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E-Bill Manager

Chapter 1

INTRODUCTION

E-Bill Manager is a GUI based application which is coded using java language. For the frontend part we make use of java along with Window Builder, which is a package containing all the swing and awt components for easy development of GUI based application that is available in eclipse ide. Also for the back-end we make use of MySQL where we create a database to store all the records. The main purpose of this application is to prepare and keep records of all the bills of a company. For the first time when the user launch this application, user needs to provide some basic information about their own business. User is able to add items, view receipts and records.

1.1 Motivation of Project

This E-Bill Manager application is very effective and efficient. This being a GUI driven application is very easy to use and can be operated by a simple user also. The need of a digital way of storing all the Bill information of a business/company motivated to build this application. Taking into consideration how everything is going smarter in today's world, this application has been designed and built to make storing records easier than ever before.

1.2 Problem Statement

This application helps to overcome the following problems:

- This application increases the speed and stores the bill records digitally.
- To remove the errors existing while manually keeping the records.
- To replace the traditional way of storing bill information.

Chapter 2

System Requirement

2.1 Hardware System Configuration:

Processor   - Intel Dual Core or above

Speed   - 1.8 GHz

RAM   - 1 GB (min)

Hard Disk   - 10 GB

2.2 Software System Configuration:

Operating System   - Windows XP or higher

Programming Language   - Java (Front-end) and MySQL (Back-end)

Compiler   - Eclipse

Chapter 3

System Design

3.1 Modules

- ➢ **Set-up module:** This module prompts the user to enter the basic information like name, address and items of their business. After all information is obtained it stores these data permanently for further use.

- ➢ **Customer Data Module**: In this module, user is prompted to enter required information of the customer and these data are stored in their respective variable name. User also needs to input the information on the number of items and name the customer has ordered.

- ➢ **Display total Module**: Here, the total bill amount along with taxable amount is calculated. The respective values of sub-total, tax and total is displayed in their respective text box.

- ➢ **Print Receipt Module**: Here, first the all the information about the customer like name, address, and there cart items and total is read. Then these information is displayed in the form of a bill in the textbox.

- ➢ **Storing Records Module**: First the connection to the SQL database is established. The required data is read from the table and stored in variables. Then Insert query is executed and the records get stored in the database.

- ➢ **View Records Module**: First set up the connection to the SQL database. Read the data from database. And the read records are displayed in the table.

3.3 Algorithm

Step 1: Start the application.

Step 2: Read the business information along with items available.

Step 3: Accept and read data from user.

Step 4: Display the E-Bill Manager window.

Step 5: Read Customer details along with their ordered items.

Step 6: On click of the total button, calculate the total bill amount.

Step 7: Display receipt if user clicks on receipt button.

Step 8: Store the records in the SQL database on click of the save button.

Step 9: Read the records from the database and display in the table if user clicks on View Records.

