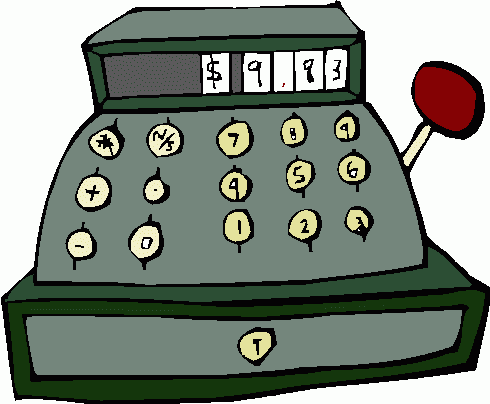
http://www.nilgiris1905.com/images/nilgiris-logo.gif

**BILLING SYSTEM**



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**CONTENTS**

* **INTRODUCTION**
* **ALGORITHM**
* **VARIABLE DESCRIPTION**
* **VARIABLES**
* **METHODS**
* **SOURCE CODE**
* **OUTPUT SCREENS**
* **BIBLIOGRAPHY**
* **CD**

**INTRODUCTION**

**This program serves as a billing system for the retail grocery store “Nilgiris”. It is meant for the use of trained billing staff and hence instructions must be read before use.**

**This billing system enables billing of products through the star-search method wherein the product to be billed is located from the master database using key words and phrases tokenized by the asterix ‘\*’. Billing of multiple products, each of varying quantity and billing multiple times is facilitated by this program. Price override and payment options are controlled by keyboard shortcuts recognized by the use of KeyListener interface. The resultant bill can be printed with an external device. A cumulative report of sales can be extracted using files and the same can also be printed using an external device. The program also has facilities for the addition of new products to the Master File.**

**This program extends the JFrame class besides implementing the interfaces KeyListener, Printable and ActionListener and makes use of various Swing java components to create a Billing System with real world applications.**

**ALGORITHM**

**Step1: Initialization of Billing System [Loading]**

**Step2: Menu window is displayed. Choose a button to proceed to the Billing Terminal [Step3], Master Product Upload [Step] or Exit [Step22] the program.**

**Step3: Billing Terminal is opened.**

**Step4: Enter product using star-search method. Press F1 [Step5] to override price else proceed to Step6.**

**Step5: Enter override price greater than given MRP. Underride of price is not allowed.**

**Step6: Enter quantity of product.**

**Step7: Repeat Step4 to Step6 until billing is complete.**

**Step8: Click on payment button to proceed to transactions.**

**Step9: Press F1 for cash [Step10], F2 for card [Step11] and F3 for coupon [Step12] transactions.**

**Step10: Enter cash amount received. Repeat Step9 if amount is still due.**

**Step11: Enter pin number for card. If entry is incorrect, warning is displayed. Else transaction is carried out successfully.**

**Step12: Enter value of coupons received. Repeat Step9 if amount is still due.**

**Step13. Click ‘Done’ if payment is complete.**

**Step14: Bill is displayed. Choose to ‘print’ [Step16] or ‘close’ [Step17].**

**Step15. Click on ‘Tender Report’ button in Billing Terminal to obtain a cumulative report of sales. Choose to ‘print’ [Step16] or ‘close’ [Step17].**

**Step16: Window is printed.**

**Step17. Window is closed and Billing Terminal is reopened for further billing [Step3].**

**Step18: Repeat Step3 to Step 15 until all billing is completed.**

**Step19: Choose Exit button in Billing Terminal to return to Menu window [Step2].**

**Step20: Master Upload window is opened.**

**Step21: Enter product description and price per unit. Click button to add product to Master File. Return to Menu window [Step2].**

