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WATER BILLING SYSTEM APPLICATION

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HACK soft[®] Systems

Water Billing System Application

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About the Developer



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Ntambi Mousah speaks regularly at international conferences and has developed and co- developed numerous systems about .NET, Java, PHP, XML, and wireless technologies, including

ASP.NET 2.0 and Visual Basic 2005/08. He is also the co- developer for SMAG (School Management System). Find out about the latest systems and softwares by HACKsoft® Systems at (<u>http://www.hacksoftsystems.com</u>).

About the Technical Reviewer

Mugabi Robert is a senior consultant and a senior analyst/developer using Microsoft technologies. He works for HACKsoft® Systems (http://www.hacksoftsystems.com) in its Ugandan branch. He is a Microsoft Certified Solution Developer for .NET, a Microsoft Certified Application Developer for .NET, and a Microsoft Certified Professional, as well as a prolific author and technical reviewer. Over the past two years he has developed systems for many organisations.

Acknowledgments

Although the "Acknowledgments" section of a book is always placed at the front, it is always the last thing a developer writes; and after spending several months working on the system together with different groups of people, most names are not even mentioned (or at least mentioned in passing). Yet, without the collective efforts of these people, the book would never have been possible.

This system is no exception.

Now that this system is done, I can finally look forward to seeing it on the computers of Town Councils and Districts.

I want to take this opportunity to thank myself, Ntambi Mousah, for my guidance and valuable suggestions for making this system a better software. Mugabi Robert, the technical reviewer for this system, also deserves special mention because he painstakingly tested every module in this system and made several good suggestions for improving the quality of the code. Thank you, Mugabi Robert. And this system would never be possible without the great patience of its project manager, Nyiraneza Dorothy. Dorothy was extremely patient with me while I was juggling developing this system and working on my other projects. For this, I am very grateful, Dorothy! To the production crew, Birungi Jackson, Rugundana Barbra —thanks for the great job of polishing my work!

I also want to thank Kisoro Town Council for financing this project. And I want to express my gratitude to Birungi Jackson and Rugundana Barbra for their help in getting me started with his system. They have been very patient in guiding a softwareidiot (that's me) and for this I am very grateful to them! Last but not least, I want to thank the chief Programmer of HACKsoft® System, Mutawe Ronald. Ronald has always been very open to my new system ideas, and his support has provided me with the avenues to try new project ideas. For this, I am indebted and very grateful to you, Robert.

Finally, thank you for accepting this system and I hope you have a great time with the various modules developed in this system.

Acronyms

Acronym	Meaning		
KITC	Kisoro Town Council		
KITWASO	Kisoro Town Water and Sewerage Authority		
SWUWS	South Western Umbrella Water Sanitation		
IS	Information System		
BASIC	Beginners All purpose Symbolic Interchange Code		
DBMS	Database Management Systems		
DML	Data Manipulation Language		
LAN	Local Area Network		
OLEDB	Object Linking Embedded Database		
GUI	Graphical User Interface		
ID	Identification		
MS	Microsoft		
ODBC	Object Database Connectivity		
PC	Personal Computer		
RAM	Random Access Memory		
RDBMS	Relational Database Management Systems		
SQL	Structured Query Language		
UML	Unified Modelling Language		
VB	Visual Basic		
VB.NET	Visual Basic .Net framework		

1.0 Introduction

1.1 Background

The document gives an account of the activities and procedures involved in using the water billing system that processes water bills and invoices for Kisoro Town Water and Sewerage Authority in Kisoro District – Uganda.

To become a customer to the KITOWASO water supply scheme, customer details are filled in the customer register upon payment of connection fee then a meter number and an account number are given to the client.

Billing is done at the end of every month, previous records in billing and payment are searched manually by a minimum of three officers from the customer, billing and payment registers to compute the bill successfully and an invoice is filled in the invoice book then dispatched to the customer by the field clerks.

Payments are effected by the customer from the town council water offices or via the bank. Either way the customer's payment is later recorded in the payment registry and a receipt is issued using a receipt book.

1.2 Scope

The system processes bills, payments, reports, manage customer details, inventory/Stock records, human resource details and payroll information.

The data that is input in the system such as [meter readings] and [customer details] is not being collected by the system but by the KITOWASO field clerks.

1.3 Significance and Justification

- > The system helps KITOWASO in services such as:
- Computerized storage of customer details, payment, billing records, stock records, human resource details and payroll information.
- > Quick retrieval of customer, billing and payment records.
- > Minimized computational errors.
- > Real time response to customer queries.
- > Efficient and reliable retrieval of customer transaction history.

- > Automated generation of management reports for the water board.
- > Timely provision of invoices and receipts to customers.
- Employee morale boosting.

2.0 System Analysis

Collected data was analyzed to understand the system and user requirements. Functional and non-functional requirements were then identified and requirement specifications established.

2.1 Requirements Definition

Billing software that:-

- Is efficient in storing and retrieving data accordingly when necessary and reports can be generated effectively and automatically as outputs. Showing performance using curves on collection, billing, volume of water sold, outstanding arrears, VAT billed and collected.
- Prints out the History, meter reading and payment status can be input, processes and then outputted inform of a bill documents for each customer on demand.
- The database is coded, tested, designed and implemented in SQL Database Management System (DBMS) using a Database server 2005
 - Net worked, two different data can be entered at the same time with different people.
- Has security with two options of user names requiring passwords to log on to the system and each user has a limited access according to user responsibility to the system and company. Store any adjustments done on a bill.
- Be scalable to any number of customers that is designed in Microsoft Visual Basic 2005 which provides much functionality.
- Contains the stored module that helps the water Board monitor and have it in the system.
- > Has a payroll module managed through the computer.
- Has a human resource details that is qualifications, experience which most of the operators hide and are not open to this request when asked.

The Company staff (those that have installed the software) are at hand for any help sought by users in case of any problem within the guarantee period of one year.

2.1.1 User Requirements

The System:

- Captures, processes, stores and keeps track of customer, payment and billing details.
- > Implements restricted and authorized access.
- > Monitors daily user transactions.
- > Keeps track of customer transaction history.
- > Generates monthly financial details/reports.
- > Supports normal and administrative users.
- > Is available at any time of the day.
- > Is very fast during the processing stages.
- > Is upgradeable in future.
- > Gives room to edit a billed invoice.
- Is fast enough so that the searched results are got in a reasonably small time interval.
- Is user friendly and maintainable by persons of average computer skills, with no knowledge on the software used.
- > Has the capacity to handle the scheme's expansion without need to redesign.

2.1.2 Functional Requirements

- > To capture, store and retrieve customer details.
- > To process, store and keep track of customer bills.
- > To process, store and keep track of Payments.
- To store, retrieve, keep track and update meter states. That is Running or Disconnected.
- > To produce Invoices and Receipts upon billing and payment respectively.
- System should perform administrative tasks such as editing an Invoice and monitoring user's daily transactions.
- > Should register and keep track of Customer's complaints.

- > Should store, retrieve and update customer's transaction history
- > To process general financial details on a monthly basis.

These financial details are:

- Total Amount collected from monthly bills
- Total Amount collected from New connections
- Total Amount from Kiosks
- Total Amount billed
- Total Number of New connections
- Total Number of Disconnections
- Total Number of Connections
- Total Debt
- Total Credit
- Total Stocked items

2.1.3 Non-Functional Requirements

- Support two types of users that is; Administrator and Normal users.
- > Restrict access to the system by password protection.
- > Backup procedures are implemented.
- > Process very fast and release real time results
- > System should be available at any time of the day.
- > Allow user access restriction through a username and password.
- > Be fast enough to satisfy the users.
- > User interfaces is simple and intuitive as possible.
- > User interfaces provides data validation against user input.

2.1.4 Software Development Tools

- Microsoft SQL Sever 2005 for the database
- Microsoft Visio 2007 as a software modelling tool
- Microsoft Visual Basic.NET in (Microsoft Visual Studio 2008) for creating the front-end and GUI for the user
- Data Report (in Visual Basic.NET) and crystal reports basic 2008 for creating system reports

2.1.5 Software and Hardware Requirements

2.1.5.1 Staff's Computer (Client)

- Windows NT, 2000 professional, XP Operating System
- At least 128 MB RAM
- At least 600 MHZ
- At least 10GB HDD
- Microsoft Office

2.1.5.2 Database Server (Server)

- Windows NT, 2000 professional, XP Operating System or Advance Server
- At least 512MB RAM
- At least 1.5GHZ processor
- At least 80GB HDD
- Microsoft SQL Server 2005
- Microsoft Office

3.0 System Installation

3.1 Server Installation

Open the folder for Server and Copy the folder WaterBilling System to "D: /" then open the setup folder and install the application using the available setup named "setup".



The following window will be displayed.



Cancel



Name: Water Billing System

Downloading: 14.9 MB of 19.1 MB

From: D:\WaterBilling System\Set Up

Click on Install to continue with the installations otherwise click "Don't Install" to cancel

Click here for more information about the installation procedures of the system

3.2 Client Installation

Open the folder for Client and Copy the folder WaterBilling System to "D: /" then open the setup folder and install the application using the available setup named "setup".

Follow the installation procedures for the server computer to install the client system.

3.3 Server Configuration

Open the folder for Installer & Mngt Studio



The following Microsoft SQL Server Management Studio window will be displayed.



Click Next and continue to install the Microsoft SQL Server Management Studio.

After installing Microsoft SQL Server Management Studio, Click start, All Programs, Microsoft SQL Server 2005 and then SQL Server Management Studio Express as shown below.



Nicrosoft SQL Server Management	Studio Express	
File Edit View Tools Window Com	munity Help	
Object Explorer		
왕 맛 = 한 下	Connect to Server	
	SOL Serve	er 2005
	Server type:	Database Engine
	Server name:	KITOWASO\SQLEXPRESS
	Authentication:	Windows Authentication
	User name: Password:	
	i domoid.	Remember password
	Connect	Cancel Help Options >>
		Click Connect to login into the Microsoft
		SQL Server Management Studio Express

The following SQL Server Management Studio Express window will be displayed.

The following SQL Server Management Studio Express window will be displayed.



🧏 Microsoft SQL Server Management Studio Ex	press	
File Edit View Tools Window Community He	qk	
😫 New Query 🕞 😅 🖃 🎒 📴 隆 🥻	🖀 🖕	
Object Explorer 🚽 🗸 🗸	Summary	• X
왕 왕 = 회 🍸	🔟 🗟 🦨 🍸 🛄 List 🔻	
	Databases PROGRAMMER3\SQLEXPRESS\Databases	1 Item(s)
Refresh	System Databases	_
Click At	tach to add the database to the database server	
to be ac	cessed by the client machines.	
Them(c) Saved		
Irem(s) paved		

The following Attach Databases window will be displayed.

📑 Attach Databases	
Select a page	🖳 Script 🝷 📑 Help
Lieneral	
	Databases to attach:
	MDF File Location Database Attach As Owner Status Message
	Add <u>B</u> emove
	Database details:
	Original File Name File Type Current File Path Message
Connection	
Server: PROGRAMMER3\SOLEVPRESS	
Connection:	
PROGRAMMER3\Programmer2	
View connection properties	
Progress	Oligity Add to add the database to the server
Beadu	Click Add to add the database to the server
() Hoday	Bemove
	OK Cancel
	OK Cancel

Attach Databases	Uccate Database Fi	les - PROGRAMMER3\SQLEXPRESS		
Select a page General Connection Server: PROGRAMMER3\SQLEX Connection: PROGRAMMER3\Program Wew connection prop	Select the file: Select the file: Config.Msi Documents an Documents	d Settings ation lication asse Records a Information		Status Message
Progress Ready	Selected path: Files of type: File name:	C:\ Database Files(*.mdf)	Cancel	Remove

The following window will be displayed.



The following window will be displayed.

🚺 Attach Databases					
Select a page	🖳 Script 👻 📑 Help				
📑 General	<u> </u>				
Databases to attach:					
	MDF File Location	Database	Attach As Owner	Status Message	
	D:\WaterBilling Syst.	D:\WATE	D:\WATE PROG		
			Add.	<u>R</u> emove	
	"D:\WATERBILLING SYS	TEMWATERBIF" d	database details:		
	Original File Name F	File Type 💦 Current	File Path	Message	
Connection	hssdb.mdf f	Data D:\Wa	terBilling System\ 📃		
Server:	hssdb_log.ldf l	Log D:\Wa	terBilling System\ 🛄		
PROGRAMMER3\SQLEXPRESS					
Connection: PBDGBAMMEB3\Programmer2					
View connection properties					
-27					
Progress					
Ready					
Wears W				Remove	
				_OK Cancel	
			/		

Click Ok to add the database to the server





The following Login - New window will be displayed.

🖥 Login - New		
Select a page	🔄 Script 🝷 🛐 Help	
La General Server Roles Ler Mapping Securables Status	Login name: Vindows authentication SQL Server authentication Password: Confirm password: Enforce password policy Enforce password expiration User must change password Mapped to certificate Certificate name:	hacksoft Search Put hacksoft as the login name Put hss09 as the password at next login
Connection		
Server: PROGRAMMER3\SQLEXPRESS Connection: PROGRAMMER3\Programmer2 View connection properties Progress Ready	Key name: Default database: Default language:	master ♥ hssdb master model msdb tempdb Select hssdb as the default database
		OK Cancel

Click Ok to save the settings and exiting the Login – New window.

🍢 Microsoft SQL Server Mana	gement Studio Express	
File Edit View Tools Windo	w Community Help	
🏥 New Query 📑 📔 🗿	l 🖪 🗎 隆 🚰 🖕	
Object Explorer	▼ I X Summary	• ×
98 9 <u>8</u> = 0 T	🔁 🖻 🥏 🍸 🏢 List 🔻	
2727 = ⊻ ⊺		

Click on the close button to close the window

Click start, All Programs, Microsoft SQL Server 2005 and then SQL Server Surface Area Configuration to configure the database server as shown below.



The following Server Surface Area Configuration window will be displayed.



Click Surface Area Configuration for services and connections and a window below will be displayed.

-	Surface Area Configuration for S	ervices and C	onnections - localhost 🛛 🔀		
1	SQL Server 2005 Surface Area Configuration Help Protect Your SQL Server				
	Enable only the services and connection types used by your applications. Disabling unused services and connections helps protect your server by reducing the surface area. For default settings, see <u>Help</u> . Select a component and then configure its services and connections:				
	 ■ SQLEXPRESS ■ I Database Engine ◆ Service 	Disable this ser	vice unless your applications use it.		
	Remote Connections	Service name:	MSSQL\$SQLEXPRESS		
	표 🛃 SQL Server Browser	Display name:	SQL Server (SQLEXPRESS)		
		Description:	Provides storage, processing and controlled access of data and rapid transaction processing.		
	$\langle \rangle$	Startup type:	Automatic		
		Service status:	Running		
		Start	Stop Pause Resume		
		Click Re	emote Connections		
	View by Instance View by Component				
			OK Cancel Apply Help		

Click Remote Connections under SQLEXPRESS – Database Engine and a window below will be displayed.

 ■ ■ SQLEXPRESS ■ ■ Database Engine Service → Remote Connections ■ □ SQL Server Browser 	By default, SQL Server 2005 Express, Evaluation, and Developer editions allow local client connections only. Enterprise, Standard, and Workgroup editions also listen for remote client connections over TCP/IP. Use the options below to change the protocols on which SQL Server listens for incoming client connections. TCP/IP is preferred over named pipes because it requires fewer ports to be opened across the firewall.
	 Local connections only
	O Local and remote connections
	Using TCP/IP only
	 Using named pipes only
	 Using both TCP/IP and named pipes
View by Instance View by Component	

Click the option for Local and remote connections to allow client machine to connect to the database server computer and a window below will be displayed.

 ■ SQLEXPRESS ■ Database Engine Service → Remote Connections ■ SQL Server Browser 	By default, SQL Server 2005 Express, Evaluation, and Developer editions allow local client connections only. Enterprise, Standard, and Workgroup editions also listen for remote client connections over TCP/IP. Use the options below to change the protocols on which SQL Server listens for incoming client connections. TCP/IP is preferred over named pipes because it requires fewer ports to be opened across the firewall. Local connections only Local and remote connections Using TCP/IP only Using named pipes only Using both TCP/IP and named pipes
View by Instance View by Component	
	OK Cancel Apply Help

Click Apply to save the changes made and a dialog window below will be displayed.

Connect	Connection Settings Change Alert					
٩	Changes to Connection Settings will not take effect until you restart the Database Engine service.					
E)	ОК					

Click Ok.

Click Ok to close the Surface Area Configuration for services and connections window.



Click start, All Programs, Microsoft SQL Server 2005 and then SQL Server Configuration Manager as shown below.

Adobe Acrobat 8 Pro	Kaspersky Anti-Virus Microsoft Developer Network	HP HACKsoft Systems	
💓 Microsoft Office Wor	microsoft Office	•	
🔞 Microsoft Office Pow	💼 Microsoft SQL Server 2005	Configuration Tools	🚡 SQL Server Configuration Manager
🔟 Adobe InDesign CS3	💼 Microsoft Visual Studio 2008	SQL Server Management Studio Express	SQL Server Error and Usage Reporting
🔣 Microsoft Office Pictu	💼 Microsoft Windows SDK v6.0A	•	😭 SQL Server Surface Area Configuration
🚮 Nero Express	Microsoft ASP.NET 2.0 AJAX Extensions	•	
	🛅 Mozilla Firefox	•	
	🛅 TuneUp Utilities 2008	•	
All Programs 👂	🖮 WampServer	•	The second s
	🐉 TuneUp Utilities 2008		and the second se
	Adobe Master Collection CS3	•	

The dialog window below will be displayed.



Right Click SQL Server (SQLEXPRESS) as shown below.

🛐 SQL Server Configuration Manager					
File Action View Help ← → 1 1 1 1 1 1					
😵 SQL Server Configuration Manager (Local)	Name		State	Start Mode	Log On As
	SQL Server (SQLEXPRESS)	Start Stop Pause Resume Restart Properties Help	Running	Automatic Automatic	NT AUTHOR

Click Restart to restart the SQL Server (SQLEXPRESS) service.