3.4 Code and Implementation

BillManager.java

```java
package miniProj1;

import java.awt.EventQueue;

import java.sql.*;

import javax.swing.JFrame;

import javax.swing.JPanel;

import javax.swing.JLabel;

import java.awt.Font;

import java.awt.Window;

import javax.swing.JTextField;

import javax.swing.DefaultComboBoxModel;

import javax.swing.JButton;

import java.awt.event.ActionListener;

import java.io.*;

import java.text.DecimalFormat;

import java.util.Scanner;

import java.util.concurrent.TimeUnit;

import java.awt.event.ActionEvent;

import javax.swing.JScrollPane;

import javax.swing.JTable;

import javax.swing.table.DefaultTableModel;

import javax.swing.border.LineBorder;
```

```java
import java.awt.Color;

import java.awt.Component;

import java.awt.Dialog;

import javax.swing.SwingConstants;


import javax.swing.JComboBox;

import javax.swing.border.BevelBorder;

import javax.swing.border.CompoundBorder;

import javax.swing.border.MatteBorder;

import javax.swing.UIManager;

import javax.swing.JSpinner;

import java.util.*;


public class BillManager  {

        public static File introfile,itemfile,pricefile;

        private  JFrame frame;

        private JTextField txtAddress;

        private JTable table_Item;

        private JTextField txtSubTotal;

        private JTextField txtVat;

        private JTextField txtTotal;

        private static JTextField txtName;

        static String bussinessName;

        private static JComboBox cbox_Item;

        private JSpinner spin_Quantity;

        static ArrayList<Integer> price;
```

```java
static BillManager window;

public static void main(String[] args) {

    EventQueue.invokeLater(new Runnable() {

        public void run() {

            try {

                introfile = new File("d:\\introfile.txt");

                itemfile=new File("d:\\itemfile.txt");

                pricefile=new File("d:\\pricefile.txt");

                if (introfile.createNewFile()){

                    Intro intro=new Intro();

                    intro.setVisible(true);

                }else{

                    window = new BillManager();

                    loadvalues();

                    window.frame.setVisible(true);

                }

            } catch (IOException e) {

                e.printStackTrace();

            }

        }

    });

}

public BillManager() {

    initialize();

}

private void initialize() {
```

```java
frame = new JFrame();

frame.setBounds(100, 100, 805, 639);

frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

frame.getContentPane().setLayout(null);

frame.setVisible(true);

JPanel panel_cstInfo = new JPanel();

panel_cstInfo.setBorder(new LineBorder(new Color(0, 0, 0)));

panel_cstInfo.setBounds(12, 13, 350, 125);

frame.getContentPane().add(panel_cstInfo);

panel_cstInfo.setLayout(null);


JLabel lblName = new JLabel("Name");

lblName.setFont(new Font("Tahoma", Font.BOLD, 14));

lblName.setBounds(12, 13, 82, 28);

panel_cstInfo.add(lblName);


txtName = new JTextField();

txtName.setFont(new Font("Tahoma", Font.BOLD, 14));

txtName.setBounds(78, 17, 260, 22);

panel_cstInfo.add(txtName);

txtName.setColumns(10);

txtName.setText(bussinessName);


JLabel lblAddress = new JLabel("Address");

lblAddress.setFont(new Font("Tahoma", Font.BOLD, 14));

lblAddress.setBounds(12, 57, 82, 28);
```

```java
panel_cstInfo.add(lblAddress);


txtAddress = new JTextField();

txtAddress.setFont(new Font("Tahoma", Font.BOLD, 14));

txtAddress.setColumns(10);

txtAddress.setBounds(78, 61, 260, 22);

panel_cstInfo.add(txtAddress);


JScrollPane scrollPane_CartInfo = new JScrollPane();

scrollPane_CartInfo.setOpaque(false);

scrollPane_CartInfo.setBounds(12, 353, 686, 114);

frame.getContentPane().add(scrollPane_CartInfo);


table_Item = new JTable();

table_Item.setFont(new Font("Tahoma", Font.BOLD, 13));

table_Item.setModel(new DefaultTableModel(

        new Object[][] {

        },

        new String[] {

                "Item Name", "Quantity", "Cost per Item", "Price"

        }

));

table_Item.getColumnModel().getColumn(0).setPreferredWidth(186);

table_Item.getColumnModel().getColumn(1).setPreferredWidth(62);

table_Item.getColumnModel().getColumn(2).setPreferredWidth(100);

scrollPane_CartInfo.setViewportView(table_Item);
```

```java
JPanel panel_Cart = new JPanel();

panel_Cart.setBorder(new LineBorder(new Color(0, 0, 0)));

panel_Cart.setBounds(12, 151, 350, 192);

frame.getContentPane().add(panel_Cart);

panel_Cart.setLayout(null);


JLabel lblChoose = new JLabel("Choose an Item");

lblChoose.setHorizontalAlignment(SwingConstants.CENTER);

lblChoose.setFont(new Font("Tahoma", Font.BOLD, 14));

lblChoose.setBounds(12, 13, 119, 28);

panel_Cart.add(lblChoose);


JLabel lblQuantity = new JLabel("Quantity");

lblQuantity.setHorizontalAlignment(SwingConstants.LEFT);

lblQuantity.setFont(new Font("Tahoma", Font.BOLD, 14));

lblQuantity.setBounds(193, 13, 119, 28);

panel_Cart.add(lblQuantity);


cbox_Item = new JComboBox();

cbox_Item.setFont(new Font("Tahoma", Font.BOLD, 13));

cbox_Item.setEditable(true);