**Step22: Program is terminated.**

**VARIABLE DESCRIPTION**

**VARIABLES**

|  |  |  |
| --- | --- | --- |
| **TYPE/OBJECT** | **VARIABLE NAME** | **DESCRIPTION** |
| **JFrame** | **load** | **To initialize** |
| **JFrame** | **terminal** | **Menu window** |
| **JFrame** | **masterupload** | **Window for uploading products to master copy** |
| **JFrame** | **main** | **Main billing terminal** |
| **JFrame** | **search** | **To display results of product search** |
| **JFrame** | **override** | **To enable price override** |
| **JFrame** | **pay** | **To enable payment** |
| **JFrame** | **cash** | **Window for cash transactions** |
| **JFrame** | **card** | **Window for card transactions** |
| **JFrame** | **coupon** | **Window for coupon transactions** |
| **JFrame** | **bill** | **Displays final bill** |
| **JFrame** | **report** | **Displays cumulative tender report** |
| **JPanel** | **opening** | **Panel for JFrame load** |
| **JPanel** | **choice** | **Panel for JFrame terminal** |
| **JPanel** | **addproduct** | **Panel for JFrame masterupload** |
| **JPanel** | **pane1** | **Panel for JFrame main** |
| **JPanel** | **pane2** | **Panel for JFrame search** |
| **JPanel** | **pane3** | **Panel for JFrame override** |
| **JPanel** | **pane4** | **Panel for JFrame pay** |
| **JPanel** | **pane5** | **Panel for JFrame cash** |
| **JPanel** | **pane6** | **Panel for JFrame card** |
| **JPanel** | **pane7** | **Panel for JFrame coupon** |
| **JPanel** | **pane8** | **Panel for JFrame report** |
| **JPanel** | **display** | **Panel for JFrame bill** |
| **JButton** | **mainwindow** | **Leads to JFrame main** |
| **JButton** | **masters** | **Leads to JFrame masterupload** |
| **JButton** | **Payment** | **Leads to JFrame pay** |
| **JButton** | **Report** | **Leads to JFrame report** |
| **JButton** | **exit** | **Leads back to JFrame terminal or terminates program** |
| **JButton** | **Masters** | **Adds product and MRP to master product list** |
| **JButton** | **select** | **Selects product from search results** |
| **JButton** | **print** | **Print respective window** |
| **JButton** | **close** | **Closes respective window** |
| **JButton** | **done** | **Completes payment transactions and displays bill** |
| **JLabel** | **jlab1** | **Displays amount of product entered** |
| **JLabel** | **jlab2** | **Displays subtotal of bill** |
| **JLabel** | **jlab3** | **Displays number of items billed** |
| **JLabel** | **L** | **Multipurpose label** |
| **JLabel** | **H1, H2** | **Display headers** |
| **JLabel** | **DT** | **Displays date and time** |
| **JTextField** | **jtfp** | **To enter product details** |
| **JTextField** | **jtfq** | **To enter number of items** |
| **JTextField** | **jtfm** | **To enter product description for master upload** |
| **JTextField** | **jtfu** | **To enter product MRP for master upload** |
| **JTextField** | **jtfo** | **To enter override price** |
| **JTextField** | **jtfc** | **To enter cash amount** |
| **JTextField** | **jtfx** | **To enter coupon value** |
| **JTextField** | **pin** | **To enter pin number for card transactions** |
| **DefaultListModel** | **lm1** | **Holds product details when billing** |
| **JList** | **jln** |
| **JScrollPane** | **jspn** |
| **DefaultListModel** | **lm2** | **Holds quantity of products when billing** |
| **JList** | **jlq** |
| **JScrollPane** | **jspq** |
| **DefaultListModel** | **lm3** | **Holds price per unit of products when billing** |
| **JList** | **jlp** |
| **JScrollPane** | **jspp** |
| **DefaultListModel** | **lm4** | **Holds total cost of product when billing** |
| **JList** | **jla** |
| **JScrollPane** | **jspa** |
| **DefaultListModel** | **lm** | **Holds results of product search** |
| **JList** | **jl** |
| **JScrollPane** | **jsp** |
| **JTable** | **jt** | **Displays cumulative tender report** |
| **Font** | **f** | **Defines font type and size for text** |
| **Font** | **F** |
| **Double** | **price, amount, subtotal** | **To calculate price, amount and subtotal** |
| **Double** | **t1, t2, t3, tendered, balance, due** | **Used to store values regarding payment transactions for an individual bill** |
| **Double** | **ppu** | **Used to enter MRP for master product upload** |
| **Double** | **cashsales, totalsales, cardsales, couponsales, overrideamount, totalsales** | **Used to store cumulative transaction details for tender report** |
| **Double** | **casht, coupon, cardt, ovno, ov, tot** | **Used to extract transaction details for cumulative tender report** |
| **Int** | **quantity, items, overridect** | **Used to track number of products billed or overriden** |
| **String** | **product, selection** | **Used to search for product when billing and store the selected** |
| **String** | **descrptn** | **Used to enter product decription for master upload** |
| **String** | **dates, time** | **Used to display date and time** |
| **String** | **text** | **Used to read files** |
| **Date** | **date** | **Extract date and time** |
| **DateFormat** | **df, DF** |
| **DateFormat** | **DF** |
| **FileWriter** | **f1, f2, fm** | **To write to files** |
| **BufferedWriter** | **b1, b2, bm** |
| **FileReader** | **f, fr** | **To read from files** |
| **BufferedReader** | **bin, br** |