Tha	dialag	TTTIM dotto	holom		diamlarrad	0100	ofton the	athon	aa aharra	halam
Ine	CHAIOS	windows	Delow	will be	uispiaveu	one	anerine	other	as shown	Delow.
	0									

SQL Server Configuration Manager		
Stopping service		
Close		

SQL Server Configuration Manager		
Starting service		
[]		

Wait until the dialog window disappears.

Click on the close button to close the SQL Server Configuration Manager window as shown below.



Click on the close button to close the window

4.0 Opening/Running of the System

4.1 System Login

Click start, All Programs, HACKsoft Systems and then WaterBilling System to run the installed system.

The Introduction form below welcomes you to the application.



The login form below is displayed on top of the introduction form.

Login	\mathbf{X}
	<u>U</u> ser name
	hss
	<u>P</u> assword
7	****
	<u>✓ Ok</u> <u>X C</u> ancel

This login form is used for security of the system. The user is required to enter the username and the password. The security levels and user rights are implemented at this form depending on the type of user logging into the system.

The login form is used to check for the availability of the database server. If the server is not available the following dialog window will be displayed.

Invalid Network Connection	
8	Sorry your computer is not connected to the database server, it seems to be on a different network or the network cable is unplugged. Try checking the network connection or contact the database administrator If the problem persists contact HACKsoft Systems on (+256774/702-061242) or (info@hacksosftsystems.com)
	ОК

The Main Document Interface (MDI) form below will be displayed.



The above form is the main switchboard. It acts as an MDI form onto which other forms display on. It is an interface to all the other forms.

The Main Document Interface (MDI) provides the navigation and different links to particular sections of the system to the user. All system processes like adding new records, updating existing records, analysis and reports are accessed from the MDI form.

4.2 Overview of the special System screen elements

Title bar

The title bar displays the system/application name and the current year plus the close button.



Closes the window or program

Menu bar

The system has a number of different menus with various program commands. Clicking a menu name reveals a pull down menu with a list of related commands.

Tool bar

The tool bar contains frequently used commands with in and out side the application that can be accessed simply by clicking. For example, you can use your mouse to open note pad by clicking on the icon for note pad.

The tool bar also contains the user name of the staff member who has logged into the system after the frequently used commands plus the current system time and date of the computer.

Logo Tasks

This section of the system contains the company logo. It can be hidden and shown by clicking on the right corner buttons accordingly.

Display Area

This is the section of the system where the other forms of the system are displayed when prompted by the system users.

Database Tasks

The system has a number of different database tasks with various program commands. Clicking a task name reveals a pull down menu with a list of related commands.

Task bar

This section of the system contains the developer details i.e. the company motto, the name of the Company, Copyright year plus rights reserved and the phone contacts of the developer for emergency technical support and inquires.

4.3 Database Tasks

The database tasks menu displays the database tasks by names as shown in the figure below.



4.3.1 Customer Details

The customer details can be displayed by pull down menu on clicking on the customer details command as shown in the figure below.



Customer details includes; Customer's Form (Customer Management Form), Kiosk's Form (Kiosk Management Form), Customer Complaints (Customer Complaints Form) and Sewer Connection (Customer Sewer Connection Form).

4.3.1.1 Customer Management Form

The customer management form below is used to capture customer details and display them when required.

This form acts as a customer entry point into the system. Customer details are entered here. These details include; Customer Name, Customer Number, Meter Number, Record Date, Sub-County, Location, Plot Number and Basis of Charge.

The customer number is assigned automatically by the computer, so there's no need to follow up the last customer number.

The Sub-County, Ward/Parish and Location can be selected from the existing by clicking on the drop down menu corresponding to the title name or can be typed by the user if it does not exist in the system.

The Basis of strictly and can only be selected form the existing options in the drop down menu.
Customer Managemnet Form 🕒					
✓	Customer Number:	01371			
	Record Date:	Tuesday	- 09/Feb/2010	~	
▼	Ward/Parish:			*	
~	Road:				
	Basis of Charge:			~	
	✓ ✓ ✓	Customer Number: Record Date: Ward/Parish: Road: Basis of Charge:	Customer Number: 01371 Record Date: Tuesday Ward/Parish: Road: Basis of Charge:	Customer Number: 01371 Record Date: Tuesday - 09/Feb/2010 Ward/Parish: Road: Basis of Charge:	

Index	Customer's Name	Customer Number	Meter Number	Connection
1	Kwizera Alex.1	1	FA00409000676	10/20/200
2	Harerimana Boniface	2	222309	10/20/200
3	Kabami Nteziyaremye (Microcare)	3	0409000677	10/20/200
4	Panda (UML)	4	223096	10/20/200
5	Nteziryayo Abdul	5	04100071	10/20/200
6	Segawa. Buruhani.1	6	0703186	10/20/200
7	The Manager (Bufumbira Hotel)	7	FB011909-04	10/20/200 [,]
8	Hitimana Lukanika(Dr)	8	3692058	10/20/200 [,]
9	Hareba Benon.1	9	0409000679	10/20/200
10	Ahamed Fayida (Park View house)	10	025931-05	10/20/200 [,]
11	Seguya Didas	11		10/1/2009
12	Mugabo John.1	12	223598	10/20/200
13	Naana Richard	13	FA024813-05	10/20/200
14	Kisoro Mosque	14	134622	10/1/2009
15	Mugabo Salim	15	0703380	10/1/2009
16	Kwizera Herberts Home	16	9112081	10/20/200 [,]
17	Nsenga Gerald	17	03131	10/20/200
18	Niyonzima Ivan	18	3691838	10/1/2009
19	Uwimana Francis.1-(Home)	19	3693354	11/7/2009
20	Buqiqi Muhammad -home	20	3692060	10/1/2009 ⊻
<				>
🔶 Add Ne	ew 🛛 💔 🛛 Edit 🖉 Refresh			🚺 Close

The record date is selected form the drop down date menu as shown in the figure below.

	Customer Managemnet Form 🗅										
Customer	Name: Kakeeto Godfrey	*	Customer Number	: 0	137	1					
Meter Num	nber:		Record Date:		Tue	esda	y - I	09/F	eb /:	2010	¥
Sub-Count	ty:	*	Ward/Parish:		<		Febr	uary	2010)	>
Location:		~	Road:		Mon	Tue	Wed	Thu	Fri	Sat	Sun
Plot Numb	er:		Basis of Charge:		25 1	26 2	27 3	28 4	29 5	30 6	31 7
	Cust	tom	er's Records		8	9	10	11	12	13	14
Index	Customor's Namo		Customor Number	м	15	16	17	18	19	20	21
1	Kwizera Alex 1		1	E4	1	23	24	25	26	-27	28
2	Harerimana Boniface		2	22	T	∠ hoT[о av:П	+ 9/N2	J 201	10	
3	Kabami Nteziyaremye (Microcare)		3	04	1900	1067	7	5702	1072	ເບັ້ງ 2ເ	יטנ

FORM OPERATIONS

Add New: - In this operation, a new customer is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New 🔀
♪	Fill up all the records before clicking on the Add New button
	ок

Edit: - Before you carry out the edit, select the customer whose details you want to edit from the list view, and then press edit. If you don't select a record the following error message is displayed.

WaterB	illing System 🔀
⚠	Select a record to edit before clicking on the Edit Button
	ок

If you select a record then the system will then process the customer information and prepare the form for editing as shown by the Edit Customer Management Records form below.

	Edit Customer M	anagement Rec	ords	
Customer Name:	Kabami Nteziyaremye (Microci 💙	Customer Number	3	
Meter Number:	0409000677	Record Date:	Tuesday - 09/	Feb/2010 💌
Sub-County:	~	Ward/Parish:		~
Location:	Kisoro-Kabale road 🗸 🗸 🗸	Road:		
Plot Number:		Basis of Charge:	Commercial	~
	Custon	ner's Records		
Index Cust	omer's Name	Customer Number	Meter Number	Connection D
1 Kaba	mi Nteziyaremye (Microcare)	3 (0409000677	10/20/2009
Edit Buttons	Delete			🔀 Cancel
🗣 Add New 🕅	Edit Refresh			🔀 Close

A set of buttons, Edit Buttons, appears at the bottom of the list view.

CEdit Buttons -		
🛃 Save	XDelete	🔀 Cancel

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Cancel** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing System 2010				
Are sure you want to delete th	is record?			
Yes No				

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.3.1.2 Kiosk's Form

This form acts as a kiosk entry point into the system. Kiosk details are entered here. These details include; Kiosk Name, Kiosk Number, Meter Number, Record Date, Sub-County, Location, Plot Number, Road as shown in the figure below.

	Kiosk's Form					
Kiosk Nan	ne:					
Kiosk Nun	nber: 0002		Meter Number:			
Sub-Cour	nty:	~	Record Date:	Tuesday - 23/F	-eb/2010 🔽	
Parish:		~	Location:		~	
Road:			Plot Number:			
		Kios	sk's Records			
Index	Kiosk Name	Kiosk Number	Meter Number	Connection Date	Location	
1	Kisoro Town Council	1	124586	10/21/2009	Kisoro hill V	
<					>	
🗣 Add Ne	ew 👌 Edit 🎯 Refree	۶h			🔀 Close	

FORM OPERATIONS

Add New: - In this operation, a new customer is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.



Edit: - Initiate this operation if you would like to make changes to existing records. Records are loaded into a Data grid view where you can edit them directly. Find the record that you want to edit and carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

	Edit Kiosk's Records 🖻					
	Kiosk Name	Kiosk Number	Meter Number	Location		
•	Kisoro Town Council	1	124586	Kisoro hill Village		
*						
5				>		
O P	revious) 🛃 Save) 🔀 Delete			🚺 Close		

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.3.1.3 Customer Complaints

This form captures complaints as forwarded by the Customers. This interface also gives you control over the complaints, managing the read messages (complaints), and the unread. Complaint details that are captured include: - Customer Name, Complaint Date, and Complaint.

			Customer Co	mplaints	Form			
Customer	r Name:	Abex Washing	Bay	~	Complaint Date:	Tue - 23/Feb	/2010	~
Complain	t:	Broken Pipes						~
								~
			New Com	olaint Records	;			
Index	Cust	omer Name	Complaint Date	Complaint				
<]				>
Select All	Sele	ct None Mark As F	Read					
			Old Com	plaint Records	;			
Index	Cust	omer Name	Complaint Date	Complaint				
<		1	11					>
Select All	Sele	ct None Mark As l	Jnread					
Add Ne	ew 📢	🕴 Edit 🛛 🐼 Refr	esh				Cl	ose

FORM OPERATIONS

Complaint Management

To mark as read: - the upper list view shows the complaints that have not yet been read. To mark as read, select the check box adjacent to the complaint, and then press Mark As Read.

To select all complaints, press Select all below the list view.

To mark as Unread: - The lower list view shows the complaints that have already been read. To mark as unread, select the check box adjacent to the complaint, and then press Mark As Unread.

To select all complaints, press Select all below the list view.

Add New: - In this operation, a new customer is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid Add New				
⚠	Fill up all the records before clicking on the Add New button			
	ОК			

Edit: - Initiate this operation if you would like to make changes to existing records. Records are loaded into a Data grid view where you can edit them directly. Find the record that you want to edit and carry out the operations as you wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you wish to exit without saving changes.

		Edit Customer Compl	aints	<u></u>
	Complaint Date	Complaint	Complaint Status	System Date
▶*				
<				5
				<u> </u>
🔇 Pr	revious) 🛃 Save) 🔰	Delete		🚺 Close

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.3.1.4 Sewer Connection

This form updates the sewer connection status of the customers. Customers that are connected to the sewer line are recorded in the sewer status as connected while those that are not connected to the sewer line are recorded in the sewer status as Not Connected by default. All new customers are recorded in the sewer status as Not Connected by default. The Customer sewer status form can be shown below.

	Customer	Sewer	Connect	ion F	orm		
Customer Number:		ompute	Customer	Name:			<
Sewer St	atus:	~	Connectio	n Date:	Tuesday - 23/F	eb / 2010	~
Service F					,		
		Custome	r's Records				
Index	Customer's Name	Custon	ner Number	Sewer	Connection Status	Sewer Con	r 🛆
1	Kwizera Alex.1	1		Connee	cted	10/1/2009	
2	Harerimana Boniface	2		Connee	cted	10/1/2009	
3	Kabami Nteziyaremye (Microc	. 3		Connee	cted	10/1/2009	
4	Panda (UML)	4		Connee	cted	10/1/2009	
5	Nteziryayo Abdul	5		Connee	cted	10/1/2009	
6	Segawa. Buruhani.1	6		Connee	cted	10/1/2009	
7	The Manager (Bufumbira Hotel)	7		Connee	cted	10/1/2009	
8	Hitimana Lukanika(Dr)	8		Connee	cted	10/1/2009	
9	Hareba Benon.1	9		Connee	cted	10/1/2009	
10	Ahamed Fayida (Park View ho	. 10		Connee	cted	10/1/2009	
11	Seguya Didas	11		Connee	cted	10/1/2009	
12	Mugabo John.1	12		Connee	cted	10/1/2009	
13	Naana Richard	13		Connee	cted	10/1/2009	
14	Kisoro Mosque	14		Connee	cted	10/1/2009	
15	Mugabo Salim	15		Connee	cted	10/1/2009	
16	Kwizera Herberts Home	16		Connee	cted	10/1/2009	
17	Nsenga Gerald	17		Connee	cted	10/1/2009	
18	Niyonzima Ivan	18		Connee	cted	10/1/2009	
19	Uwimana Francis.1-(Home)	19		Connee	cted	10/1/2009	
20	Bugigi Muhammad -home	20		Connee	cted	10/1/2009	
21	Mbishibishi John	21		Connee	cted	10/1/2009	
22	Rucakatsi Mahuuku Stanley.1	22		Connee	cted	10/1/2009	
23	Uwimana Francis-2	23		Conne	cted	10/1/2009	
24	Ngirabakunzi Emmanuel	24		Connee	cted	10/1/2009	×
<	1111					>	
🛃 Update	e Record 🗟 Refresh					🔀 Clos	5e

FORM OPERATIONS

Update Record: - In this operation, the customer sewer connection status is recorded and updated in the system.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.3.2 Billing

The customer billing information can be displayed by pull down menu on clicking on Billing command as shown in the figure below.



4.3.2.1 Customer Billing

The customer billing form below is used to capture customer billing details and display them when required.

			Custo	mer's Bi	lling Form	<u> </u>		
Custome	r No.:	898	V Compute)	Customer Name:	Ndibwami Yasin.2 🛛 🗸		
Reading Date: Sun - 31/Jan,		/2010 🛛 🔽		Meter Number:	0703496			
Reading Date:Sun - 31/JanBilling Date:Mon - 01/Feb		/2010 🛛 🔽		Location:	Bunagana road /Rutudwe			
Current Reading:				Previous Reading:	25167			
Service F	Fee:				BI Brought Forward:	2766.03		
Bill Amou	ınt:				Sewerage Charges:			
Vat Amo	unt:				Total Amount:			
			Cust	omer's Billir	a Records			
Index	Cust	omer Number	Customer Name		Location			
1	898		Ndibwami Yasin.2			Bunagana road /Rutudwe V		
2	898		Ndibwami Yasin.2 Ndibwami Yasin.2			Bunagana road /Rutudwe V Bunagana road /Rutudwe V		
4	898		Ndibwami Yasin.2			Bunagana road /Rutudwe V		
<						>		
🔶 Add N	ew 🕅	Edit 🛛 🗟 Refr	esh			🚺 Close		

This form acts as a customer billing point into the system. Customers are billed from here.

The customer number is selected form the drop down list or can be typed by the user as required. After selecting the customer number and you click on Compute, all the customer billing records are displayed in the listview, the customer name, Meter number, Location, previous reading and balance brought forward, as shown in the figure above. If the customer number is not known then the customer record can be selected by the customer name.

The reading date and the billing date are selected by the user of the system.

As you type or input the current reading, the Service fee, Sewerage charges, Bill amount, Vat amount and Total amount are generated by the system automatically as shown in the figure below.

	Customer's Billing Form							
Customer No.:	4 V Compute	Customer Name:	Panda (UML) 🛛 👻					
Reading Date:	Sun - 31/Jan /2010 🛛 👻	Meter Number:	223096					
Billing Date:	Mon - 01/Feb/2010 🛛 👻	Location:	Kisoro hill /Kisoro- Kabale					
Current Reading:	678900	Previous Reading:	624271					
Service Fee:	0	Bl Brought Forward:	31109.89					
Bill Amount:	81943.5	Sewerage Charges:	0					
Vat Amount:	14749.83	Total Amount:	127803.22					
	Cust	omer's Billing Records						
Index Cust	omer Number 🕴 Customer Na	ame	Location					
1 4	Panda (UML))	Kisoro hill /Kisoro- Kabale r					
2 4	Panda (UML)	•	Kisoro hill /Kisoro- Kabale re					
3 4	Panda (UML)	•	Kisoro hill /Kisoro- Kabale ri					
4 4	Panda (UML)		Kisoro hill /Kisoro- Kabale ri					

FORM OPERATIONS

Add New: - In this operation, a new customer bill is generated and entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New
♪	Fill up all the records before clicking on the Add New button
	ОК

Edit: - Click Edit to change or delete any customer billing record and the following Edit Customer's Billing Records form will be displayed. Select the customer whose details you want to edit from the drop down list by either the customer number or by the customer name, and then press Compute. The last customer billing record will be displayed or brought to focus for making the required changes.