cbox_Item.setBounds(12, 54, 119, 28);

panel_Cart.add(cbox_Item);


JButton btnAdd = new JButton("Add Item");
```

```java
                btnAdd.addActionListener(new ActionListener() {
                        public void actionPerformed(ActionEvent e) {

                                int table_price=0;


table_price=(int)spin_Quantity.getValue()*price.get(cbox_Item.getSelectedIndex());

DefaultTableModel model = (DefaultTableModel) table_Item.getModel();

model.addRow(newObject[]{cbox_Item.getSelectedItem().toString(),spin_Quantity.getV

alue(),price.get(cbox_Item.getSelectedIndex()),table_price});

                                cbox_Item.setSelectedIndex(0);

                                spin_Quantity.setValue(0);

                                        }

                        });

                        btnAdd.setFont(new Font("Tahoma", Font.BOLD, 14));

                        btnAdd.setBounds(106, 142, 119, 37);

                        panel_Cart.add(btnAdd);



                        spin_Quantity = new JSpinner();

                        spin_Quantity.setFont(new Font("Tahoma", Font.BOLD, 13));

                        spin_Quantity.setBounds(174, 54, 124, 28);

                        panel_Cart.add(spin_Quantity);



                        JPanel panel_Bill = new JPanel();

                        panel_Bill.setBorder(new LineBorder(new Color(0, 0, 0)));

                        panel_Bill.setBounds(374, 13, 324, 330);

                        frame.getContentPane().add(panel_Bill);

                        panel_Bill.setLayout(null);
```

```java
JLabel lblNewLabel_2 = new JLabel("Bill Information");

lblNewLabel_2.setHorizontalAlignment(SwingConstants.CENTER);

lblNewLabel_2.setFont(new Font("Tahoma", Font.BOLD, 14));

lblNewLabel_2.setBounds(12, 13, 300, 26);

panel_Bill.add(lblNewLabel_2);


JLabel lblSubTotal = new JLabel("Sub Total");

lblSubTotal.setHorizontalAlignment(SwingConstants.CENTER);

lblSubTotal.setFont(new Font("Tahoma", Font.BOLD, 13));

lblSubTotal.setBounds(12, 110, 82, 47);

panel_Bill.add(lblSubTotal);


JLabel lblVat = new JLabel("VAT");

lblVat.setHorizontalAlignment(SwingConstants.CENTER);

lblVat.setFont(new Font("Tahoma", Font.BOLD, 13));

lblVat.setBounds(12, 170, 82, 42);

panel_Bill.add(lblVat);


JLabel lblTotal = new JLabel("Total");

lblTotal.setHorizontalAlignment(SwingConstants.CENTER);

lblTotal.setFont(new Font("Tahoma", Font.BOLD, 13));

lblTotal.setBounds(12, 225, 82, 47);

panel_Bill.add(lblTotal);


txtSubTotal = new JTextField();
```

```java
txtSubTotal.setFont(new Font("Tahoma", Font.BOLD, 14));

txtSubTotal.setEditable(false);

txtSubTotal.setColumns(10);

txtSubTotal.setBounds(106, 110, 152, 45);

panel_Bill.add(txtSubTotal);


txtVat = new JTextField();

txtVat.setFont(new Font("Tahoma", Font.BOLD, 14));

txtVat.setEditable(false);

txtVat.setColumns(10);

txtVat.setBounds(110, 172, 152, 45);

panel_Bill.add(txtVat);


txtTotal = new JTextField();

txtTotal.setFont(new Font("Tahoma", Font.BOLD, 14));

txtTotal.setEditable(false);

txtTotal.setColumns(10);

txtTotal.setBounds(110, 227, 152, 45);

panel_Bill.add(txtTotal);


JButton btnTotal = new JButton("Total");

btnTotal.addActionListener(new ActionListener() {

        public void actionPerformed(ActionEvent e) {

                int row_count=table_Item.getRowCount();

                double subTotal=0;

                for(int i=0;i<row_count;i++) {
```

```java
                subTotal=subTotal+Integer.parseInt(table_Item.getValueAt(i, 3).toString());

                        }

                        DecimalFormat df=new DecimalFormat("#.00");

                        double vat=subTotal*0.13;

                        txtSubTotal.setText(df.format(subTotal));

                        txtVat.setText(df.format(vat));

                        txtTotal.setText(df.format(vat+subTotal));

                }

        });
btnTotal.setBounds(12, 496, 109, 37);

        frame.getContentPane().add(btnTotal);

        JButton btnRecipt = new JButton("Recipt");

        btnRecipt.setFont(new Font("Tahoma", Font.PLAIN, 13));

        btnRecipt.addActionListener(new ActionListener() {

                public void actionPerformed(ActionEvent e) {

                        txt_bill.setText("");

                        frame.setBounds(100, 100, 1257, 639);

                        String items_name = "";

                        String quantity="";

                        String cost="";

                        txt_bill.setText("\n-----------------------------------------------
----------");

                        txt_bill.append("\n\t\t   *****E-BILL MANAGER****");


                        txt_bill.append("\n-----------------------------------------------
----------\n\n");
```

```java
                          txt_bill.append("\tItem\t\tQuantity\t\tPrice ");

                          txt_bill.append("\n-----------------------------------------
----------\n");

                          for(int i=0;i<table_Item.getRowCount();i++) {


                                  items_name=(String)