**METHODS:**

|  |  |
| --- | --- |
| **Method Name** | **Description** |
| **BillingSystem** | **Constructor: Opens initialization window** |
| **terminalframe** | **Opens terminal window for menu** |
| **mainbutton** | **Opens main window for billing** |
| **masterbutton** | **Opens window for master product upload** |
| **paymentbutton** | **Opens window for payment** |
| **keyPressed(KeyEvent ke)** | **Method overrides for KeyListener interface** |
| **keyReleased(KeyEvent ke)** |
| **keyTyped(KeyEvent ke)** |
| **paint(Graphics g)** | **Method overrides for Printable interface** |
| **int print(Graphics g, PageFormat pf, int page)** |
| **actionPerformed(ActionEvent e)** |

**SOURCE CODE**

**import java.io.\*;**

**import java.util.\*;**

**import java.text.\*;**

**import javax.swing.\*;**

**import java.awt.\*;**

**import java.awt.event.\*;**

**import java.awt.print.\*;**

**import java.awt.print.Printable.\*;**

**import javax.swing.DefaultListModel.\*;**

**import javax.swing.table.\*;**

**public class BillingSystem extends JFrame implements KeyListener, Printable, ActionListener**

**{**

**JFrame load, terminal, masterupload, main, search, override, pay, cash, card, coupon, bill, report;**

**JPanel opening, choice, addproduct, pane1, pane2, pane3, pane4, pane5, pane6, pane7, pane8, display;**

**JLabel jlab1, jlab2, jlab3, L, H1, H2, DT;**

**JTextField jtfp, jtfq, jtfm, jtfu, jtfo, jtfc, pin, jtfx;**

**DefaultListModel lm1, lm2, lm3, lm4, lm;**

**JList jln, jlq, jlp, jla, jl;**

**JScrollPane jspn, jspq, jspp, jspa;**

**JButton mainwindow, masters, Payment, Report, exit, Masters, print, close;**

**JTable jt;**

**Font f, F;**

**double price, amount, subtotal=0.0;**

**double t1=0.0, t2=0.0, t3=0.0, tendered, balance, due, ppu;**

**double cashsales=0.0, cardsales=0.0, couponsales=0.0, overrideamount=0.0, totalsales=0.0;**

**double casht=0.0, coupont=0.0, cardt=0.0, ovno=0.0, ov=0.0, tot=0.0;**

**int quantity, items=0, overridect=0;**

**String product, text, descrptn, selection;**

**FileWriter f1,f2, fm;**

**BufferedWriter b1, b2, bm;**

**String msg="";**

**int X=10, Y=20;**

**Date date=new Date();**

**DateFormat df=DateFormat.getDateInstance(DateFormat.FULL, Locale.UK); DateFormat DF=DateFormat.getTimeInstance(DateFormat.LONG, Locale.UK);**