		I	Edit Custo	mer's Billing Re	cords	`
Customer	r No.:	4	V Compute	Customer N	ame: F	Panda (UML) 🛛 🔽
Reading Date: S		Sun - 31/Jan	/2010 💌	Meter Numb	oer:	223096
Reading Date: Billing Date:		Mon - 01/Feb	/2010 🛛 🖌	Location:	I	Kisoro hill /Kisoro- Kabale
Current R	eading:	624271		Previous Re	ading: 🚺	521027
Service F	ee:	1500		Bl Brought F	orward:	1.9900000000524
Bill Amour	nt:	4866		Sewerage C	harges:	20000
Vat Amou	unt:	4745.88		Total Amour	nt: 🕻	31109.89
			Cust	omer's Billing Records		
Index	Custo	omer Number	Customer Na	me		Location
1	4		Panda (UML)			Kisoro hill /Kisoro- Kabale ri
2	4		Panda (UML) Panda (UML)			Kisoro hill /Kisoro- Kabale ri Kisoro hill /Kisoro- Kabale ri
4	4		Panda (UML)			Kisoro hill /Kisoro-Kabale n
)				
<						>
🔇 Previo	ius 🛃	Save 🔀 Del	ete			🔀 Close

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

em 2010 🛛 🔛
delete this record?
No

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.3.2.2 Kiosk Billing

The Kiosk Billing Form below is used to capture Kiosk billing details and display them when required.

			Kios	sk's Billin	g Form			
Kiosk Num	nber:	1	Compute		Meter Number:	12	4586	
Reading D	ate:	Sun - 31/Jar	/2010 🛛 💌		Location:	Kis	oro hill Village	
Billing Dat	e:	Mon - 01/Fet	/2010 🛛 🖌		Previous Reading:	66	6	
Current R	eading:				Bl Brought Forward:	0		
Bill Amour	nt:				Total Amount:			
			K	iosk's Billing R	ecords			
Index	Kisok	Number	Meter Numb	er	Current Reading		Previous Reading	Readin
1	1		124386		000			31/12/
<								>
🔶 Add Ne	w 🚱	Edit 🗟 Refi	resh					Close

This form acts as a Kiosk billing point into the system. Kiosks are billed from here.

The Kiosk number is selected form the drop down list or can be typed by the user as required. After selecting the Kiosk number and you click on Compute, all the Kiosk billing records are displayed in the listview, the Meter number, Location, previous reading and balance brought forward, as shown in the figure above. If the customer number is not known then the customer record can be selected by the customer name.

The reading date and the billing date are selected by the user of the system.

As you type or input the current reading, the Bill amount and Total amount are generated by the system automatically as shown in the figure below.

			Kios	sk's Billing Form			6
Kiosk Nur	mber:	1	Y Compute	Meter Number:	124	4586	
Reading Date: Sun - 31/Jan/2010 💌		Location:	Kis	Kisoro hill Village			
Billing Date: Mon - 01/Feb		b/2010 🛛 🔽	Previous Reading:	666			
Current F	Current Reading: 989			Bl Brought Forward	: 0		
Bill Amou	nt:	646		Total Amount: 646			
			Ki	iosk's Billing Records			
Index	Kisok	Number	Meter Numb	er Current Reading	Current Reading Previous Read		Readin
1	1		124586	666			31/12/

FORM OPERATIONS

Add New: - In this operation, a new Kiosk bill is generated and entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.



Edit: - Initiate this operation if you would like to make changes to existing records. Records are loaded into a Data grid view where you can edit them directly. Find the record that you want to edit and carry out the operations as you wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you wish to exit without saving changes.

		Edit Kiosk's	Billing Record	S	
	Kiosk Number	Meter Number	Current Reading	Previous Reading	Reading Date
•	1	124586	666		31/12/2009
*					
<	III				>
G F	Previous) 🛃 Save) 🔀	Delete			🚺 Close

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.3.2.3 Customer Bills Analysis

The Customer Bills Analysis form below is used to analyse customer billing details by year, month and display them when required.

	C	ustomer Billing Records Ana	lysis					
Year: 20	09 🔽 Month	December 🖌 Compute						
L	Customers Without Bills							
Index	Customer Number	Customer's Name	Meter Number	Connection				
1	11	Sequya Didas		10/1/2009				
2	14	Kisoro Mosque	134622	10/1/2009				
3	27	The Manager, Shell (U) Ltd	132952	10/1/2009				
4	43	FH KITOWASO		10/1/2009				
5	61	Kisoro Hosptal		10/1/2009				
6	142	Kafirica		10/1/2009				
7	149	Mbonigaba Laurence	3693316	10/28/2009				
8	168	Ntezimana James	04100086	11/21/200!				
9	180	Washing Bay		10/1/2009				
10	214	Mpamyabigwi Davis		10/1/2009				
11	219	Warid Telcom		10/1/2009				
12	275	Capt Habymugisha Adam	0701315	10/1/2009				
13	279	D.O.M. Seseme Deaf Project	0703312	10/1/2009				
14	298	Kanyabukungu stand post / Nyakaba		10/1/2009 🗸				
<				>				
		Customer's Billing Records						
Index	Customer Number	Customer Name	Location	~				
1	255	Ngahirang Michael	Kisoro -Kaba	le road				
2	303	Rumazimisi Jamos	Chabi-Chapi	ka road				
3	1101	Mwunyaneza Emmanuel	Nyakahaya	Karoda				
4	1087	Harelimana Richard	Nyakubuyu					
5	767	Duhimhaze Gad	Rutare					
6	472	Rutare CDC	Rutare					
7	681	Ntahanganya James	Nyakabaya					
8	395	Murumbura Eebiano	Rutare Villan	e				
q	1123	Ntamuhereza Dominic(Er)3	Nyarurama	~				
<				>				
Refresh	📄 📄 Print Preview			🔀 Close				

The upper listview with capture records for customers without bills as specified by the year and month criteria while the lower listview captures records for customers with bills.

The records for customers without bills can be printed out by clicking on the Print Preview button. When you click on the Print Preview button the figure below is shown.

	Customer Billing Records Analysis 🗧								
	l of 3 🕨 🔰 👄 🙆	2 🛃 🔲 🖬 🕞	▼ 100%	▼ Find	Next				
	KISORO TOWN WATER & SEWERAGE AUTHORITY								
		DO BOX 100	VISORO						
		P.O BOX 100	, KISOKO						
	<u>Cl</u>	JSTOMERS W	THOUT BILLS						
Customer Number	Customer Name	Meter Number	Basis Of Charge	Location	Meter Status				
11	Seguya Didas			Kisoro-Kabale road					
14	Kisoro Mosque	134622	Institutional/Go vt	Kisoro Hill Village					
27	The Manager, Shell (U) Ltd	132952		Kivegeri road					
43	FH KITOWASO			Kisoro-Bunagana road					
61	Kisoro Hosptal			Bunagana road					
142	Kafirica			Nyarusiza road					
149	Mbonigaba Laurence	3693316	Domestic	Gasasira road					
168	Ntezimana James	04100086		Chanika road					
180	Washing Bay			Main Village					
214	Mpamyabigwi Davis			Kivegeri road /Chahi					
219	Warid Telcom			Kisoro hill					
275	Capt Habymugisha Adam	0701315		Karumena Village/Mutolere road					
<	1		1	1					
O Previous									

Click here to print the records shown otherwise click Previous to exit without printing and go back the previous form.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.3.3 Payments

The customer payment information can be displayed by pull down menu on clicking on Payments command as shown in the figure below.



4.3.3.1 Customer Payments

The customer's payment form below is used to capture customer's payment details and display them when required.

			Customer's	Pay	ment Form			
Payment I	Date:	Tue - 23/F	eb / 2010 🛛 👻		Customer Name:	Byil	besho Stephen	~
Customer	Number:	90	Compute		Location:	Circ	ular road	
Amount P	aid:			UGX	Basis of Charge:	Don	nestic	
Current B	alance:			UGX	Payment Amount:	160	05.37	
Payment	Mode:		~		Reciept No.:			
			Customer F	paymer	nt Records			
Index	Custon	ner Number	Customer Name				Location	
1	90		Byibesho Stephen				Circular road	
3	90		Byibesho Stephen				Seseme	
			· ·					
<	1111							>
🔶 Add Ne	w 🚱	Edit 🎯 Refr	esh					🔀 Close

This form acts as a customer's payment point into the system. Customer bills are paid from here.

The payment date is selected by the user as by the date on which the customer made his payment at the cash office.

The customer record can be selected by the customer number from the drop down list alongside the customer number label. After selecting the customer number and you click on Compute, all the customer payment records are displayed in the listview, the customer name, Location, Basis of Charge and payment amount, as shown in the figure above. If the customer number is not known then the customer record can be selected by the customer name.

As you type or input the amount paid by the customer, the Current Balance is calculated by the system automatically as shown in the figure below.

The payment mode is selected as it was done by the customer and the respective receipt number is entered by the user.

	Customer's Payment Form 🗅								
Payment	Date:	Tue - 23/F	eb / 2010 🛛 👻		Customer Name:	Byibesho Stephen 👻			
Customer	Number:	90	Compute		Location:	Circular road			
Amount Paid: 16000			UGX	Basis of Charge:	Domestic				
Current B	alance:	5.37000000	00008	UGX	Payment Amount:	16005.37			
Payment	Mode:	Cash	~	Reciept No.:		316754			
			Customer F	payme	nt Records				
Index	Custon	ner Number	Customer Name			Location			
1	90		Byibesho Stephen			Circular road			
2	90		Byibesho Stephen			Circular road			
3 90 Byibesho Stephen				Seseme					

FORM OPERATIONS

Add New: - In this operation, a new customer payment record is generated and entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid Add New						
⚠	Fill up all the records before clicking on the Add New button					
	ОК					

Edit: - Click Edit to change or delete any customer payment record and the following Edit Customer's Payment Records form will be displayed. Select the customer whose details you want to edit from the drop down list by either the customer number or by the customer name, and then press Compute. The last customer payment record will be displayed or brought to focus for making the required changes.

	Edit	t Customer's	s Pay	/ment Recor	ds			
Payment Date: Tue - 23/Feb/2010			Customer Name:	Byil	besho Stephen		~	
Customer Number:	90	V Compute		Location:	Circ	ular road		
Amount Paid:	20000		UGX	Basis of Charge:	Dor	nestic		
Current Balance:	16005.37		UGX	Payment Amount:	36005.37			
Payment Mode:	Cash	~		Reciept No.:	331:	32		
		Customer F	ayme	nt Records				
Index Custor 1 90 2 90 3 90	ner Number C Br Br	ustomer Name yibesho Stephen yibesho Stephen yibesho Stephen				Location Circular road Circular road Seseme		
<								>
🔇 Previous 🛃	Save 🔀 Delete	e					🔀 Clo	ose

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing Syst	tem 2010 🛛 🔛					
Are sure you want to delete this record?						
Yes	No					

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.3.3.2 Connections

4.3.3.2.1 New Connection



The New Connection form below is used to capture customer's new connection payment details and display them when required.

This form acts as a customer's new connection payment point into the system. Customers that are newly connected to the water system, their payments are recorded from here to the system.

The payment date is selected by the user as by the date on which the customer made his payment at the cash office.

	New Connection Payment Form 🗅								
	Customer	Number:		Compute		Customer Name:			~
	Amount Pa	aid:			UGX	Payment Date:	Wed	- 24/Feb/2010	~
	Current Ba	alance: [UGX	Payment Amount:	5000	0	
	Payment I	Mode:		~]	Reciept No.:			
				Connectio	on Payr	ment Records			
	Index	Custon	ner Number	Customer Name				Location	
	1 2	1345 1346		Ndoroheje Vianne Sebusaga Emmai	ey nuel			Mwalo Karabosha	
				7					
l	(11						>
C	🕈 Add New 🖓 Edit 🗟 Refresh 🚺 Close								

The customer record can be selected by the customer number from the drop down list alongside the customer number label. After selecting the customer number and you click on Compute, the payment amount is displayed, as shown in the figure above. If the customer number is not known then the customer record can be selected by the customer name.

As you type or input the amount paid by the customer, the Current Balance is calculated by the system automatically as shown in the figure below.

The payment mode is selected as it was done by the customer and the respective receipt number is entered by the user.

FORM OPERATIONS

Add New: - In this operation, a new connection payment record is generated and entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New 🔀
♪	Fill up all the records before clicking on the Add New button
	ок

Edit: - Click Edit to change or delete any customer payment record and the following Edit Connection Payment Records form will be displayed. Select the customer whose details you want to edit from the Datagrid view.

		Edit Connection	Payment F	Records		
	Customer Number	Customer Name		Payment Date	Amount Paid	
•	1345	Ndoroheje Vianney		11/4/2009	50000	
	1346	Sebusaga Emmanuel		11/6/2009	50000	
*						
<						>
G P	revious) 🛃 Save) 🍃	Colete			🚺 Clos	se

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing Sy	stem 2010 🛛 🖂				
Are sure you want to delete this record?					
Yes	No				

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.3.3.2.2 Customer Reconnection

The Customer Reconnection form below is used to capture customer's new connection payment details and display them when required.

This form acts as a customer's reconnection payment point into the system. Customers that are reconnected to the water system, their payments are recorded from here to the system.

The payment date is selected by the user as by the date on which the customer made his payment at the cash office.

Re Connection Payment Form 🗅								
Customer Numbe	r:	✓ Compute		Customer Name:			~	
Amount Paid:			UGX	Payment Date:	Wed	- 24/Feb/2010	~	
Current Balance:			UGX	Payment Amount:	1000	0		
Payment Mode:		v		Reciept No.:				
		Connectio	on Payn	nent Records				
Index Custo	omer Number	Customer Name				Location		
<							>	
🗣 Add New 🖓	Edit 🗟 Refi	esh					🚺 Close	

The customer record can be selected by the customer number from the drop down list alongside the customer number label. After selecting the customer number and you click on Compute, the payment amount is displayed, as shown in the figure above. If the customer number is not known then the customer record can be selected by the customer name.

As you type or input the amount paid by the customer, the Current Balance is calculated by the system automatically as shown in the figure below.

The payment mode is selected as it was done by the customer and the respective receipt number is entered by the user.

FORM OPERATIONS

Add New: - In this operation, a reconnection payment record is generated and entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New 🔀
⚠	Fill up all the records before clicking on the Add New button
	ОК

Edit: - Click Edit to change or delete any customer reconnection payment record and the following Edit Connection Payment Records form will be displayed. Select the customer whose details you want to edit from the Datagrid view.

		Edit Connection	Payment	Records	6
	Customer Number	Customer Name		Payment Date	Amount Paid
*					
<					>
O P	revious 🛃 Save 🔀	Delete			🔀 Close

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing Sys	stem 2010 🛛 🔀
Are sure you want	to delete this record?
Yes	No
Yes	No

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.3.3.3 Balance Payments

4.3.3.3.1 New Connection



The New Connection Balance Payment form below is used to capture customer's new connection balance payment details and display them when required.

This form acts as a customer's new connection balance payment point into the system. Customers that are newly connected to the water system, their balance payments are recorded from here to the system. The payment date is selected by the user as by the date on which the customer made his payment at the cash office.

		New	Connection	Bala	nce Paymen	t Fo	rm		6
Customer	Number:		V Compute		Customer Name:				~
Amount P	aid:			UGX	Payment Date:	Wed	- 24/Feb/2010		~
Current B	alance:			UGX	Payment Balance:				
Payment Mode:				Reciept No.:					
L			Connectio	on Payn	nent Records				
Index	Custon	ner Number	Customer Name				Location		
1	1345		Ndoroheje Vianne	∋y			Mwalo		
2	1346		Sebusaga Emma	nuel			Karabosha		
<				_				_	>
🔶 Add Ne	w 🚯	Edit 🗟 Refr	esh					X	Close

The customer record can be selected by the customer number from the drop down list alongside the customer number label. After selecting the customer number and you click on Compute, the payment amount is displayed, as shown in the figure above. If the customer number is not known then the customer record can be selected by the customer name.

As you type or input the amount paid by the customer, the Current Balance is calculated by the system automatically as shown in the figure below.

The payment mode is selected as it was done by the customer and the respective receipt number is entered by the user.

FORM OPERATIONS

Add New: - In this operation, a new connection balance payment record is generated and entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New 🔀
♪	Fill up all the records before clicking on the Add New button
	ок

Edit: - Click Edit to change or delete any customer balance payment record and the following Edit Connection Payment Records form will be displayed. Select the customer whose details you want to edit from the Datagrid view.

	Edit Connection Payment Records									
	Customer Number	Customer Name		Payment Date	Amount Paid					
•	1345	Ndoroheje Vianney		11/4/2009	50000					
	1346	Sebusaga Emmanuel		11/6/2009	50000					
*										
1					N					
G Pi	revious) 🛃 Save) 🎽	C Delete			🚺 Close					

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing Sys	stem 2010 🛛 🔀
Are sure you want	to delete this record?
Yes	No
Yes	No

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.3.3.3.2 Customer Reconnection



The Customer Reconnection Balance Payment form below is used to capture customer's reconnection balance payment details and display them when required.

This form acts as a customer's reconnection balance payment point into the system. Customers that are reconnected to the water system, their balance payments are recorded from here to the system.

The payment date is selected by the user as by the date on which the customer made his payment at the cash office.

	Reconnection Balance Payment Form 🗅								
	Customer	Number:		V Compute		Customer Name:			*
	Amount Pa	aid:			UGX	Payment Date:	Wed	- 24/Feb/2010	~
	Current B	alance: [:		UGX	Payment Balance:			
	Payment I	Mode:		~		Reciept No.:			
L				Connectio	on Payn	nent Records			
	Index	Custon	ner Number	Customer Name				Location	
Ľ	•								<u> </u>
C	Add Ne	w 🦓	Edit 🗟 Refr	esh					🔀 Close

The customer record can be selected by the customer number from the drop down list alongside the customer number label. After selecting the customer number and you click on Compute, the payment amount is displayed, as shown in the figure above. If the customer number is not known then the customer record can be selected by the customer name.

As you type or input the amount paid by the customer, the Current Balance is calculated by the system automatically as shown in the figure below.

The payment mode is selected as it was done by the customer and the respective receipt number is entered by the user.

FORM OPERATIONS

Add New: - In this operation, a reconnection balance payment record is generated and entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New 🔀
♪	Fill up all the records before clicking on the Add New button
	ок

Edit: - Click Edit to change or delete any customer reconnection balance payment record and the following Edit Connection Payment Records form will be displayed. Select the customer whose details you want to edit from the Datagrid view.