table_Item.getValueAt(i, 0);

                                  quantity=table_Item.getValueAt(i,
1).toString();

                                  cost=table_Item.getValueAt(i, 3).toString();


        txt_bill.append("\n\n\t"+items_name+"\t\t"+quantity+"\t\t\t"+cost+"\n");

                          }

                          txt_bill.append("\n\t\t\t--------------");

                          txt_bill.append("\n\n\t\t\t\t SubTotal:"+"
"+txtSubTotal.getText()+"\n\n\t\t\t\t Vat:"+" "+txtVat.getText()

                                  +"\n\n\t\t\t\t Total:"+" "+txtTotal.getText());

                          txt_bill.append("\n\t\t\t\t--------------");



                  }
          });
          btnRecipt.setBounds(147, 496, 109, 37);

          frame.getContentPane().add(btnRecipt);

                  JButton btnReset = new JButton("Reset");

          btnReset.addActionListener(new ActionListener() {

                  public void actionPerformed(ActionEvent e) {
```

```java
                        txtName.setText("");

                        txtAddress.setText("");

                        txtSubTotal.setText("");

                        txtTotal.setText("");

                        txtVat.setText("");

                        DefaultTableModel model=(DefaultTableModel)
table_Item.getModel();

                        model.setRowCount(0);


                }
        });
        btnReset.setBounds(282, 496, 109, 37);

        frame.getContentPane().add(btnReset);


        JButton btnSave = new JButton("Save");

        btnSave.addActionListener(new ActionListener() {

                public void actionPerformed(ActionEvent e) {

                        savetoDB();

                }
        });
        btnSave.setBounds(417, 496, 109, 37);

        frame.getContentPane().add(btnSave);


        JButton btnRecords = new JButton("View Records");

        btnRecords.addActionListener(new ActionListener() {

                public void actionPerformed(ActionEvent e) {
```

```java
                    Records rec=new Records();

                    rec.setVisible(true);

            }

    });

    btnRecords.setBounds(555, 496, 143, 37);

    frame.getContentPane().add(btnRecords);

}

 static void loadvalues() {

Scanner scan;

ArrayList<String> item=new ArrayList<String>();

price=new ArrayList<Integer>();

Iterator<String> itemItr= item.iterator();

try {

            scan=new Scanner(itemfile);

            while (scan.hasNext()) {

                    item.add(scan.nextLine());

            }

            scan.close();

            String itemArr[]=new String[item.size()];

            itemArr=item.toArray(itemArr);

            for(int i=0;i<itemArr.length;i++) {

                    cbox_Item.addItem(itemArr[i]);

            }


            scan=new Scanner(pricefile);

            while(scan.hasNext()) {
```

```java
                    price.add(Integer.parseInt(scan.nextLine()));

            }

            scan.close();

        } catch (IOException e) {


            e.printStackTrace();

        }


    }
            public void savetoDB() {

                int j=0;

                String item ="";

                String qty = "";

        Connection con = null;

        String conUrl = "jdbc:sqlserver://localhost; databaseName=demo;
integratedSecurity=true;";

                try {

                    Class.forName("com.microsoft.sqlserver.jdbc.SQLServerDriver");

                    con = DriverManager.getConnection(conUrl);

                      Statement stmt=con.createStatement();

                        ResultSet rs;

                        PreparedStatement p = null;

                        String customerName=txtName.getText();

                        for(int i=0;i<table_Item.getRowCount();i++) {

                                item=item+(String)table_Item.getValueAt(i, j)+" ";

                                qty=qty+table_Item.getValueAt(i, j+1)+" ";
```

```java
                                    }

                                    String subTotal=txtSubTotal.getText();

                                    String vat=txtVat.getText();

                                    String total=txtTotal.getText();

                                    String address=txtAddress.getText();for(int
p=con.prepareStatement("Insert into
bill(Customer_name,Address,item_name,quantity,subtotal,vat,total) values
(?,?,?,?,?,?,?)");

                                        p.setString(1, customerName);

                                        p.setString(2, address);

                                        p.setString(3, item);

                                        p.setString(4, qty);

                                        p.setString(5, subTotal);

                                        p.setString(6,vat);

                                        p.setString(7, total);

                                        p.executeUpdate();

                }

                catch(Exception e) {

                        e.printStackTrace();

                }

            }

}
```