**String dates=df.format(date);**

**String time=DF.format(date);**

**public BillingSystem()**

**{**

**L=new JLabel(" LOADING.....");**

**H1=new JLabel("NILGIRI'S");**

**H2=new JLabel("At the heart of great taste. Since 1905.");**

**DT=new JLabel(dates+" "+time);**

**f=new Font("Britannic Bold", Font.PLAIN, 20);**

**H1.setFont(f);**

**H2.setFont(f);**

**L.setFont(f);**

**load=new JFrame("BILLING SYSTEM");**

**load.setSize(400, 200);**

**load.setVisible(true);**

**load.setFocusable(true);**

**opening=new JPanel();**

**opening.setLayout(new FlowLayout());**

**load.add(opening);**

**opening.setFocusable(true);**

**addKeyListener(this);**

**load.addKeyListener(this);**

**opening.addKeyListener(this);**

**opening.add(H1);**

**opening.add(H2);**

**opening.add(L);**

**opening.add(DT);**

**try**

**{**

**Thread.sleep(5000);**

**load.setVisible(false);**

**}**

**catch(InterruptedException ex)**

**{**

**Thread.currentThread().interrupt();**

**}**

**terminalframe();**

**}**

**public void terminalframe()**

**{**

**terminal=new JFrame("BILLING SYSTEM");**

**terminal.setSize(450, 200);**

**terminal.setVisible(true);**

**choice=new JPanel();**

**choice.setLayout(new FlowLayout());**

**terminal.add(choice);**

**choice.add(H1);**

**choice.add(H2);**

**mainwindow=new JButton("BILLING TERMINAL");**

**masters=new JButton("MASTER PRODUCT UPLOAD");**

**exit=new JButton("EXIT");**

**choice.add(mainwindow);**

**choice.add(masters);**

**choice.add(exit);**

**choice.add(DT);**

**mainwindow.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**mainbutton();**

**}**

**});**

**masters.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**masterbutton();**

**}**

**});**

**exit.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**System.exit(EXIT\_ON\_CLOSE);**

**}**

**});**

**}**

**public void mainbutton()**

**{**

**terminal.setVisible(false);**

**main=new JFrame("BILLING TERMINAL");**

**main.setVisible(true);**

**main.setSize(380,500);**

**main.setFocusable(true);**

**pane1=new JPanel();**

**pane1.setLayout(new FlowLayout());**

**main.add(pane1);**

**pane1.setFocusable(true);**

**L=new JLabel(“BILLING TERMINAL #001”); L.setFont(f);**

**pane1.add(L);**

**pane1.add(new JLabel(" Enter Product "));**

**pane1.add(new JLabel("Quantity"));**

**jtfp= new JTextField(20);**

**pane1.add(jtfp);**

**pane1.add(new JLabel());**

**jtfq= new JTextField(3);**

**pane1.add(jtfq);**

**pane1.add(new JLabel());**

**jlab1=new JLabel("Amount: Rs. 0.0");**

**pane1.add(jlab1);**

**pane1.add(new JLabel());**

**jlab2=new JLabel(" SubTotal: Rs. 0.0 ");**

**pane1.add(jlab2);**

**jlab3=new JLabel("Items: 0");**

**pane1.add(jlab3);**

**pane1.add(new JLabel("Product Details "));**

**pane1.add(new JLabel(" Quantity"));**

**pane1.add(new JLabel("Price"));**

**pane1.add(new JLabel("Amount"));**

**lm1=new DefaultListModel();**

**jln=new JList(lm1);**

**jln.setSelectionMode(ListSelectionModel.SINGLE\_SELECTION);**

**lm2=new DefaultListModel();**

**jlq=new JList(lm2);**

**jlq.setSelectionMode(ListSelectionModel.SINGLE\_SELECTION);**

**lm3=new DefaultListModel();**

**jlp=new JList(lm3);**

**jlp.setSelectionMode(ListSelectionModel.SINGLE\_SELECTION);**

**lm4=new DefaultListModel();**

**jla=new JList(lm4);**

**jla.setSelectionMode(ListSelectionModel.SINGLE\_SELECTION);**

**jspn=new JScrollPane(jln);**