Edit Reconnection Payment Records									
		Customer Number	Customer Name		Payment Date	Amount Paid			
	*								
	<					N			
I	•								
	🔇 Pr	evious) 🛃 Save) 🔰	Delete			🔀 Close			

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing Sys	stem 2010 🛛 🔀
Are sure you want	to delete this record?
Yes	No

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.3.3.4 Customer Invoice

		Customer Invo	ice P	rocessing		Ē
Year:	2009 🖌	Month: December	~	Customer Name:		~
Location:			~	Customer Number	:	Compute
-		Customer's E	illing Re	cords		
Index	Customer Number	Customer Name			Location	~
1	1	Kwizera Alex.1			Kisoro-Kabale road	1 -
2	2	Harerimana Boniface			Kisoro-Kabale road	1
3	3	Kabami Nteziyaremye	(Microo	are)	Kisoro-Kabale road	1
4	4	Panda (UML)			Kisoro hill /Kisoro-	Kabale
5	5	Nteziryayo Abdul			Kisoro-Kabale road	t i
6	6	Segawa. Buruhani.1			Kisoro-Kabale road	t i
7	7	The Manager (Bufumb	ira Hote	l)	Kisoro-Kabale road	1
8	8	Hitimana Lukanika(Dr)		Kisoro-Kabale road	1
9	9	Hareba Benon.1			Kisoro-Kabale road	1
10	10	Ahamed Fayida (Park	View ho	use)	Kisoro-Kabale road	1
11	12	Mugabo John.1			Kisoro Hill Village	
12	13	Naana Richard			Kisoro Hill Village	
13	15	Mugabo Salim			Kisoro Hill Village	
14	16	Kwizera Herberts Hor	ne		Kisoro Hill Village	
15	17	Nsenga Gerald			Chuho road	
16	18	Niyonzima Ivan			Kisoro Hill Village	
17	19	Uwimana Francis.1-(F	lome)		Kisoro Hill Village	
18	20	Bugigi Muhammad -ho	ome		Kisoro Hill Village	
19	21	Mbishibishi John			Kisoro Hill Village	
20	22	Rucakatsi Mahuuku St	anley.1		Kisoro Hill Village	
21	23	Uwimana Francis-2			Kisoro Hill Village	
22	24	Ngirabakunzi Emmanu	iel		Kisoro Hill Village	
23	25	Mulengezi Moses			Kisoro Hill Village	
24	26	The Manager, KIBA			Kisoro-Kabale road	1
25	28	The Manager, Stanbic	bank		Kisoro-Kabale road	~
<						>
Select All	Select None		Refre	esh) 📄 Print Prev	iew 💽	X Close

The Customer Invoice Processing form above is used to print customer bills and display them when required.

The customer bills are sorted by Year, Month, Location, Customer Name and Customer Number by selecting form the dropdown list as required by the system user.

The Customer bills to be printed are selected by checking the check boxes at the beginning of the customer billing record as shown in the figure below.

	Customer Invoice Processing 🗅									
Year:	2009 🔽	Month: December 🛛 🕑	Customer Name:	<						
Location:		∼	Customer Numbe	Compute						
	Customer's Billing Records									
Index	Customer Number	Customer Name		Location 🔷						
✓ 1	1	Kwizera Alex.1		Kisoro-Kabale road						
2	2	Harerimana Boniface		Kisoro-Kabale road						
🗹 3	3	Kabami Nteziyaremye (Microca	are)	Kisoro-Kabale road						
☑ 4	4	Panda (UML)		Kisoro hill /Kisoro- Kabale						
✓ 5	5	Nteziryayo Abdul		Kisoro-Kabale road						
6	6	Segawa. Buruhani.1		Kisoro-Kabale road						
7	7	The Manager (Bufumbira Hotel)	Kisoro-Kabale road						
8	8	Hitimana Lukanika(Dr)		Kisoro-Kabale road						
9	9	Hareba Benon.1		Kisoro-Kabale road						
10	10	Ahamed Fayida (Park View hou	use)	Kisoro-Kabale road						

To select all the records to be printed, Click Select All otherwise Click Select None or select the require records one by one.

When the selection of the required records is done, Click Print Preview. This will result to the display of the form below. Insert the invoice papers in the printer to enable printing of the customer bills.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.



Click here to print the records shown otherwise click Previous to exit without printing and go back the previous form.

4.3.4 Financial details



The Financial details can be displayed by pull down menu on clicking on the customer details command as shown in the figure above.

4.3.4.1 General Details

The Financial Details Form under General Details below is used to display and print financial details that include Billing, Collection, Salary Payment, Expenditure and Consumption Details when required.

Financial Details Form 🗅							
Year: 2009 💌	Month: December 🛛	Compute					
 Billing Details 							
Bl Brought Forward:	42,496,253	UGX	Service Fee:	1,872,000	UGX		
Consumption Fee:	19,711,992	UGX	Sewerage Fee:	1,085,000	UGX		
Total Amount Billed:	69,245,664	UGX	Vat Amount:	4,080,419	UGX		
- Collection Datails							
From Bills:	24,547,025	UGX	Bills Balance:	7,213,823	UGX		
New Connections:	0	ugx	Conn' Balance:	0	UGX		
Re-Connections:	0	ugx	Re-Co Balance:	0	UGX		
-Salary Payment De	atails						
Amount Paid:	0	ugx	Balance:	0	UGX		
Expenditure Detail	s 0	lugx	Water Board	0	lucx		
management.] = =	Water board.	0	Joan		
Consumption Deta	ils						
Water Consumed:	13,141,328	Litres		13,141	Units		
🗟 Refresh 🛛 🔚 Prin	t Preview			X	Close		

The records are sorted by year and Month and the click the Compute button that generates the records according to the criteria specified by the user of the system as seen in the figure above. Click Print Preview to continue with the printing of the displayed records that results to the form below.

Financial Details Form			
🚺 🗐 🚺 🖣 1 of	1 ▶ ▶ ♦ 🙆 🛃	🚽 🗐 🛍 🛃 🖌 100% 🔹	Find Next
KISORO TOWN WATER & SEWERAGE AUTHORITY			
P.O BOX 100, KISORO			
GENERAL FINANCIAL DETAILS			
Billing Details (UGX)			
Bl Brought Forward:	42,496,253	Service Fee:	1,872,000
Consumption Fee:	19,711,992	Sewerage Fee:	1,085,000
Total Amount Billed:	69,245,664	Vat Amount:	4,080,419
Collection Details (UGX)			
From Bills:	24,547,025	Bills Balance:	7,213,823
New Connections:	0	Cont Balance:	0
Re-Connections:	0	Re-CoBalance:	0
Salary Payment Details (UGX)			
Previous			
Click here to print the records shown otherwise click Previous			

to exit without printing and go back the previous form.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.3.4.2 Accumulation

The Financial Accumulation Form under Accumulation below is used to display and print accumulation details from the collection as recorded form the payment made by the customers.
Financial Accumulation Form 😂							
Year: 2009 💌 Month:	December 🔽 🕻	ompute					
1: 0	0	17: 0	24,547,025				
2: 0	0	18: 0	24,547,025				
3: 0	0	19: 0	24,547,025				
4: 0	0	20: 0	24,547,025				
5: 0	0	21: 0	24,547,025				
6: 0	0	22: 0	24,547,025				
7: 0	0	23: 0	24,547,025				
8: 0	0	24: 0	24,547,025				
9: 0	0	25: 0	24,547,025				
10: 0	0	26: 0	24,547,025				
11: 0	0	27: 0	24,547,025				
12: 24,547,025	24,547,025	28: 0	24,547,025				
13: 0	24,547,025	29: 0	24,547,025				
14: 0	24,547,025	30: 0	24,547,025				
15: 0	24,547,025	31: 0	24,547,025				
16: 0	24,547,025						
Collection Details							
Total Amount Collected: 24	,547,025	UGX Total Balance: 7,213	3,823 UGX				
Refresh 🔚 Print Previe	w		🔀 Close				

The records are sorted by year and Month and the click the Compute button that generates the records according to the criteria specified by the user of the system as seen in the figure above. Click Print Preview to continue with the printing of the displayed records that results to the form below.

		Financial /	Accumul	ation	Form	6
	₫ ◀ 1	of 1 🕨 🕅 🗢 🔕 🚅 🚑 🔲	100	%	Find Next	
	ŀ	ISORO TOWN WATER	& SEWI	ERAG	E AUTHORITY	^
		P.O BOX	100, KISC	RO		
		Accumu	lation Deta	ils		
						,
1.	0	0	17.	0	0	
2.	0	0	18.	0	24,547,025	≣
З.	0	0	19.	0	24,547,025	
4.	0	0	20.	0	24,547,025	
5.	0	0	21.	0	24,547,025	
6.	0	0	22.	0	24,547,025	
7.	0	0	23.		24,547,025	
8.	0	0	24.	0	24,547,025	
9.	0	0	25.	0	24,547,025	
10.	0	0	26.	0	24,547,025	
11.	n	Û	27.	n	24 547 025	~
O Pre	evious				j,	

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.4 Media Player

The Media Player is used to play your favorite music and videos while executing other program features. It is initiated by clicking Open Sound/Video File command as shown in the figure below.



Clicking Open Sound/Video File command displays the figure below.

Open		? 🔀
Look in:	📑 My Documents 💽	3 🦻 📂 🛄 •
Pecent	Adobe AdobeStockPhotos Alcohol 120% Computer_network_files FIFA 08	NFS Most Wanted NokiaLifeblogData SQL Server Management Studi Trial1 Updater5 Version Cue Nisual Studio 2005
My Documents	 Fin Hss Bronchures MONEY My Music My Pictures NeroVision 	Visual Studio 2008
My Computer	Network_topology_files	biz card Book1
My Network	File name: I Files of type: All Files (*.*)	Open Cancel

The Sound/Video File can be opened by clicking File the Open.

Browse for the file you want to play and click Open as shown in the figure below.

Open						? 🗙
Look in:	🚞 Bongo		*	3 🦻	ب 🔝 🔊	
Content Conten	🙀 One thing-Wyre 🙀 Yule Pale - Red:	e ft amani san				
Desktop						
J My Documents						
My Computer						
X_	File name:	One thing-Wyre ft amani			~	Open
My Network	Files of type:	All Files (*.*)			~	Cancel

Click Open will prompt the Sound/Video file to play automatically as shown in the figure below.



4.5 Menu bar

4.5.1 File



4.5.1.1 Open

The Open command prompts to open the Sound/Video File to be played in the media player.

4.5.1.2 Print

The Print command prompts to print the selected records by the system users.

4.5.1.3 Print Preview

The Print Preview command prompts to view the records to be printed by the system users.

4.5.1.4 Print Setup

The Print Setup command prompts the user to setup the print options.

4.5.1.5 Log Off

The Log Off command prompts the system to log off and return to the introduction interface for other users to login into the system with their user name and passwords.

4.5.1.6 Exit

The Exit command prompts the system to shutdown and exit completely.

4.5.2 Edit



4.5.2.1 Undo

The Undo command prompts the system to undo the change made.

4.5.2.2 Redo

The Redo command prompts the system to redo the change made.

4.5.2.3 Cut

The Cut command prompts to cut or remove the selected text data in the system.

4.5.2.4 Copy

The Copy command prompts to make a copy or remove of the selected text data in the system.

4.5.2.5 Paste

The Paste command prompts to paste the text data that was previously copied or cut by the system user in the system.

4.5.2.6 Select All

The Select All command prompts to select all text data in the system.

4.5.3 View



4.5.3.1 Toolbar

The Toolbar command prompts to show or hide the system toolbar.

4.5.3.2 Status bar

The Status bar command prompts to show or hide the system status bar.

4.5.3.3 Invoices



The Invoices command prompts to show the customer invoices by year, month and by customer number.

4.5.3.3.1 By Year

		Customer Invoi	ce Processing	E
Year:	2009 👻		Customer Name:	×
Location	Bigina		~	Compute
		Customer's Bi	lling Records	
Index	Customer Number	Customer Name		Location 🔥
1	913	Bitangaro Sam Kwizera	3	Bigina Village /Munzererc
2	858	Hafasha Godfrey		Bigina Village
3	846	Twebaze Annociata		Bigina village
4	410	Nsabuwera Aaron		Bigina Village, Rukiribuga
5	409	Nkunze Emmanuel		Bigina Village, Rukiribuga
6	370	Tusiime Bernard(Rev).1	L	Bigina village / Mutesa cl
7	368	Kwizera Gideon(Rev)		Bigina Plot 4, P.O. Box 25
8	768	Rukundo Tom(Dr)		Bigina
9	749	Sebagabo Bosco.1		Bigina Village
10	743	Maiso Francis		Bigina village
11	737	Bizimenyera John		Bigina
12	711	Nyiraneza Dorothy		Bigina
13	141	Tumushime Charles		Bigina /Muzerero road
14	140	Tereraho John		Bigina /Muzerero road
15	138	Harera Boniface.2		Bigina /Muzerero road
16	87	Nemeye Nelson		Bigina Village,Budallah ro
17	750	Ntanyungura Aurelian		Bigina Village
18	931	Ishimwe Collins		Bigina Village / Gasasira
19	1189	Mbonizana samuel		Bigina/Nyarusiza road
20	592	Nzabandora Paul. 2		Bigina /Buddallah road
21	593	Bakame Dominic		Bigina / Rukiribuga rad
22	1180	Nsabiyera Emmanuel S	tephen	Bigina
23	1170	Niyonzima Stephen	-	Bigina Village
24	729	Nsenga Christopher		Bigina
25	156	Nsabimana Robert .1		Bigina Village
	1000	· ·····		n:_:
Coloot All				
Select All			🍣 Refresh 📄 Print Prev	view 🔀 Close

The Customer Invoice Processing form above is used to print customer bills sorted by year and display them when required.

The customer bills are also sorted by Location and Customer Name by selecting form the dropdown list as required by the system user.

The Customer bills to be printed are selected by checking the check boxes at the beginning of the customer billing record.

To select all the records to be printed, Click Select All otherwise Click Select None or select the require records one by one.

When the selection of the required records is done, Click Print Preview. This will result to the display of the print invoice form. Insert the invoice papers in the printer to enable printing of the customer bills.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

		Customer Invo	ice Proc	essing		
Year:	2009 🔽	Month: December	Cu	stomer Name:		<
Location			~		Cor	npute
		Customer's Bi	illing Record	ls		
Index	Customer Number	Customer Name			Location	^
1	1	Kwizera Alex.1			Kisoro-Kabale road	
2	2	Harerimana Boniface			Kisoro-Kabale road	
3	3	Kabami Nteziyaremye	(Microcare))	Kisoro-Kabale road	
4	4	Panda (UML)			Kisoro hill /Kisoro- Ka	abale
5	5	Nteziryayo Abdul			Kisoro-Kabale road	
6	6	Segawa. Buruhani.1			Kisoro-Kabale road	
7	7	The Manager (Bufumbi	ira Hotel)		Kisoro-Kabale road	
8	8	Hitimana Lukanika(Dr)		Kisoro-Kabale road	
9	9	Hareba Benon.1			Kisoro-Kabale road	
10	10	Ahamed Fayida (Park V	View house))	Kisoro-Kabale road	
11	12	Mugabo John.1			Kisoro Hill Village	
12	13	Naana Richard			Kisoro Hill Village	
13	15	Mugabo Salim			Kisoro Hill Village	
14	16	Kwizera Herberts Hom	ne		Kisoro Hill Village	
15	17	Nsenga Gerald			Chuho road	
16	18	Niyonzima Ivan			Kisoro Hill Village	
17	19	Uwimana Francis.1-(H	lome)		Kisoro Hill Village	
18	20	Bugigi Muhammad -ho	me		Kisoro Hill Village	
19	21	Mbishibishi John			Kisoro Hill Village	
20	22	Rucakatsi Mahuuku Sta	anley.1		Kisoro Hill Village	
21	23	Uwimana Francis-2			Kisoro Hill Village	
22	24	Ngirabakunzi Emmanu	el		Kisoro Hill Village	
23	25	Mulengezi Moses			Kisoro Hill Village	
24	26	The Manager, KIBA			Kisoro-Kabale road	
25	28	The Manager, Stanbic I	bank		Kisoro-Kabale road	~
2 00		Allering Determined			Marine Malada and	>
Select All	Select None		2 Refresh	📄 Print Prev	iew 🔀	Close

4.5.3.3.2 By Month

The Customer Invoice Processing form above is used to print customer bills sorted by year and month and display them when required.

The customer bills are also sorted by Location and Customer Name by selecting form the dropdown list as required by the system user.

The Customer bills to be printed are selected by checking the check boxes at the beginning of the customer billing record.

To select all the records to be printed, Click Select All otherwise Click Select None or select the require records one by one.

When the selection of the required records is done, Click Print Preview. This will result to the display of the print invoice form. Insert the invoice papers in the printer to enable printing of the customer bills.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

	Customer Invo	ice Pı	rocessing		Ē
Year: 2009 💌 M	1onth: December	~	Customer Name:	Kwizera Alex.1	~
Location:		~	Customer Number:	1 🗸	Compute
	Customer's E	Billing Re	cords		
Requirements	Details				
Customer Number	1				
Customer Name	Kwizera Alex.1				
Location	Kisoro-Kabale roa	d			
Basis of Charge	Commercial				
Meter Number	FA00409000676				
Current Reading	272652				
Previous Reading	269959				
Consumption	2693				
-					
Reading Date	11/30/2009				
Billing Date	12/1/2009				
Invoice Number	2953				
Previous Invoice Balance	271248				
Previous Payments	0				
Balance Brought Forward	271248				
Service Fee	1500				
Bill Amount	4039.5				
Vat Amount	4597.11				
Sewerage Fee	20000				
_					
Total Amount	301384.61				
Record Date	11/30/2009				
System User	Barbra				
Select All Select None		Defe	sch 🕞 Drint Droui		Close
		Rene			Ciose

4.5.3.3.3 By Customer Number

The Customer Invoice Processing form above is used to print customer bills sorted by year, month and customer number and display them when required.

The customer bills are also sorted by Location and Customer Name by selecting form the dropdown list as required by the system user.

The Customer bills to be printed are selected by checking the check boxes at the beginning of the customer billing record.

To select all the records to be printed, Click Select All otherwise Click Select None or select the require records one by one.