Intro.java

```java
package miniProj1;
```

```java
import java.awt.BorderLayout;

import java.awt.FlowLayout;

import javax.swing.JButton;

import javax.swing.JDialog;

import javax.swing.JFrame;

import javax.swing.JPanel;

import javax.swing.border.EmptyBorder;

import javax.swing.border.LineBorder;

import java.awt.Color;

import javax.swing.JLabel;

import java.awt.Font;

import javax.swing.JTextField;

import javax.swing.JScrollPane;

import javax.swing.SwingConstants;

import javax.swing.JTable;

import javax.swing.table.DefaultTableModel;

import java.awt.event.ActionListener;

import java.io.FileWriter;

import java.io.IOException;

import java.io.PrintWriter;

import java.util.ArrayList;

import java.util.Iterator;

import java.util.concurrent.TimeUnit;

import java.awt.event.ActionEvent;

import javax.swing.UIManager;
```

```java
public class Intro extends JDialog {

    private final JPanel contentPanel = new JPanel();

    private JTextField txtItem;

    private JTextField txtPrice;

    private JTextField txtBusiness;

    private JTextField txtAddress;

    private JTable table_first;


    BillManager bill;

    Intro dialog;

    PrintWriter writer;

    public static void main(String[] args) {

        try {

            Intro dialog = new Intro();

            dialog.setDefaultCloseOperation(JDialog.DISPOSE_ON_CLOSE);

            dialog.setVisible(true);

        } catch (Exception e) {


            e.printStackTrace();

        }


    }

    public Intro() {

        setBounds(100, 100, 748, 538);

        getContentPane().setLayout(new BorderLayout());

        contentPanel.setBorder(new EmptyBorder(5, 5, 5, 5));
```

```java
getContentPane().add(contentPanel, BorderLayout.CENTER);

contentPanel.setLayout(null);




JPanel panel = new JPanel();

panel.setBounds(12, 195, 304, 146);

panel.setLayout(null);

panel.setBorder(new LineBorder(new Color(0, 0, 0)));

contentPanel.add(panel);



JLabel lbl_item = new JLabel("Item Name");

lbl_item.setFont(new Font("Tahoma", Font.BOLD, 15));

lbl_item.setBounds(12, 13, 121, 27);

panel.add(lbl_item);



JLabel lbl_price = new JLabel("Price");

lbl_price.setFont(new Font("Tahoma", Font.BOLD, 15));

lbl_price.setBounds(12, 68, 110, 23);

panel.add(lbl_price);



JButton btnAddItem = new JButton("Add Item");



btnAddItem.setFont(new Font("Tahoma", Font.BOLD, 14));

btnAddItem.setBounds(127, 108, 138, 25);

panel.add(btnAddItem);
```

```java
txtItem = new JTextField();

txtItem.setFont(new Font("Tahoma", Font.BOLD, 13));

txtItem.setColumns(10);

txtItem.setBounds(127, 16, 138, 27);

panel.add(txtItem);


txtPrice = new JTextField();

txtPrice.setFont(new Font("Tahoma", Font.BOLD, 13));

txtPrice.setColumns(10);

txtPrice.setBounds(127, 68, 138, 27);

panel.add(txtPrice);


JPanel panel_1 = new JPanel();

panel_1.setBounds(12, 75, 706, 96);

panel_1.setLayout(null);

panel_1.setBorder(new LineBorder(new Color(0, 0, 0)));

contentPanel.add(panel_1);


JLabel lbl_bussiness = new JLabel("Bussiness Name");

lbl_bussiness.setFont(new Font("Tahoma", Font.BOLD, 15));

lbl_bussiness.setBounds(12, 13, 121, 27);

panel_1.add(lbl_bussiness);


txtBusiness = new JTextField();

txtBusiness.setFont(new Font("Tahoma", Font.BOLD, 13));
```

```java
txtBusiness.setColumns(10);

txtBusiness.setBounds(159, 16, 521, 22);

panel_1.add(txtBusiness);


JLabel lbl_address = new JLabel("Address");