**jspn.setPreferredSize(new Dimension(150,200));**

**pane1.add(jspn);**

**pane1.add(new JLabel());**

**jspq=new JScrollPane(jlq);**

**jspq.setPreferredSize(new Dimension(35,200));**

**pane1.add(jspq);**

**pane1.add(new JLabel());**

**jspp=new JScrollPane(jlp);**

**jspp.setPreferredSize(new Dimension(35,200));**

**pane1.add(jspp);**

**pane1.add(new JLabel());**

**jspa=new JScrollPane(jla);**

**jspa.setPreferredSize(new Dimension(35,200));**

**pane1.add(jspa);**

**Payment=new JButton("Payment");**

**pane1.add(Payment);**

**Report=new JButton("Tender Report");**

**pane1.add(Report);**

**exit=new JButton("Exit");**

**pane1.add(exit);**

**pane1.add(DT);**

**pane1.add(new JLabel("Press F1 after product entry for price override"));**

**try**

**{**

**f1=new FileWriter("Bill.txt");**

**b1=new BufferedWriter(f1);**

**b1.write("Description Price Qty. Amount");**

**b1.newLine();**

**f2=new FileWriter("TenderReport.txt", true);**

**b2=new BufferedWriter(f2);**

**b2.newLine();**

**}**

**catch(Exception e)**

**{**

**}**

**jtfp.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**try**

**{**

**jtfp.setFocusable(true);**

**product=jtfp.getText();**

**FileReader f=new FileReader("ProductList.txt");**

**BufferedReader bin=new BufferedReader(f);**

**search=new JFrame("PRODUCT SEARCH");**

**search.setVisible(true);**

**search.setSize(400, 550);**

**pane2=new JPanel();**

**pane2.setLayout(new FlowLayout());**

**search.add(pane2);**

**pane2.add(H1);**

**pane2.add(H2);**

**lm=new DefaultListModel();**

**jl=new JList(lm);**

**jl.setSelectionMode(ListSelectionModel.SINGLE\_SELECTION);**

**JScrollPane jsp=new JScrollPane(jl);**

**jsp.setPreferredSize(new Dimension(300,400));**

**pane2.add(jsp);**

**JButton select=new JButton("Select");**

**pane2.add(select);**

**int ct=0;**

**String pname; boolean b=false;**

**while((text=bin.readLine())!=null)**

**{**

**StringTokenizer st=new StringTokenizer(product, "\*");**

**String token; int lim=st.countTokens();**

**pname=text.substring(0, text.indexOf(';'));**

**for(int i=0;i<lim; i++)**

**{**

**token=st.nextToken();**

**int x=token.length();**

**int pl=pname.length();**

**int j=0;**

**do**

**{**

**if(pname.substring(j, j+x).equalsIgnoreCase(token))**

**{**

**ct++; b=true;**

**}**

**j++;**

**}while(j<(pl-x));**

**if(ct==lim)**

**{**

**lm.addElement(text);**

**ct=0;**

**}**

**}**

**}**

**if(!b)**

**{**

**JOptionPane.showMessageDialog(null, "No such product**

**available!");**

**}**

**select.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**int idx=jl.getSelectedIndex();**

**selection=(String)jl.getSelectedValue();**

**jtfp.setText(selection.substring(0, selection.indexOf(';')));**

**lm1.addElement(selection.substring(0, selection.indexOf(';')));**

**price=Double.parseDouble(selection.substring((selection.indexOf(';')+1), selection.length()));**

**lm3.addElement(price);**

**search.setVisible(false);**

**}**

**});**

**jtfp.addKeyListener(new KeyAdapter() {**

**public void keyReleased(KeyEvent ke)**

**{**

**}**

**public void keyTyped(KeyEvent ke)**

**{**

**msg+=ke.getKeyChar();**

**repaint();**

**}**

**public void keyPressed(KeyEvent ke)**

**{**

**int key=ke.getKeyCode();**

**if(key==KeyEvent.VK\_F1)**

**{**

**override=new JFrame("PRICE OVERRIDE");**

**override.setVisible(true);**

**override.setSize(300,150);**

**pane3=new JPanel();**

**override.add(pane3);**

**pane3.add(new JLabel("Product Description:**

**"+product+" "));**

**pane3.add(new JLabel(" Original price/unit:**

**"+price+" "));**

**pane3.add(new JLabel("Override price: "));**

**jtfo=new JTextField(10);**

**pane3.add(jtfo);**

**jtfo.