When the selection of the required records is done, Click Print Preview. This will result to the display of the print invoice form. Insert the invoice papers in the printer to enable printing of the customer bills.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

File Edi	t View	Tools	Windows	Help			
i 🛧 🍣 🔒	🖌 🖌 Т	oolbar			B (🥖 🔊 🔌 🚾 🔀	
	🖌 🖌 St	tatus Bar					
🎜 Logo	T 📄 h	nvoices		•			
	C	ustomer T	ransctions	•		By Year	
V	c c	ustomer L	edger Card.			By Month	
k	SI SI	tocked Ite	ms			By Week	
Ū		21				By Date	
X X		71				By Customer	
Į		[3]					
	1	~					

4.5.3.4 Customer Transactions

4.5.3.4.1 By Year

		Customer Transactions Form	6						
Year: 20	09 🖌		Compute						
Transaction Records									
Index	Customer Number	Customer Name	Location 🔷						
1	1	Kwizera Alex.1	Kisoro-Kabale road						
2	2	Harerimana Boniface	Kamonyi						
3	3	Kabami Nteziyaremye (Microcare)	Kisoro-Kabale road						
4	4	Panda (UML)	Kisoro hill /Kisoro- Kabale						
5	4	Panda (UML)	Kamonyi						
6	5	Nteziryayo Abdul	Kisoro-Kabale road						
7	5	Nteziryayo Abdul	Kisoro-Kabale road						
8	6	Segawa. Buruhani.1	Kisoro-Kabale road						
9	7	The Manager (Bufumbira Hotel)	Kisoro-Kabale road						
10	7	The Manager (Bufumbira Hotel)	Kisoro-Kabale road						
11	7	The Manager (Bufumbira Hotel)	Kisoro-Kabale road						
12	8	Hitimana Lukanika(Dr)	Kisoro-Kabale road						
13	9	Hareba Benon.1	Kisoro-Kabale road						
14	9	Hareba Benon.1	Kisoro-Kabale road						
15	10	Ahamed Fayida (Park View house)	Kisoro-Kabale road						
16	13	Naana Richard	Kisoro Hill Village						
17	13	Naana Richard	Mutolere road						
18	13	Naana Richard	Kisoro Hill Village						
19	13	Naana Richard	Kisoro Hill Village						
20	16	Kwizera Herberts Home	Kisoro Hill Village						
21	16	Kwizera Herberts Home	Kivegeri road / Nyagishin						
22	16	Kwizera Herberts Home	Kisoro Hill Village						
23	17	Nsenga Gerald	Chuho road						
24	17	Nsenga Gerald	Kisoro - Kabale road 🛛 🗸						
<									
Collectio	on Details								
Total Am	ount Collected: 78,38	9,280 UGX Total Balance: 2	7,893,132 UGX						
2 Refrest	n 📄 Print Preview		🔀 Close						

The Customer Transaction form above is used to print customer transaction details sorted by year and display them when required.

Click Print Preview. This will result to the display of the print form as shown in the figure below.

		Cust	omer T	ransact	ions Fo	rm		
	🖣 1 of 32 🕨	🕨 🗧 😣 🖪	1 6 🗆 1] 🛃 🛛 📔 100%	• •		Find Ne	ext
	KISORO	TOWN W	ATER &	& SEWEI	RAGE A	UTHOR	ITY	
		q	O BOX 1	00 KISOR	0			
		Ger	eral Tran	eactions Pe	nort			
		<u>uer</u>						
Customer No.	Customer Name	Location	Basis Of Charge	Payment Date	Amount	Balance	Mode	Reciept No.
1	Kwizera Alex.1	Kisoro- Kabale road	Commerc ial					
				01/Jan/0001	300,000	1,385	Cash	32797
2	Harerimana Boniface	Kamonyi						
				01/Jan/0001	50,000	20,856	Cash	31551
3	Kabami Nteziyaremye (Microcare)	Kisoro- Kabale road	Commerc ial					
				11/Nov/2009	111,100	83	Cash	31973
4	Panda (UML)	Kisoro hill /Kisoro- Kabale road	Commerc ial					
				10/Aug/2009	36,400	170	Cash	31291
				11/Nov/2009	70,400	-2	Cash	32661
5	Nteziryayo Abdul	Kisoro- Kabale road	Domestic					
				10/Aug/2009	10,000	-552	Cash	32783

Click the print icon to print the records shown otherwise click Previous to exit without printing and go back the previous form.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.3.4.2 By Month

The Customer Transaction form below is used to print customer transaction details sorted by year and month and display them when required.

Voor		Customer Transactions Form	<u> </u>
7 ear. 20	Month: De		Compute
		Transaction Records	
Index	Customer Number	Customer Name	Location 🗠
1	1	Kwizera Alex.1	Kisoro-Kabale road 📃
2	4	Panda (UML)	Kisoro hill /Kisoro- Kabale
3	5	Nteziryayo Abdul	Kisoro-Kabale road
4	7	The Manager (Bufumbira Hotel)	Kisoro-Kabale road
5	8	Hitimana Lukanika(Dr)	Kisoro-Kabale road
6	9	Hareba Benon.1	Kisoro-Kabale road
7	13	Naana Richard	Kisoro Hill Village
8	16	Kwizera Herberts Home	Kisoro Hill Village
9	17	Nsenga Gerald	Chuho road
10	20	Bugigi Muhammad -home	Kisoro Hill Village
11	21	Mbishibishi John	Kisoro Hill Village
12	22	Rucakatsi Mahuuku Stanley.1	Kisoro Hill Village
13	25	Mulengezi Moses	Kisoro Hill Village
14	30	Bakenga James -1	Kisoro-Kabale road
15	35	Kisoro Tourist Hotel	Kisoro-Kabale road
16	41	District Water Office	Kisoro-Bunagana road
17	45	Rwabanda Sam	Nyamirima Village
18	45	Rwabanda Sam	Nyamirima Village
19	47	Nturo John.C	Nyamirima Village
20	51	Dusabe Geoffrey.1	Bunagana road
21	53	The Parish Priest, Kisoro Catholic Parish	Bunagana road
22	54	Duhimbaze Kenneth	Bunagana road
23	55	Dusabe Geoffrey. 3	Kivengere road
24	56	Nzabonimpa Francis C/O Halera Boniface	Bunagana road 🛛 🗸 🗸
<			-
Collecti	on Details		
Total Am	ount Collected: 24,54	7,025 UGX Total Balance: 7,	213,823 UGX
Refresl	h) 📄 Print Preview		Close

Click Print Preview to print the displayed customer transaction details.

Click the print icon to print the records shown otherwise click Previous to exit without printing and go back the previous form.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.3.4.3 By Week

The Customer Transaction form below is used to print customer transaction details sorted by year, month and week and display them when required.

		Customer Transactions Form						
Year: 2009 V Month: December V Week: 4 V								
		Transaction Records						
Index	Customer Number	Customer Name	Location	^				
1	20	Buqiqi Muhammad -home	Kisoro Hill Village					
2	22	Rucakatsi Mahuuku Stanley.1	Kisoro Hill Village					
3	47	Nturo John.C	Nyamirima Village					
4	58	Sebutale Pascal	Bunagana road					
5	62	Dufitimukiza Christopher-farm	Bunagana road					
6	70	JSH Tank 10PD Kiconco Peace	Bunagana road					
7	84	Nkeza Annociata	Church road					
8	93	Marimanya Connie 1	Circular road					
9	102	Bugigi Muhammed(Virunga Hotel)	Mutanda road					
10	102	Bugigi Muhammed(Virunga Hotel)	Mutanda road					
11	103	Mugisha Charles	Mutanda road					
12	117	Sebahutu Geofrey	Chuho road					
13	135	Kiganda Abdul Musobya	Nyarusiza road					
14	162	Niyonsaba Alex	Gasasira road					
15	176	Ndagiza Said Sirati	Main Village					
16	187	Sebuhingiririza Rwabitiplot43	Main Village					
17	199	New Market PTs.	Main Village					
18	202	New park PTS	Main Village					
19	225	Rezida Joseph	Karumena Village					
20	240	Sebisura Manzi	Kamonyi					
21	252	Hategek Imana.Syliver	Mutolere road					
22	259	Mayunga Pontius 2	Mbongera/Bugera					
23	264	Nkusi Wa Bnyavanga	Mutolere road					
24	286	District Director of Health Services	Kisoro - Kabale road	~				
<				>				
Collectio	n Details							
Total Am	ount Collected: 6.758.	971 UGX Total Balance: 1.6	35,187 U	IGX				
Refrest	n 📄 Print Preview		🔀 CI	ose				

Click Print Preview to print the displayed customer transaction details.

Click the print icon to print the records shown otherwise click Previous to exit without printing and go back the previous form.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.3.4.4 By Date

The Customer Transaction form below is used to print customer transaction details sorted by year, month, week and date and display them when required.

		Customer Transactions Form	C
Year: 20	09 🛛 Month: No	vember 👻 Week: 2 💌 Payment	t Date: 11 👻 Compute
		Transaction Records	
Index	Customer Number	Customer Name	Location 🧹
1	3	Kabami Nteziyaremye (Microcare)	Kisoro-Kabale road
2	5	Nteziryayo Abdul	Kisoro-Kabale road
3	7	The Manager (Bufumbira Hotel)	Kisoro-Kabale road
4	25	Mulengezi Moses	Kisoro Hill Village
5	29	Nkurunziza Peter.1	Kisoro-Kabale road
6	30	Bakenga James -1	Kisoro-Kabale road
7	45	Rwabanda Sam	Nyamirima Village
8	46	Semucyo Enos	Nyamirima Village
9	53	The Parish Priest, Kisoro Catholic Parish	Bunagana road
10	58	Sebutale Pascal	Bunagana road
11	59	Rubibi Yeremiah	Bunagana road
12	66	MSH.9 Mrs Ndiramiye	Bunagana road
13	70	JSH Tank 10PD Kiconco Peace	Bunagana road
14	72	JSH.14&15Twebaze Wilbroad	Bunagana road
15	73	JSH.17&18 Kisoro Hospital	Bunagana road
16	79	Kagayifu Geoffrey	Bunagana road
17	82	Sabiti Epaphrah.1	Church road
18	102	Bugigi Muhammed(Virunga Hotel)	Mutanda road
19	104	Hanyurwa Sheeba.1	Mutanda road
20	105	The Manager, Mubano Hotel	Mutanda road
21	105	The Manager, Mubano Hotel	Mutanda road
22	110	Nyagahima Joseline	Chuho road
23	132	Hakiza William	Nyarusiza road
24	133	Nsababera Junior	Nyarusiza road 🔍 🗸
<			>
Collectio	on Details		
Total Am	ount Collected: 8,868 ,	193 UGX Total Balance: 2,6	521,643 UGX
Refrest	n 📄 Print Preview		🔀 Close

Click Print Preview to print the displayed customer transaction details.

Click the print icon to print the records shown otherwise click Previous to exit without printing and go back the previous form.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.3.4.5 By Customer

The Customer Transaction form below is used to print customer transaction details sorted by year, month, week, date and customer number or name and display them when required.

				Cı	stomer '	Transact	ion	s Form				ĉ
Payment	Year:	2009	*	Month:	December	~	W	eek:	P	ayment D	ate:	~
Customer	Name:	Abex V	Vash	ing Bay		~	Cu	ustomer Number	: 7	24	~	Compute
Location:		Kisoro	Hill V	/illage			Ba	asis of Charge:	(Commerc	ial	
					Tran	saction Reco	ords					
Index	Payn	nent Da	te		Amount I	Paid		Balance			Mo	de
1	12/1	7/2009			150000			101326.94			Cas	h
2	12/3	0/2009			70000			31326.94			Cas	h
<												>
- Collectio	n Dota	ile				,						
Total Amo	ount Co	llected:	220	,000		UGX	Tot	al Balance: 31,	327			UGX
🍣 Refresh		Print Pre	eview	•							(🔀 Close

Click Print Preview to print the displayed customer transaction details as shown in the figure below.

Image:
KISORO TOWN WATER & SEWERAGE AUTHORITY P.O BOX 100, KISORO Customer Financial Details Report Customer Name: Abex Washing Bay Customer 724 Basis of Charge: Commercial Location: Kisoro Hill Village
P.O BOX 100, KISORO Customer Financial Details Report Customer Name: Abex Washing Bay Customer 724 Basis of Charge: Commercial Number: Constorer Kisoro Hill Village
Customer Financial Details Report Customer Name: Abex Washing Bay Customer 724 Basis of Charge: Commercial Number: Location: Kisoro Hill Village
Customer Name: Abex Washing Bay Customer 724 Basis of Charge: Commercial Number: Location: Kisoro Hill Village
Customer Name: Abex Washing Bay Customer 724 Basis of Charge: Commercial Number: Location: Kisoro Hill Village
Customer 724 Basis of Charge: Commercial Number: Location: Kisoro Hill Village
Number: Location: Kisoro Hill Village
Location: Kisoro Hill Village
Payment Date Amount Balance Mode Recent No. Invoice No. Record Da
01/Jan/0001 70.000 31.327 Cash 32926 2960 12/19/200

Click the print icon to print the records shown otherwise click Previous to exit without printing and go back the previous form.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.3.5 Customer Ledger Card

The Customer Ledger form below is used to print customer transaction details sorted by the period between years and months and display them when required.

	Cus	tomer Transa	ctions Form		2
) (То		
Year: 20	008 💙 Month:	~	Year: 2010 💌 r	Month:	~
Custome	er Name: Abex Washing Bay	~	Customer Num	ber: 724 🗸	Compute
Location	: Kisoro Hill Village		Basis of Charg	e: Commercial	
Index	Meter Number	Current Reading	Previous Reading	Consumption	Invoic
1	132753	742867	593321	149546	2754
2	132753	833983	742867	91116	2960
3	132753	833983	742867	91116	2960
4	132753	593321	555761	37560	1288
5	132753	593321	555761	37560	1288
6	132753	742867	593321	149546	2754
<					<u>></u>
Collectio	on Details				
Total Am	ount Collected: 575,000	UG)	K Total Balance: 1	68,282	UGX
Refresh	n 📄 Print Preview				🚺 Close

Click Print Preview to print the displayed customer transaction details as shown in the figure below.