lbl_address.setFont(new Font("Tahoma", Font.BOLD, 15));

lbl_address.setBounds(12, 53, 144, 26);

panel_1.add(lbl_address);


txtAddress = new JTextField();

txtAddress.setFont(new Font("Tahoma", Font.BOLD, 13));

txtAddress.setColumns(10);

txtAddress.setBounds(159, 56, 521, 22);

panel_1.add(txtAddress);


JButton btnOk = new JButton("OK");

btnOk.addActionListener(new ActionListener() {

        public void actionPerformed(ActionEvent e) {

                try {

                        writer=new PrintWriter(bill.introfile);

                        writer.append(txtBusiness.getText().toString());

                        writer.println();

                        writer.append(txtAddress.getText().toString());

                        writer.println();

                        writer.flush();

                        writer.close();
```

```java
                                ArrayList<String> al=new ArrayList<String>();

                                int nrow=table_first.getRowCount();

                                int ncol=table_first.getColumnCount();

                                writer=new PrintWriter(bill.itemfile);

                                for(int i=0;i<nrow;i++) {

    writer.append((String)table_first.getValueAt(i, 0));

                                        writer.println();

                                }

                                writer.close();

                                writer=new PrintWriter(bill.pricefile);

                                for(int i=0;i<nrow;i++) {

                                    writer.append((String)table_first.getValueAt(i, 1));

                                        writer.println();


                                }

                                writer.close();

                                Intro.this.dispose();

                            bill=new BillManager();

                                bill.loadvalues();

                        } catch (IOException e1) {

                                e1.printStackTrace();

                        }


                    }
            });
```

```java
btnOk.setBounds(621, 418, 97, 25);

btnOk.setFont(new Font("Tahoma", Font.BOLD, 14));

contentPanel.add(btnOk);


JLabel lblIntro = new JLabel("Please provide the necessary Information");

lblIntro.setBounds(12, 29, 706, 33);

lblIntro.setHorizontalAlignment(SwingConstants.CENTER);

lblIntro.setFont(new Font("Tahoma", Font.BOLD, 20));

contentPanel.add(lblIntro);


JScrollPane scrollPane = new JScrollPane();

scrollPane.setBackground(Color.WHITE);

scrollPane.setBounds(328, 195, 390, 146);

contentPanel.add(scrollPane);


table_first = new JTable();

table_first.setFont(new Font("Tahoma", Font.BOLD, 13));

table_first.setBackground(Color.WHITE);

scrollPane.setViewportView(table_first);

table_first.setModel(new DefaultTableModel(

        new Object[][] {

        },

        new String[] {

                "Item Name", "Price"

        }

));
```

```java
                table_first.getColumnModel().getColumn(0).setPreferredWidth(174);


        btnAddItem.addActionListener(new ActionListener() {

            public void actionPerformed(ActionEvent e) {


                DefaultTableModel model = (DefaultTableModel)
table_first.getModel();

                model.addRow(new
Object[]{txtItem.getText().toString(),txtPrice.getText().toString()});

                }

            });

        }

}
```

<u>Records.java</u>

```java
package miniProj1;

import java.awt.BorderLayout;

import java.awt.FlowLayout;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.ResultSet;

import java.sql.Statement;

import javax.swing.JButton;

import javax.swing.JDialog;

import javax.swing.JPanel;

import javax.swing.border.EmptyBorder;

import javax.swing.JScrollPane;
```

```java
import javax.swing.JTable;

import javax.swing.table.DefaultTableModel;

import javax.swing.JLabel;

import javax.swing.SwingConstants;

import java.awt.Font;


public class Records extends JDialog {

        private final JPanel contentPanel = new JPanel();

        private static JTable table_rec;

        static Records dialog;

        public static void main(String[] args) {

                try {

                    dialog = new Records();

                        dialog.setDefaultCloseOperation(JDialog.DISPOSE_ON_CLOSE);

                        dialog.setVisible(true);

                } catch (Exception e) {

                        e.printStackTrace();

                }

        }

        public Records() {

                setBounds(100, 100, 794, 381);

                getContentPane().setLayout(new BorderLayout());

                contentPanel.setBorder(new EmptyBorder(5, 5, 5, 5));

                getContentPane().add(contentPanel, BorderLayout.CENTER);

                contentPanel.setLayout(null);
```

```java
JScrollPane scrollPane = new JScrollPane();

scrollPane.setBounds(12, 120, 749, 203);

contentPanel.add(scrollPane);


table_rec = new JTable();

table_rec.setFont(new Font("Tahoma", Font.BOLD, 13));

table_rec.setModel(new DefaultTableModel(

    new Object[][] {

    },

    new String[] {

            "Name", "Address", "Items", "Quantity", "Sub Total",

"VAT", "Total"

    }

));

scrollPane.setViewportView(table_rec);

JLabel lblStored = new JLabel("Stored Records In Database");

lblStored.setFont(new Font("Tahoma", Font.BOLD, 15));

lblStored.setHorizontalAlignment(SwingConstants.CENTER);

lblStored.setBounds(12, 30, 749, 35);

contentPanel.add(lblStored);

loadRec();

}

public void loadRec() {

    try {

            DefaultTableModel model = (DefaultTableModel)
table_rec.getModel();
```

```java
                    Connection con = null;

                    Statement stmt;

                    Class.forName("com.microsoft.sqlserver.jdbc.SQLServerDriver");

                    con=DriverManager.getConnection("jdbc:sqlserver://localhost;
databaseName=demo; integratedSecurity=true;");

                    stmt=con.createStatement();

               ResultSet rs=stmt.executeQuery("select * from bill");

                    while(rs.next())  {

                              String name=rs.getString(1);

                              String address=rs.getString(2);

                              String items=rs.getString(3);

                              String quantity=rs.getString(4);

                              String subtotal=rs.getString(5);

                              String vat=rs.getString(6);

                              String total=rs.getString(7);

                              model.addRow(new
Object[]{name,address,items,quantity,subtotal,vat,total});

                         }

            }catch(Exception e) {

                    e.printStackTrace();

            }


      }

}}
```

Chapter 4

Result and Discussion

	Secure	Low cost	Easy Access
Digital E-Bill Manager	Yes	No	Yes
Traditional E-Bill Manager	No	Yes	No

Conclusion

So, there is a necessity of a digital means of storing records for business as it is secure, fast and as well as easily manageable. Also this application provides sufficient information about the implementation of java language to create a responsive application, swing and awt components. This application also teaches to design the application according to user needs and requirements. Here we also make use of different database queries to store and view libraries. This application also teaches the way by which external libraries and jars can be applied into an application. So, java is a simple but very effective language which helps us to build softwares and application which can easily be used as a commercial product.