Image:			Cust	tomer Trai	nsactions	Form		
KISORO TOWN WATER & SEWERAGE AUTHORITY P.O BOX 100, KISORO CUSTOMER LEDGER CARD Customer Name: Abex Washing Bay Customer Number: 724 Basis of Charge: Commercial Location: Kisoro Hill Village Meter Number: 132753 Date Current Reading Previous Reading Consumption Amount of Bill Amount of Paid No. Balance Ol/Jan/0001 742.867 91,116 168,282 80,000 2754 88,282 Ol/Jan/0001 742,867 91,116 168,282 80,000 2754 88,282 Ol/Jan/0001 742,867 91,116 168,282 80,000 2754 88,282 01/Jan/0001 83,983 742,867 91,116 101,327 70,000 2960 101,327 10,001 106,815 <t< td=""><td></td><td>1 of 1 🕨</td><td>) 🗧 🛛 🕏</td><td> 🖪 🔲 🖬 🔒</td><td>100%</td><td>•</td><td>Find I</td><td>Next</td></t<>		1 of 1 🕨) 🗧 🛛 🕏	🖪 🔲 🖬 🔒	100%	•	Find I	Next
P.O BOX 100, KISOROCUSTOMER LEDGED CARDCustomer NammerAbex Varing Baz724Sais of ChargenCommercialDotation:724Sais of ChargenCommercialDateCurrent ReadingPrevious ReadingConsumption Amount of BillAmount of PaidNovice ReadingBalance Date01/Jan/0001742,86793,321149,546168,28280,000275482,82201/Jan/0001833,983742,86791,116101,32770,0002960101,32701/Jan/0001833,983742,86791,116101,32770,000296031,32710/Dec/2009593,221555,76137,560168,15335,000128.8106,81510/Dec/2009593,231555,76137,560106,81535,000128.8106,81510/Dec/2009742,86793,321149,46638,282170,000128.8163,81510/Dec/2009593,321555,76137,560106,81535,000128.8163,81510/Dec/2009593,321555,76137,560106,81535,000128.8163,82510/Dec/2009742,86793,321149,54638,282170,000128.8163,825		KISORO	TOWN W	ATER & S	EWERAG	E AUTH	ORITY	
P.O BOX 100, KISORO CUSTOMER LEDGER CARD Customer Name: Abex Washing Bay Customer Number: 724 Basis of Charge: Commercial Location: Kisoro Hill Village Meter Number: 132753 Date Current Reading Previous Reading Consumption Reading Amount of Bill Amount of Paid Invoice Balance 01/Jan/0001 742,867 593,321 149,546 168,282 80,000 2754 88,282 01/Jan/0001 833,983 742,867 91,116 251,327 150,000 2960 101,327 01/Jan/0001 833,983 742,867 91,116 101,327 70,000 2960 31,327 10/Dec/2009 593,321 555,761 37,560 176,815 70,000 1288 106,815 10/Dec/2009 593,321 555,761 37,560 106,815 35,000 1288 71,815 10/Dec/2009 742,867 93,321 149,546 382,822 170,000 2754 168,282					VICODO			
CUSTOMER LEDGER CARD Customer Name: Abex Washing Bay Customer Number: 724 Basis of Charge: Commercial Location: Kisoro Hill Village Meter Number: 132753 Date Current Reading Previous Reading Consumption Amount of Bill Amount of Paid No. Balance 01/Jan/0001 742,867 993,321 149,546 168,282 80,000 2754 82,282 01/Jan/0001 833,983 742,867 91,116 101,327 150,000 2960 101,327 0/Jan/0001 833,983 742,867 91,116 101,327 70,000 2960 31,327 10/Dec/2009 593,321 555,761 37,560 176,815 70,000 1288 106,815 10/Dec/2009 593,321 555,761 37,560 106,815 35,000 1288 71,815 11/Nov/2009 742,867 593,321 149,546 383,282 170,000 2754 168,282 <td></td> <td></td> <td>F</td> <td>2.0 BOX 100,</td> <td>KISORO</td> <td></td> <td></td> <td></td>			F	2.0 BOX 100,	KISORO			
Customer Name: Abex Washing Bay Customer Nume: 724 Basis of Charge: Commercial Location: Kisoro Hill Village Meter Number: 132753 Date Current Reading Previous Reading Consumption Amount of Bill Amount of Paid Invoice Balance 01/Jan/0001 742,867 993,321 149,546 168,282 80,000 2754 88,282 01/Jan/0001 833,983 742,867 91,116 101,327 70,000 2960 31,327 01/Jan/0001 833,983 742,867 91,116 101,327 70,000 2960 31,327 01/Jan/0001 93,321 555,761 37,560 106,815 35,000 1288 106,815 10/Dec/2009 93,321 555,761 37,560 106,815 35,000 1288 71,815 11/Nov/2009 742,867 93,321 149,546 38,282 170,000 2754 168,282			<u>Cl</u>	JSTOMER LED	GER CARD			
Customer Number: 724 Basis of Charge: Commercial Location: Kisoro Hill Village Meter Number: 132753 Date Current Reading Previous Reading Consumption Amount of Bill Amount of Paid Invoice No. Balance 01/Jan/0001 742,867 593,321 149,546 168,282 80,000 2754 88,282 01/Jan/0001 833,983 742,867 91,116 251,327 150,000 2960 101,327 01/Jan/0001 833,983 742,867 91,116 101,327 70,000 2960 31,327 10/Dec/2009 593,321 555,761 37,560 176,815 70,000 1288 106,815 10/Dec/2009 593,321 555,761 37,560 106,815 35,000 1288 71,815 11/Nov/2009 742,867 593,321 149,546 388,282 170,000 2754 168,282	Customer Nan	ne: Abex	Washing Bay					
Location: Kisoro Hill Village Meter Number: 132753 Date Current Reading Previous Reading Consumption Amount of Bill Amount of Paid Invoice No. Balance No. 01/Jan/0001 742,867 593,321 149,546 168,282 80,000 2754 88,282 01/Jan/0001 833,983 742,867 91,116 251,327 150,000 2960 101,327 01/Jan/0001 833,983 742,867 91,116 101,327 70,000 2960 31,327 10/Dec/2009 593,321 555,761 37,560 176,815 70,000 1288 106,815 10/Dec/2009 593,321 555,761 37,560 106,815 35,000 1288 71,815 11/Nov/2009 742,867 593,321 149,546 338,282 170,000 2754 168,282	Customer Nur	nber: 724			Basis of Cł	narge: Co	mmercial	
Location:Kisoro Hill VillageMeter Number:132753DateCurrent ReadingPrevious ReadingConsumption ReadingAmount of BillAmount PaidInvoice No.Balance No.01/Jan/0001742,867593,321149,546168,28280,000275488,28201/Jan/0001833,983742,86791,116251,327150,0002960101,32701/Jan/0001833,983742,86791,116101,32770,000296031,32710/Dec/2009593,321555,76137,560176,81570,0001288106,81510/Dec/2009593,321555,76137,560106,81535,000128871,81511/Nov/2009742,867593,321149,546338,282170,0002754168,282			TT:44 T T:44		2.000 01 01			
DateCurrent ReadingPrevious ReadingConsumptionAmount of BillAmount PaidInvoice No.Balance No.01/Jan/0001742,867593,321149,546168,28280,000275488,28201/Jan/0001833,983742,86791,116251,327150,0002960101,32701/Jan/0001833,983742,86791,116101,32770,000296031,32710/Dec/2009593,321555,76137,560176,81570,0001288106,81510/Dec/2009593,321555,76137,560106,81535,000128871,81511/Nov/2009742,867593,321149,546338,282170,0002754168,282	Location:	K.isor	o Hill Village		Meter Nun	iber: 13.	2153	
01/Jan/0001 742,867 593,321 149,546 168,282 80,000 2754 88,282 01/Jan/0001 833,983 742,867 91,116 251,327 150,000 2960 101,327 01/Jan/0001 833,983 742,867 91,116 101,327 70,000 2960 31,327 01/Dec/2009 593,321 555,761 37,560 176,815 70,000 1288 106,815 10/Dec/2009 593,321 555,761 37,560 106,815 35,000 1288 71,815 11/Nov/2009 742,867 593,321 149,546 338,282 170,000 2754 168,282	Date	Current Reading	Previous Reading	Consumption	Amount of Bill	Amount Paid	Invoice No.	Balance
01/Jan/0001 833,983 742,867 91,116 251,327 150,000 2960 101,327 01/Jan/0001 833,983 742,867 91,116 101,327 70,000 2960 31,327 10/Dec/2009 593,321 555,761 37,560 176,815 70,000 1288 106,815 10/Dec/2009 593,321 555,761 37,560 106,815 35,000 1288 71,815 10/Dec/2009 593,321 555,761 37,560 106,815 35,000 1288 71,815 11/Nov/2009 742,867 593,321 149,546 338,282 170,000 2754 168,282	01/Jan/0001	742,867	593,321	149,546	168,282	80,000	2754	88,282
01/Jan/0001 833,983 742,867 91,116 101,327 70,000 2960 31,327 10/Dec/2009 593,321 555,761 37,560 176,815 70,000 1288 106,815 10/Dec/2009 593,321 555,761 37,560 106,815 35,000 1288 71,815 11/Nov/2009 742,867 593,321 149,546 338,282 170,000 2754 168,282	01/Jan/0001	833,983	742,867	91,116	251,327	150,000	2960	101,327
10/Dec/2009 593,321 555,761 37,560 176,815 70,000 1288 106,815 10/Dec/2009 593,321 555,761 37,560 106,815 35,000 1288 71,815 11/Nov/2009 742,867 593,321 149,546 338,282 170,000 2754 168,282	01/Jan/0001	833,983	742,867	91,116	101,327	70,000	2960	31,327
10/Dec/2009 593,321 555,761 37,560 106,815 35,000 1288 71,815 11/Nov/2009 742,867 593,321 149,546 338,282 170,000 2754 168,282	10/Dec/2009	593,321	555,761	37,560	176,815	70,000	1288	106,815
11/Nov/2009 742,867 593,321 149,546 338,282 170,000 2754 168,282	10/Dec/2009	593,321	555,761	37,560	106,815	35,000	1288	71,815
	11/Nov/2009	742,867	593,321	149,546	338,282	170,000	2754	168,282
	<			1111				
<u>د المحمد المحم</u>	O Previous							

Click the print icon to print the records shown otherwise click Previous to exit without printing and go back the previous form.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.3.6 Stocked Items

The Stocked Items form below is used to print stocked items details sorted by the year, month and item name and display them when required.

			Sto	cked	Items F	orm		(
Year: 20:	10 🔽	Month: Febru	uary	~	Item Name:	Water M	letres	
			St	tocked	Items Recor	ds		
Index	Item Id	It	tem Name				Item Units	Quantity Sto
☑ 1	1	W	ater Metre	S			Pcs	450
<								
Select All	Select No	one						
			Re Re	fresh	Print Pres	view		Close
								0.050

The stocked items to be printed are selected by checking the check boxes at the beginning of the stocked item record as shown in the figure below.

To select all the records to be printed, Click Select All otherwise Click Select None or select the require records one by one.

Click Print Preview to print the displayed stocked items details as shown in the figure below.

			Stocke	d Item	s Form				6
	📢 🖣 1 of 1 🕨 🕅	🔶 🙆 🛊	1 4 🗖 🏛] 🛃 - 100)% 🔹		Fi	nd Next	
	KISORO TOV	VN WAT	FER & \$	SEWER	AGE AUTI	IOR	TΥ		
		P.O	BOX 100,	KISORC)				
SL.No	Item Name	Unit	Quantity Stocked	Additions	Total Recieved	Issue s		Stock Balance	
1	Water Metres	Pcs	450		450		450		
<)
O Pre	vious								

Click the print icon to print the records shown otherwise click Previous to exit without printing and go back the previous form.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.4 Tools



4.5.4.1 Expenditure

The Expenditure command prompts to open the Expenditure Form.

		Expe	nditure Form	Ê		
Expenditure Id:2			Exp. Date:	Fri - 26/Feb/2010 💌		
Exp. Type:			~			
Authorised by: A	rea MAnager		Recieved by:			
Details:				<		
Amount Spent:		UGX Mo	de:	Reciept No.:		
		Exp	enditure Records			
Index Expe	ex Expenditure Id Exp. Date		Expenditure Type	Authorised by		
1 1		26/02/2010	Management	Area MAnager		
<	Ш			>		
🔶 Add New 🛛 🚷	Edit 🔐 Refre	esh		Close		

The expenditure Id is automatically generated by the system, the expenditure date is selected by the system user, and the expenditure type is selected by the user specifying the type of expenditure made either by the Management or by the Water Board as shown in the diagram below.

		Expend	iture Form		ĩ
Expenditure Id:	2		Exp. Date:	Fri - 26/Feb/2010	~
Exp. Type:		~			
Authorised by:	Management Water Board		Recieved by:		
Details:					< <
Amount Spent:		UGX Mode:	~	Reciept No.:	

The person's name that authorized the expenditure to be made is entered under authorised by while the receiver's name is also entered under received by. The details of the expenditure are entered under details and so are the amount spent, mode of payment and the receipt number.

FORM OPERATIONS

Add New: - In this operation, an expenditure record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.



Edit: - Click Edit to change or delete any expenditure record and the following Edit Expenditure Records form will be displayed. Select the expenditure whose details you want to edit from the Datagrid view.

		Edit Expenditu	ire Records	Ĺ
	Expenditure Id	Expenditure Date	Expenditure Type	Authorised By
۱.	1	26/02/2010	Management	Area MAnager
*				
<	III			>
(Previous 🛛 🔚 Save 🖉 🔀 D	elete		🔀 Close

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.



Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.4.2 Meter Status

File Edit View	Tools	Windows	Help	
🚓 🍣 🔚 🖂 🕰	Ex.	penditure		🥖 🔌 😿 💌 🖉 🚳 🛛
	🦦 Ма	eter Status	•	Customer Meters
🧔 Logo Tasks	🚱 Sy	stem Settings	•	Kiosk Meters
EISORO	🎯 Sto	ores Records	•	The second s
	😓 🛛 Ad	lministration	•	
	💄 Ch	ange Password	:l	

4.5.4.2.1 Customer Status

This form updates the connection status of the customers. Customers that are connected to water are recorded in the meter status as connected while those that are not connected to water are recorded in the meter status as Not Connected. All new customers are recorded in the meter status as Not Connected by default. The Customer Meter status form can be shown below.

	Custome	er Meter Statu	s Form		C
Customer	Number: 🗸 Con	pute Custome	r Name:		~
Meter Nu	mber:	Connect	ion Date: Friday	- 26/Feb/2010	~
Meter Sta	atus:	Meter Re	ading:		
		Customer's Records			
Index	Customer's Name	Customer Number	Meter Number	Meter Reading	^
1	Kwizera Alex.1	1	FA00409000676	269959	
2	Harerimana Boniface	2	222309	1910179	
3	Kabami Nteziyaremye (Microc	3	0409000677	324623	
4	Panda (UML)	4	223096	603714	
5	Nteziryayo Abdul	5	04100071	310472	
6	Segawa. Buruhani.1	6	0703186	169002	
7	The Manager (Bufumbira Hotel)	7	FB011909-04	1153009	
8	Hitimana Lukanika(Dr)	8	3692058	659978	
9	Hareba Benon.1	9	0409000679	1284038	
10	Ahamed Fayida (Park View ho	10	025931-05	555198	
11	Seguya Didas	11		0	
12	Mugabo John.1	12	223598	251296	
13	Naana Richard	13	FA024813-05	1380977	
14	Kisoro Mosque	14	134622	44863	
15	Mugabo Salim	15	0703380	97041	
16	Kwizera Herberts Home	16	9112081	794347	
17	Nsenga Gerald	17	03131	106236	
18	Niyonzima Ivan	18	3691838	0	
19	Uwimana Francis.1-(Home)	19	3693354	140072	
20	Bugigi Muhammad -home	20	3692060	0	
21	Mbishibishi John	21	3692002	0	
22	Rucakatsi Mahuuku Stanley.1	22	025934-05	0	
23	Uwimana Francis-2	23		0	
24	Noirahakunzi Emmanuel	24	0701253	Π	~
<	· · · · · · · · · · · · · · · · · · ·				>
-					
🛃 Update	e Record 🛛 🗟 Refresh			×	Close

FORM OPERATIONS

Update Record: - In this operation, the customer meter connection status is recorded and updated in the system.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.5.4.2.2 Kiosk Status

This form updates the connection status of the kiosks. Kiosks that are connected to water are recorded in the meter status as connected while those that are not connected to water are recorded in the meter status as Not Connected. All new kiosks are recorded in the meter status as Not Connected by default. The Kiosk Meter status form can be shown below.

Kiosk Meter Status Form					
Kiosk Nun	nber:	Compute	Loaction:		
Meter Nu	mber:		Connection Date	Friday - 2	6/Feb/2010 💌
Meter Sta	atus:	~	Meter Reading:		
		Kiosk	's Records		
Index	Kiosk Number	Meter Number	Meter Reading	Meter Status	Record Date
1	1	124586			10/21/2009
<					>
🕞 Update	e Record 🗟 Refresh				Close

FORM OPERATIONS

Update Record: - In this operation, the kiosk meter connection status is recorded and updated in the system.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.



4.5.4.3 System Settings

4.5.4.3.1 Sub-County Form

The Sub-County command prompts to open the Sub-County Form.

Sub-County Form					
Sub-Cour	nty Name:				
		Sub County F	Records		
Index	Sub-County Name	Rec	ord Date	System User	
1	Nyakabande	10/	8/2009	Administrator	
2	Nyakinama	10/3	8/2009	Administrator	
3	Chahi	10/	8/2009	Administrator	
4	Nyarusiza	10/3	8/2009	Administrator	
5	Muramba	10/3	8/2009	Administrator	
6	Kisoro TC	10/	8/2009	Administrator	
7	kabale	10/	14/2009	Administrator	
8	South ward	10/	23/2009	birujacks	
9	Kisoro town council	10/	23/2009	birujacks	
🗣 Add Ne	ew 🚷 Edit 🎯 Refresh				🛃 Close

The Sub-County is entered by the system user in order to add a new Sub-County to the system.

FORM OPERATIONS

Add New: - In this operation, a Sub-County record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New 🔀
⚠	Fill up all the records before clicking on the Add New button
	ОК

Edit: - Click Edit to change or delete any Sub-County record and the following Edit Sub-County Records form will be displayed. Select the Sub-County whose details you want to edit from the Datagrid view.

Edit Sub-County Records				Ē
	Sub-County Name	System Date	System User	
•	Nyakabande	10/8/2009	Administrator	
	Nyakinama	10/8/2009	Administrator	
	Chahi	10/8/2009	Administrator	
	Nyarusiza	10/8/2009	Administrator	
	Muramba	10/8/2009	Administrator	
	Kisoro TC	10/8/2009	Administrator	
	kabale	10/14/2009	Administrator	
	South ward	10/23/2009	birujacks	
	Kisoro town council	10/23/2009	birujacks	
*				
3	Previous) 🛃 Save) 🔀 Delete			🔀 Close

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing Sys	stem 2010 🛛 🔀	
Are sure you want to delete this record		
Yes	No	

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.5.4.3.2 Parish Form

The Parish Form command prompts to open the Parish Form as shown below

		Parish Form	C		
Sub-Co	ounty:	Parish Name:			
		Parish Records			
Index	Parish	Sub-County	Record Date		
1	Gikoro	Nyakabande	10/8/2009		
2	Mutolere	Nyakabande	10/8/2009		
3	Kagera	Nyakabande	10/8/2009		
4	Rwaramba	Nyakinama	10/8/2009		
5	Mubuga	Nyakinama	10/8/2009		
6	Nyacisenyi	Nyarusiza	10/8/2009		
7	Mabungo	Nyarusiza	10/8/2009		
8	Kabuhungiro	Nyarusiza	10/8/2009		
9	Kabindi	Nyarusiza	10/8/2009		
10	tyre	kabale	10/14/2009		
11	South ward	Kisoro town council	10/23/2009		
12	Nyakabaya	Nyarusiza	10/8/2009		
13	North ward	Kisoro town council	10/23/2009		
14	Bikoro	Nyarusiza	10/8/2009		
15	Gasiza	Nyakabande	10/23/2009		
16	Gisorora	Nyakabande	10/23/2009		
17	Nyakabingo	Chahi	10/8/2009		
18	Chanika	Chahi	10/8/2009		
19	Muganza	Chahi	10/8/2009		
20	Kisoro Town	Kisoro TC	10/8/2009		
21	Sooko	Muramba	10/8/2009		
22	Chuho	Nyakabande	10/8/2009		
<			>		
🕈 Add	New 🥵 Edit 😪 Refre	sh	Close		

The Sub-County name is selected form the drop down list while the Parish name is entered by the system user.

FORM OPERATIONS

Add New: - In this operation, a new Parish record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New 🔀
♪	Fill up all the records before clicking on the Add New button
	ок

Edit: - Click Edit to change or delete any Parish record and the following Edit Parish Records form will be displayed. Select the Parish whose details you want to edit from the Datagrid view.

	Edit Parish Records					
ſ		Parish	Sub-County	System Date	System_Weel System	
	•	Gikoro	Nyakabande	10/8/2009	2 - 10 - 2009 Octo	
		Mutolere	Nyakabande	10/8/2009	2 - 10 - 2009 Octo	
		Kagera	Nyakabande	10/8/2009	2 - 10 - 2009 Octo	
		Rwaramba	Nyakinama	10/8/2009	2 - 10 - 2009 Octo	
		Mubuga	Nyakinama	10/8/2009	2 - 10 - 2009 Octo	
		Nyacisenyi	Nyarusiza	10/8/2009	2 - 10 - 2009 Octo	
		Mabungo	Nyarusiza	10/8/2009	2 - 10 - 2009 Octo	
		Kabuhungiro	Nyarusiza	10/8/2009	2 - 10 - 2009 Octo	
		Kabindi	Nyarusiza	10/8/2009	2 - 10 - 2009 Octo	
		tyre	kabale	10/14/2009	2 - 10 - 2009 Octo	
		South ward	Kisoro town council	10/23/2009	4 - 10 - 2009 Octo	
		Nyakabaya	Nyarusiza	10/8/2009	2 - 10 - 2009 Octo	
		North ward	Kisoro town council	10/23/2009	4 - 10 - 2009 Octo	
		Bikoro	Nyarusiza	10/8/2009	2 - 10 - 2009 Octo	
		Gasiza	Nyakabande	10/23/2009	4 - 10 - 2009 Octo	
		Gisorora	Nyakabande	10/23/2009	4 - 10 - 2009 Octo	
		Nyakabingo	Chahi	10/8/2009	2 - 10 - 2009 Octo	
		Chanika	Chahi	10/8/2009	2 - 10 - 2009 Octo	
		Muganza	Chahi	10/8/2009	2 - 10 - 2009 Octo	
		Kisoro Town	Kisoro TC	10/8/2009	2 - 10 - 2009 Octo	
		Sooko	Muramba	10/8/2009	2 - 10 - 2009 Octo	
		Chuho	Nyakabande	10/8/2009	2 - 10 - 2009 Octo	
	*					
L						
(O Previous 🛃 Save 🔀 Delete 🚺 Close					

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing Sy	stem 2010 🛛 🔀	
Are sure you want to delete this record		
Yes	No	

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.5.4.3.3 Location Form

The Location Form command prompts to open the Location Form as shown below

	Location Form				
Sub-Cou	nty:	Parish:	~		
Village:					
	L	Leasting Records			
		Lucation Records			
Index	Location/village	Parish Kisasa Balisa	sub-county		
1	Koone Kilus Baad	KISOFO POLICE	KISOFO A		
2	Kiira koad Maliaaa		KISOFO A		
3	Malinga Mushuuna 1	Zone A	KISOFO A		
4	Mudrivura 1 Kabakle Boad		KISUFU A		
5	Rabakie Kudu Bikoro gasiza	Cyre South ward	Kabale Kisoro town cr		
7	Kibaya	Casiza	Nuakahando		
8	Kanyahukungu	Gisorora	Nyakabande		
9	Zindiro	North ward	Kisoro town cr		
-	Lindi b	North Hard	Kisoro connic.		
<			>		
🔶 Add Ni	🗣 Add New) 🝓 Edit) 🗟 Refresh 🛛 🔀 Close				

The Sub-County name and the Parish name are selected form the drop down list while the Location name is entered by the system user.

FORM OPERATIONS

Add New: - In this operation, a new Location record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Invalid Add New				
⚠	Fill up all the records before clicking on the Add New button				
	ОК				

Edit: - Click Edit to change or delete any Location record and the following Edit Location Records form will be displayed. Select the Location whose details you want to edit from the Datagrid view.

Edit Location Records					
	Location	Parish	Sub-County	System Date	
•	Koone	Kisoro Police	Kisoro A	10/1/2009	
	Kiira Road	Kisoro Police	Kisoro A	10/1/2009	
	Malinga	Zone A	Kisoro A	10/1/2009	
	Muahvura 1	Zone A	Kisoro A	10/1/2009	
	Kabakle Road	tyre	kabale	10/14/2009	
	Bikoro gasiza	South ward	Kisoro town council	10/23/2009	
	Kibaya	Gasiza	Nyakabande	10/23/2009	
	Kanyabukungu	Gisorora	Nyakabande	10/23/2009	
	Zindiro	North ward	Kisoro town council	12/2/2009	
*					
<		11			
_					
G F	🔾 Previous 🛛 😽 Save 🛛 💥 Delete 🛛 🛛 🚺 Close				

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

his record?

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.5.4.3.4 Basis of Charge

The Basis of Charge command prompts to open the Basis of Charge Form.

Basis of Charge Form 🛱					
Basis of Ch	arge:				
		Basis of C	harge Records		
Index 1 0 2 1 3 1	Basis of Charge Commercial Institutional/Govt Domestic	Basis of C	Record Date 9/25/2009 9/25/2009 9/25/2009	System User Administrator Administrator Administrator	
🗣 Add New	/ 🛞 Edit 🖓 Refresh				🔀 Close

The Basis of Charge is entered by the system user in order to add a new Basis of Charge to the system.

FORM OPERATIONS

Add New: - In this operation, a Basis of Charge record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New 🛛
♪	Fill up all the records before clicking on the Add New button
	ок

Edit: - Click Edit to change or delete any Basis of Charge record and the following Edit Basis of Charge Records form will be displayed. Select the Basis of Charge whose details you want to edit from the Datagrid view.

	Edit Basis	of Charge Red	cords		
	Basis of Charge	System Date	System User		
•	Commercial	9/25/2009	Administrator		
	Institutional/Govt	9/25/2009	Administrator		
	Domestic	9/25/2009	Administrator		
*					
				_	
🔇 Р	revious 🛃 Save 🔀 Delete			X	Close

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing Sys	stem 2010 🛛 🖂
Are sure you want	to delete this record?
Yes	No

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.5.4.3.5 Departments

The Departments command prompts to open the Departments Form.

Department Form 🗅					
Departme	nt Name:				
	Department Records				
Index	Department	Record Date	System User		
1	Accounts	9/30/2009	Administrator		
2	Sales	9/30/2009	Administrator		
3	Support	9/30/2009	Administrator		
4	Field Office	9/30/2009	Administrator		
5	Administration	10/14/2009	Administrator		
🗣 Add Ne	ew 🝓 Edit 🎯 Refresh			Close	
The Departments name is entered by the system user in order to add a new Department to the system.

FORM OPERATIONS

Add New: - In this operation, a Department record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid Add New				
♪	Fill up all the records before clicking on the Add New button			
	ОК			

Edit: - Click Edit to change or delete any Department record and the following Edit Departments Records form will be displayed. Select the Department whose details you want to edit from the Datagrid view.

	Edit Department Records 0							
	Department Name	System Date	System User					
•	Accounts	9/30/2009	Administrator					
	Sales	9/30/2009	Administrator					
	Support	9/30/2009	Administrator					
	Field Office	9/30/2009	Administrator					
	Administration	10/14/2009	Administrator					
*								
				Cloco				
	revious 🛃 Save 🔀 Delete			La Close				

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing System 2010					
Are sure you want to delete this record?					
Yes	No				

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.5.4.4 Stores Records



4.5.4.4.1 Stocked Items

The Stocked Items command prompts to open the Stocked Items Form as shown in the figure below.

Selecting the Item name prompts the system to load the Item Id, Item Units and available Quantity, the receiving date is selected by the system user, and the received quantity is entered by the system user while the person that received the items is selected for the drop down list.

		Stoc	ked Iten	ns Form		Ē
Recieving	Date: Fri - 26/Feb	/2010 🔽	Item Name:			~
Item Id:			Item Units:		Available Qtty:	
Recieved	Qtty:		Recieved by:			~
		Ste	ocked Items	Records		
Index	Item Id	Item Name			Item Units	Quantity Stor
1	1	Water Metres			Pcs	450
4						>
🛃 Update	e Stock 🗟 Refresh					🔀 Close

FORM OPERATIONS

Update Record: - In this operation, the stocked items are recorded and updated in the system.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.5.4.4.2 Local Purchase Order

The Local Purchase Order command prompts to open the Local Purchase Order Form as shown in the figure below.

Selecting the Supplier name prompts the system to load the Supplier Id, the LPO number is generated by the system automatically but it can also be entered manually by the user, the LPO date is selected by the system user.

The LPO details are filled where the quantity and unit price are entered by the user while the particulars are selected for the drop down list.

The designation1 and designation2 form their respective are selected for the drop down lists.

Local Purchase Order (LPO) Form 🗅						
Supplier's Nar	ne:					
LPO Number:	00002	LPC) Date: Fri - :	26/Feb/2010 💌 🤒	Suplier Id:	
Qty Par	ticulars				Unit Price	Amount
				~		
				~		
				~		
				~		
				~		
				~		
				~		
				~		
				~		
				~		
				~		
				~		
				~		
				✓		
				~		
E.&.O.E						1
De	signation1:	<u> </u>	Designation	12:	Y Total:	
Add New	🚱 Edit 🗟	Refresh [🕄 View	/ LPO Records			🔀 Close

FORM OPERATIONS

Add New: - In this operation, a Local Purchase Order record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New 🔀
♪	Fill up all the records before clicking on the Add New button
	ок

Edit: - Click Edit to change or delete any Local Purchase Order record and the following Edit Local Purchase Order Records form will be displayed. Select the LPO whose details you want to edit from the Datagrid view.

	Edit Local Purchase Order Records							
	LPO Number	LPO Date	Supplier Id	Supplier Name				
•	00001	25/02/2010	00001	HACKsoft Systems				
*								
<					_	>		
G P	revious 🛛 🛃 Save 🕽 🎽	🕻 Delete			X	Close		

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing System 2010						
Are sure you want to delete this record?						
Yes No						

View LPO Records: - This enables the user to view the saved LPO records as shown below.

Local Purchase Order Records						
Index	LPO Number	LPO Date	Supplier Id	Supplier Name		
1	00001	25/02/2010	00001	HACKsoft Systems		
<					>	
🔇 Previo	us			X	Close	

Click previous to view the previous window otherwise click Close to exit the LPO window.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.4.4.3 Supplier Invoice

The Supplier Invoice command prompts to open the Supplier Invoice Form as shown in the figure below.

	Supplier Invoice Form						
Invoice N	umber:	LPO No	Comput	LPO Date:			
Invoice D	ate: Fri - 26/Fe	b / 2010 💌	Recieved by:				
		LPO Reco	rds without Invoices				
Index	LPO Number	LPO Date	Supplier Id	Supplier Name			
					<u> </u>		
		Invoi	ced LPO Records				
Index	LPO Number	LPO Date	Invoice Number	Invoice Date	Supplier Id		
1	00001	25/02/2010	0123	25/02/2010	00001		
<					>		
Select All	Select None Mark .	As Uninvoiced					
🗣 Add Ne	ew 谢 Edit 🎯 Ref	fresh			🔀 Close		

The invoice number is entered manually by the user; the LPO number is selected form the system and then click compute. Clicking the compute button retrieves the LPO date from the system while the invoice date is selected by the system user plus entering the person who received the supplier invoice.

FORM OPERATIONS

To mark as Uninvoiced: - The lower list view shows the LPOs that have been invoice by the suppliers. To mark as Uninvoiced, select the check box adjacent to the record, and then press Mark As Uninvoiced. To select all records, press Select all below the list view otherwise Click Select None or select the require records one by one.

Add New: - In this operation, an invoice record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid Add New					
♪	Fill up all the records before clicking on the Add New button				
	ОК				

Edit: - Click Edit to change or delete any invoice record and the following Edit Supplier's Invoice Records form will be displayed. Select the invoice whose details you want to edit from the Datagrid view.

Edit Supplier's Invoice Records						
		LPO Number	LPO Date	Supplier Id	Supplier Name	
	۱.	00001	25/02/2010	00001	HACKsoft Systems	
	*					
	<					>
	🔇 Pr	evious 🛃 Save				🚺 Close

Carry out the operations as you would wish i.e. **Save** changes made, or **Previous** if you would wish to exit without saving changes.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

			G	ioods Reciev	ed Note	6
Recieving	Date:	Fri - 26/Feb,	/2010	∽	Goods Recieved No.:	
Supplier N	lame:				Supplier Id:	
Item Nam	e:				V Item Id:	
Item Unit:	s:		Quantit	:y:	Recieved by:	~
				Goods Recieved	Records	
Index	Recie	eved Note Id		Recieving Date	Supplier Id	Supplier Name
1	0845	8	2	25/02/2010	00001	HACKsoft Systems
<				1		
🗣 Add New 🚯 Edit 🗟 Refresh 🚺 Close						

4.5.4.4.4 Goods Received Note

The Goods Received Note command prompts to open the Goods Received Note Form as shown in the figure above

The Goods Received number is entered manually by the system user.

Selecting the Supplier name prompts the system to load the Supplier Id, selecting the Item name prompts the system to load the Item Id and Item Units while the Quantity received is entered by the user and the person that receiving person is selected for the drop down list.

FORM OPERATIONS

Add New: - In this operation, a Goods Received Note record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New 🛛 🛛
⚠	Fill up all the records before clicking on the Add New button
	ОК

Edit: - Click Edit to change or delete any Goods Received Note record and the following Edit Goods Received Note Records form will be displayed. Select the Goods Received Note whose details you want to edit from the Datagrid view.

	Edit Goods Recieved Records 🗅						
	Recieved Note Id	Recieving Date	Supplier Id	Supplier Name			
•	08458	25/02/2010	00001	HACKsoft Systems			
*							
<				>			
G P	revious 🛛 🛃 Save 🛛 🔀 Dele	te		🔀 Close			

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing System 2010					
Are sure you want to delete this record?					
Yes No					

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

Requisition/Issue Voucher Form												
	Requisition Date: Fri - 26/Feb/2			b/20	10 💌		Requisition No.:					
	Item Nam	e:				~		Issued by:				~
	Item Units	5:			Item	Id:		Issuing Date:	Fri	- 26/Feb/2010		~
	Quantity:							Available Qtty:				
	Recieved	by:				~		Recieving Date:	Fri	- 26/Feb/2010		~
						Requisition/Is:	sue Vou	cher Records				
	Index	Vouch	ier Nu	ımber	F	Requisition Date	•	Item Id		Item Name		
	1	91012			2	5/02/2010		1		Water Metres		
											>	
											_	
	Add New 🔂 Edit Refresh											

4.5.4.4.5 Requisition/Issue Voucher

The Requisition/Issue Voucher command prompts to open the Requisition/Issue Voucher Form as shown in the figure above

The Requisition/Issue Voucher is used to assign stocked items to the employee's of KITOWASO to use in the field or to supply to customers.

The Requisition number is entered manually by the system user.

Selecting the Item name prompts the system to load the Item Id, Item Units and the available quantity while the Quantity to be issued is entered by the user and the person that receiving person is selected for the drop down list. The issuing and receiving date are selected from the date viewer by the system user.

FORM OPERATIONS

Add New: - In this operation, a Requisition record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid Add New					
♪	Fill up all the records before clicking on the Add New button				
	ОК				

Edit: - Click Edit to change or delete any Requisition record and the following Edit Requisition/Issue Voucher Records form will be displayed. Select the Requisition whose details you want to edit from the Datagrid view.

	Edit Requisition/Issue Voucher Records 😂							
	Voucher Number	Voucher Date	Item Id	Item Name				
	91012	25/02/2010	1	Water Metres				
*								
<					2			
	<u>n</u>							
G	Previous 🛃 Save	🔀 Delete			🚺 Close			

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing System 2010						
Are sure you want to delete this record?						
Yes No						

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.4.4.6 Suppler Form

The supplier management form below is used to capture supplier details and display them when required.

This form acts as a supplier entry point into the system. Supplier details are entered here. These details include; Supplier Name, Tel Number, Alternative phone, Email Address, Postal Address, Physical Location, Website and Materials supplied.

The supplier Id is assigned automatically by the computer, so there's no need to follow up the last supplier number.

	Supplier's Form 🗅					
Supplier's Name:						
Tel Number:			Supplier Id:	00002		
Alternative Phone:			Email Address:			
Postal Address:			Physical Location:			
Website:						
Materials Supplied:						*
		Supplie	r's Records			
Index Supplie	r Id	Supplier Name			Postal Addres	s Kampa
1 00001		HACKSUIT Bystems			P.0 B0X 09111	zampa
🕈 Add New 🔮 Edit 🗟 Refresh 🚺 Close						

FORM OPERATIONS

Add New: - In this operation, a supplier record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New 🔀
♪	Fill up all the records before clicking on the Add New button
	ОК

Edit: - Click Edit to change or delete any supplier record and the following Edit Supplier's Records form will be displayed. Select the supplier whose details you want to edit from the Datagrid view.

	Edit Supplier's Records 🗅							
	Supplier Id	Supplier Name	Physical Location					
•	00001	HACKsoft Systems	Banda - Kyambogo Street					
*								
<			>					
_								
G P	Previous 🛃 Save 🎽	Delete	Close					

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing Sys	stem 2010 🛛 🔀				
Are sure you want to delete this record?					
Yes No					

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

			Items Form		<u> </u>
Item Name	e:				
Item Units	Item Units: Item Number: 2				
Description	n:		-		
					~
			Items Records		
Index	Item Id	Item Name		Item Units	Item Description
1	1	water Metres		PCS	Digital Water Metres
<					>
🔶 Add Nev	w 🚷 Edit	Refresh			Close

4.5.4.4.7 Items Form

The items management form above is used to capture item details and display them when required.

This form acts as an item entry point into the system. Item details are entered here. These details include; Item Name, Item Units and Description.

The Item number is assigned automatically by the computer, so there's no need to follow up the last item number.

FORM OPERATIONS

Add New: - In this operation, an items record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Invalid Add New					
⚠	Fill up all the records before clicking on the Add New button					
	ОК					

Edit: - Click Edit to change or delete any item record and the following Edit Item's Records form will be displayed. Select the item whose details you want to edit from the Datagrid view.

	Edit Items Records 😂					
	Item Id	Item Name			Item Units	
•	1	Water Metres			Pcs	
*						
	111				<u> </u>	
3	Previous) 🛃 Save) 🍃	C Delete			🚺 Close	

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing System 2010					
Are sure you want to delete this record?					
Yes No					

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.4.5 Administration

File Edit View To	ools Windows Help			
i 🛧 🍣 🔒 🖪 🕰 📑	Expenditure	6	» 🔌 🖬 💌 🖉 📑 🛛	Welcome: Administrator
	Meter Status 🕨			
🛛 🕼 Logo Tasks	System Settings 🔹 🕨			
LISORO O	Stores Records 🔹 🕨			
	Administration	2*	Employees	
	Change Password	92	System Users	
Creation - 1			Salary Payment	
			Salary Bl Payment	
			Advance Payment	
		3 .	Update Constants	

This menu is available to only system administrators or the managers of the system. It contains the following sub-menu items.

4.5.4.5.1 Employees

	Employee's Form 🍪					
Employe	Employee's Information Employment Information Salary Information					
Employee's Name:		Employee':	5 Id: 6]		
Postal Address:			Sex:]	
Date of	f Birth:	Fri - 26/	02/2010 🔽	Phone Nun	nber:	
Residen Address	tial ;:			Title Held:		Employee's Photo
			Emj	ployee's Records		
Index	Employ	ee's Id	Employee's Na	ime	Postal Address	Residential Ac
1	1		Rugandana Bai	rbra athy	P.O Box 100 Kisoro P.O Box 100 Kisoro	Karumena Bigina
3	3		Birungi Jackson	n	p.o Box 100, Kisoro.	Main Village
4	4		Atuhaire Geofrey K		P.O. Box 100,Kisoro	Main Village
5	5		Mfitumukiza Christopher		P.o. Box 100, Kisoro	Kiburara/Nyal
<						>
🔶 Add N	Add New 👰 Edit 🗟 Refresh					

The employee's management form above is used to capture employees' details and display them when required.

This form acts as employee's entry point into the system. Employee's details are entered here and are categorised in three phases. I.e. Employee's information, Employment information and Salary information. The employee's information contains information as seen in the figure below.

Employee's Informa	Employee's Information Employment Information Salary Information				
Employee's Name:		Employee's Id:	6		
Postal Address:	~	Sex:	~		
	×	Phone Number:			
Date of Birth:	Fri - 26/02/2010 💌	Home Phone:			
Residential					
Address:	×	Title Held:		Employee's Photo	

The employee's photo is added by clicking the employee's photo button and then browse it form the computer where it was stored by the computer user. The storage of the employee's photo can not be on any removable media that includes CD-ROM, Flash disk, iPods, and others but if it is contained on the removable media it is firs copied to the computer system hard drive.

The employee's Id is assigned automatically by the computer, so there's no need to follow up the last employee's number.

The employment information contains information as seen in the figure below.

Employee's Information Employment Information Salary Information	
Hire Date: Fri -26/02/2010 Department:	Village:
Position:	Referee1:
Reports to:	Tel Number:
Employee's	Referee2:
(Notes):	Tel Number:

Employee'	e's Information Employment Information S	alary Information	
Basic Pay	UGX		
Allowanc	Ces: UGX		
	🗌 NSSF (0.08 UGX)	Net Pay:	UGX
	🗌 Pay As You Earn (0.100 UGX)		
	Local Service Tax (20000 UGX)		

The salary information contains information as seen in the figure below.

FORM OPERATIONS

Add New: - In this operation, an items record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid Add New					
⚠	Fill up all the records before clicking on the Add New button				
	ок				

Edit: - Click Edit to change or delete any item record and the following Edit Item's Records form will be displayed. Select the item whose details you want to edit from the Datagrid view.

	Edit Employee's Records						
$ \Gamma$	Employee I	d s	Staff Name	Sex	Date of Birth		
	1	R	ugandana Barbra	Female	12/12/1983		
	2	N	lyiraneza Dorothy	Female	10/17/1972		
	3	В	irungi Jackson	Male	9/5/1984		
	4	A	tuhaire Geofrey K	Male	3/12/1978		
	5	м	lfitumukiza Christopher	Male	3/12/1978		
*	*						
<							
	Close						

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing System 2010					
Are sure you want to delete this record?					
Ves No					

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.4.5.2 System Users

	System Users 😫						
	Staff Name	e:	Status:			~	
	User Name			User	Туре:		~
	Password:			Confi	irm Password:		
Г	Turdaya		Syste	em User's Record	ls	01-1	Deferrere
	Index	Staff Name Rugandana Barbra	User Name	User Type	Record Date	Status	Administrator
	2	Nviraneza Dorothy	Dorothy	Administrator	10/15/2009	Active	Administrator
	3	Birungi Jackson	birujacks	Administrator	10/16/2009	Active	Administrator
(♦ Add New ♦ Edit ♦ Refresh Close 						

The system user's form above is used to capture system user's details and display them when required.

This form acts as system user's entry point into the system. System user's details are entered here that include Staff name, User name, User type and Password.

The staff name is selected form the system and can also be entered manually; the status can be Active or Not Active depending on the availability of the system user to use the assigned account and the User type can be User or administrator for security reasons and user privileges as assigned by the Manager of the system.

FORM OPERATIONS

Add New: - In this operation, a system user's record is entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New 🔀
⚠	Fill up all the records before clicking on the Add New button
	ок

Edit: - Click Edit to change or delete any item record and the following Edit System User's Records form will be displayed. Select the system user whose details you want to edit from the Datagrid view.

	Edit System Users S						
	Staff Name	Login Name	Login Type	Status	Syste		
•	Rugandana Barbra	Barbra	User	Active	4:10:		
	Nyiraneza Dorothy	Dorothy	Administrator	Active	1:21:		
	Birungi Jackson	birujacks	Administrator	Active	4:58:		
*							
<					>		
			<i>y</i>				
GF	🔇 Previous) 🚽 Save) 💢 Delete 🚺 🚺 Close						

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing System 2010				
Are sure you want to delete this record?				
Yes	No			
Yes	No			

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.5.4.5.3 Salary Payment

The salary payment form below is used to capture employee's salary payment details and display them when required.

	Salary Payment Form							
Employee's Id:		✓ Compute]	Employe	e's Name:			
Payment Year:		~		Payment	t Month:			~
Basic Pay:]	Payment	t Date:	Fri - 2	6/Feb/201	0 🖌
Allowances:]	Advance	Amount:			
Taxes:]	Prev-Bal	ance:			
Amount Paid:			UGX	Net Pay:				
Current Balance	:		UGX	Mode:		Re	eciept No.:	
	Salary Payment Records							
Index Emp	loyee's Id	Payment Year	Payment	Month	Payme	nt Date	Basic Pay	Allowa
<								>
								Class
🔽 Auu New 🛛 📢	👔 Euit 🛛 🐼 Reff	esn						Liose

This form acts as an employee's salary payment point into the system. Employee's salary is paid from here.

The employee's record can be selected by the employee's Id from the drop down list alongside the customer number label. After selecting the employee's Id and you click on Compute, all the employee's salary payment records are displayed as shown in the figure below.

Employee's Id:	1 Compute		Employee's Name	Rugandana Barbra
Payment Year:	2010 👻]	Payment Month:	January 👻
Basic Pay:	250000]	Payment Date:	Sat - 30/Jan /2010 🛛 👻
Allowances:	10000]	Advance Amount:	
Taxes:	0]	Prev-Balance:	
Amount Paid:		UGX	Net Pay:	260000
Current Balance:		UGX	Mode:	Reciept No.:

As you type or input the amount paid to the employee, the Current Balance is calculated by the system automatically.

The payment mode is selected as it was done by the manager and the respective receipt number is entered by the user.

FORM OPERATIONS

Add New: - In this operation, a new employee's salary payment record is generated and entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.



Edit: - Click Edit to change or delete any employee's salary payment record and the following Edit Salary Payment Records form will be displayed. Select the employee whose details you want to edit from the drop down list by the employee's Id, and then press Compute. The last employee's salary payment record will be displayed or brought to focus for making the required changes.

	Edit Salary Payment Records							
Employee's Id:	1	Compute)	Employe	e's Name:			
Payment Year:	2010	*]	Paymen	t Month:	January		~
Basic Pay:]	Paymen	t Date:	Sat - 3	0/Jan /2010	~
Allowances:]	Advance	Amount:			
Taxes:]	Prev-Bal	ance:			
Amount Paid:			UGX	Net Pay:				
Current Balance	:		UGX	Mode:		Re	ciept No.:	
		Salary	Payment	Records				
Index Emp	loyee's Id	Payment Year	Payment	Month	Payme	nt Date	Basic Pay	Allowa
<								>
🔇 Previous	S Previous 🛃 Save 🔀 Delete							

A set of buttons, Edit Buttons, appears at the bottom of the list view as shown in the figure above.

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing System 2010					
Are sure you want to delete this record?					
Yes	No				
Yes	No				

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.4.5.4 Salary Bl Payment

The salary balance payment form below is used to capture employee's salary balance payment details and display them when required.

	Salary Balance Payment Form							
Employee's Id:		✓ Compute]	Employe	e's Name:			
Payment Year:		~		Payment	t Month:			~
Basic Pay:]	Payment	t Date:	Sat - 2	7/Feb/2010	~
Allowances:]	Advance	Amount:			
Taxes:]	Prev-Bal	ance:			
Amount Paid:			UGX	Net Pay:				
Current Balance:			UGX	Mode:		Re	ciept No.:	
		Salary	Paymen	t Records				
Index Emp	loyee's Id	Payment Year	Paymer	nt Month	Payme	nt Date	Basic Pay	Allowa
<								>
<u></u>		,						
🔶 Add New 🕅 🖓	🕈 Add New 🔞 Edit 🗟 Refresh 🚺 Close							

This form acts as an employee's salary balance payment point into the system. Employee's salary balances are paid from here.

The employee's record can be selected by the employee's Id from the drop down list alongside the customer number label. After selecting the employee's Id and you click on Compute, all the employee's salary balance payment records are displayed.

As you type or input the amount paid to the employee, the Current Balance is calculated by the system automatically.

The payment mode is selected as it was done by the manager and the respective receipt number is entered by the user.

FORM OPERATIONS

Add New: - In this operation, a new employee's salary balance payment record is generated and entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.

Invalid	Add New 🔀
♪	Fill up all the records before clicking on the Add New button
	ок

Edit: - Click Edit to change or delete any employee's salary balance payment record and the following Edit Salary Balance Payment Records form will be displayed. Select the employee whose details you want to edit from the Datagrid view.

Edit Salary Balance Payment Records					
	Employee Id	Payment Month	Payment Date	Basic Pay	Allowances
*					
<					>
🔇 Pr	revious) 🛃 Save) 🔀 Deleta				🔀 Close

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing System 2010 🛛 🔀					
Are sure you want to delete this record?					
Yes	No				

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

Close: - Closes the form.

4.5.4.5.5 Advance Payment

The advance payment form below is used to capture employee's salary advance payment details and display them when required.

Salary Adavnce Payment Form						
Employee	's Id:	V Compute	Employee	e's Name:		
Payment	Year:	~	Payment	: Month:		~
Amount P	aid:		UGX Payment	Date: Sat - 2	7/Feb/2010	~
Mode:	~		Reciept	No.:		
		Salar	y Payment Records			
Index	Employee's Id	Payment Year	Payment Month	Payment Date	Basic Pay	Allowa
						2
🗣 Add Ne	ew 🛛 🚷 🛛 Edit 🗟 Ref	resh				🔀 Close

This form acts as an employee's salary advance payment point into the system. Employee's salary advances are paid from here.

The employee's record can be selected by the employee's Id from the drop down list alongside the customer number label. After selecting the employee's Id and you click on Compute, all the employee's salary advance payment records are displayed.

As you type or input the amount paid to the employee, the Current Balance is calculated by the system automatically.

The payment mode is selected as it was done by the manager and the respective receipt number is entered by the user.

FORM OPERATIONS

Add New: - In this operation, a new employee's salary advance payment record is generated and entered into the system. Before you carry out this operation, all fields must be filled to ensure proper validation otherwise the following error message will be displayed.



Edit: - Click Edit to change or delete any employee's salary advance payment record and the following Edit Salary Advance Payment Records form will be displayed. Select the employee whose details you want to edit from the Datagrid view.

Edit Salary Advance Payment Records 3						
		Employee Id	Payment Month	Payment Date	Basic Pay	Allowances
	*					
	<					>
	A					
	🕑 Pr	evious 🛛 🛃 Save J 💢 Delete				Close

Carry out the operations as you would wish i.e. **Save** changes made, **Delete** entire record, or **Previous** if you would wish to exit without saving changes.

If you try to delete a record then the following message will be displayed. Click Yes if you want to delete the selected record otherwise Click No.

Water Billing Sys	tem 2010 🛛 🔛			
Are sure you want to delete this record?				
Yes	No			

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

	Con	stants Form		6
	Systen	n Constants Records		
Requirements		Details		
Vat Rate		0.18		
Consumption Fee		1.5		
Service Fee		1500		
Connection Fee		50000		
Disconnection Fee		10000		
Reconnection Fee		10000		
New Sewer Connection		50000		
Sewer Service Fee		10000		
Sewer Discharge Fee		10000		
CessPool Service Fee		50000		
CessPool Emptying		85000		
Fine		400000		
Estimated Consumption		200000		
Illegal Connection Report	er	1		
Public Stand Post/Kiosk		2		
NSSF Rate		0.08		
PAYE Rate		0.100		
Local Service Tax		20000		
Record Date		10/14/2009		
System User		Administrator		
		Edit Section		
Vat Rate	Consumption Fee	Service Fee	Connection Fee	Disconnection Fee
• 0.18	1.5	1500	50000	10000
*				
<				>
🛃 Update Constants) 🗟 Refresh 🛛 🔀 Close				

4.5.4.5.5 Update Constants

This form updates the constants of the system users. The administrator can change the constants of the system any time using the form above.

FORM OPERATIONS

Update Constants: - In this operation, the new system constants are recorded and updated in the system.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.4.6 Change Password

		Change	e Password	Form	`
Old Passv	word:				
New Pass	sword:		Confirm New P	assword:	
		Sys	tem User Records	5	
Index	Staff Name	User Name	User Type	Password Change Date	Reference
1 2	Rugandana Barbra Nyiraneza Dorothy	Barbra Dorothy	User Administrator	11/21/2009 10/15/2009	Administrator Administrator
3	Birungi Jackson	birujacks	Administrator	10/16/2009	Administrator
<			Ш		>
🛃 Chang	e Password 🛛 🗟 Refi	resh			🚺 Close

This form updates the passwords of the system users. Users can change their passwords any time as they wish using the form above.

FORM OPERATIONS

Change Password: - In this operation, the user's new password is recorded and updated in the system.

Refresh: - This operation causes records to be reloaded and clears the fields for fresh data entry.

4.5.5 Windows

This menu contains different features to do with the look and appearance of windows in the system.



4.5.6 Help

The help menu contains different help features of the system.



4.5.6.1 About the System

This contains the name, version, copyright year and copyright Company, of the system as seen in the figure below. It also contains the warning message that must be read by the users of the system at all times.

🖶 About Water Billing Database Management System 2010 💦 🔲 🔀
o 🜍 🚅 🥟 🐳
Database Management Application System Version 3.0 Copyright © 2010 HACKsoft® Systems (www.hacksoftsystems.com) All Rights Reserved Installed Products:
Database Management Application System
Warning : This application is protected by copyright laws and international treaties unauthorized reproduction or distribution of this program or any portion of it, may results in severe civil and criminal penalties ,and will be prosecuted to the maxinmum extent possible under law.

4.6 Toolbar


5.0 System Testing

Testing is a systematic attempt to reveal the presence of errors (to "falsify" system). Testing is accomplished by identifying defects in the system and revealing problems.

The system had to be tested to confirm whether it meets its requirements. A prototype was used to verify functions of the system, which was later to be demonstrated for the users. Quality control techniques like fault avoidance, fault detection and fault tolerance, to prevent errors by finding faults before the system is released. Input/output of each component has been tested (black testing). Internal data structure has also been test (white box).

The usability of prototypes is not sometimes evaluated, but it was to obtain the user's opinion of the prototype and this was through testing the system with the help of some users:

- It was first tested during coding, to make sure that the codes produce the desired functionality.
- The system administrators have clear control over the system, therefore, they do regulate user access at a given time that is to say issues regarding user authentication.
- All links on the MDI work as required, information is added and updated very fast, prompting the users of the system to appreciate and view the information in time.
- All data added on the database becomes operational immediately, there is absolutely no lead time between adding and updating records and when it becomes available for system user's viewing.
- The restrictions placed on users do apply and a user cannot access information he is not meant to access, in the same vein, the system administrators have got absolute control over who uses the system.

6.0 Conclusion, Recommendations & Limitations

The system was developed, data for the new system collected from the old system using various tools like interviews, questionnaires and observations, data analysed and later used to design and implement the system that was tested and validated successfully.

Below are Conclusions made from the developed system and what is recommended for the intended results from the system.

5.2 Conclusions

The developers were able to draw out the following conclusions:

- a) The new system will bring about increased efficiency in carrying out water billing activities, by reducing on the time taken during the processing of bills and payments.
- b) The work force will be reduced and funds may be saved as well. Thus being cost effective since it costs less and yet the benefits are more.
- c) This system will increase staff moral and zeal at work hence increased productivity

5.3 Recommendations

The developers recommend that the following should be done:

- a) The system should be installed on all the computers and sections of KITOWASO.
- b) The database should be installed on one server to enable access from the staff of KITOWASO on a network.
- c) Only one user should be registered as an administrator in the system, otherwise confidential data may be corrupted. However the system may register many normal users.
- d) Updated anti-virus software should be installed on all the computers in order to combat system malicious codes such viruses, Trojan horse programs and worms.

- e) Anti-spy ware software should be installed to protect against spy ware that is, since the computer system is connected to any network
- f) Routine backup procedures since the data dealt with is always needed for next transactions.
- g) Buy a printer to interconnect it with the personal computer to be used for printing out customer bills, stock records, receipts and other needed documents and reports.

5.4 Limitations

- a) It does not have the advanced security options include biometric fingerprint login and bar-code badge scanning.
- b) The system does not have the following functionalities which would be of benefit if the pharmacy grows into a larger scale: computerized customer consumption tracking, on-line customer interactions and pre-screening, integrated restock reminder system, water and & sewer line contraindication monitoring, multiple disconnection options.
- c) It cannot be accessed online.

Function Keys and Combinations

The shortcut keys described on this page refer to the U.S keyboard layout. Keys on the other layouts may not correspond exactly to the keys on a U.S keyboard.

	ENTER	CTRL	ALT	
	Execute Add New, Save			
0		Go to Open		
Р		Go to Print		
F4		Log Off	Exit the system	
F1		System Contents		
А		Select All		
С		Copy the		
		selected text		
V		Paste the copied		
		or cut text		
Х		Cut the selected		
		text		
Y		Redo		
Ζ		Undo		