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**double nprice=Double.parseDouble(jtfo.**

**getText());**

**if(nprice<price)**

**{**

**JOptionPane.showMessageDialog(null,**

**"Overriding price must be greater than product**

**MRP!");**

**}**

**else**

**{**

**overrideamount=overrideamount+(nprice-**

**price);**

**overridect=overridect+1;**

**lm3.removeElementAt(lm3.getSize()-1);**

**price=nprice;**

**lm3.addElement(price);**

**override.setVisible(false);**

**}**

**}**

**});**

**}**

**}**

**public void paint(Graphics g)**

**{**

**g.drawString(msg, X, Y);**

**}**

**});**

**if(selection.length()>11)**

**{**

**b1.write(selection.substring(0,11)+" ");**

**}**

**else**

**{**

**b1.write(selection+" ");**

**}**

**b1.write(price+" ");**

**bin.close();**

**}**

**catch(Exception e)**

**{**

**}**

**}**

**});**

**jtfq.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**quantity=Integer.parseInt(jtfq.getText());**

**lm2.addElement(quantity);**

**amount=price\*quantity;**

**lm4.addElement(amount);**

**jlab1.setText("Amount: "+amount);**

**subtotal= subtotal+amount;**

**jlab2.setText("SubTotal: Rs. "+subtotal+" ");**

**items=items+quantity;**

**jlab3.setText("Items: "+items);**

**try**

**{**

**b1.write(quantity+" ");**

**b1.write(amount+" ");**

**b1.newLine();**

**}**

**catch(Exception e)**

**{**

**}**

**jtfp.setText(null);**

**jtfq.setText(null);**

**}**

**});**

**Payment.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**paymentbutton();**

**}**

**});**

**Report.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**main.setVisible(false);**

**report=new JFrame("TENDER REPORT");**

**report.setVisible(true);**

**report.setSize(380,400);**

**pane8=new JPanel();**

**pane8.setLayout(new FlowLayout());**

**report.add(pane8);**

**pane8.add(H1);**

**pane8.add(H2);**

**L=new JLabel("TENDER REPORT");**

**f=new Font("Britannic Bold", Font.PLAIN, 18);**

**L.setFont(f);**

**pane8.add(L);**

**try**

**{**

**FileReader fr=new FileReader("TenderReport.txt");**

**BufferedReader br=new BufferedReader(fr);**

**String line;**

**while((line=br.readLine())!=null)**

**{**

**String type=line.substring(0, line.indexOf(':'));**

**double add= Double.parseDouble (line.substring (**

**(line.indexOf(':')+1), line.length()));**

**if(type.equals("Cash"))**

**{**

**casht+=add;**

**}**

**if(type.equals("Coupon[Sodexo/Ticket Restaurant]"))**

**{**

**coupont+=add;**

**}**

**if(type.equals("Card[Credit/Debit]"))**

**{**

**cardt+=add;**

**}**

**if(type.equals("Number of overrides"))**

**{**

**ovno+=add;**

**}**

**if(type.equals("Override Amount"))**

**{**

**ov+=add;**

**}**

**if(type.equals("Total sales"))**

**{**

**tot+=add;**

**}**

**}**

**br.close();**

**}**

**catch(Exception e)**

**{**

**}**

**String headers[]={"Transaction Type/Tender", "Amount"};**

**Object data[][]={**

**{"Cash", casht},**

**{"Coupon[Sodexo/Ticket Restaurant]", coupont},**

**{"Card[Credit/Debit]", cardt},**

**{"Number of overrides", ovno},**

**{"Override Amount", ov},**

**{"Total sales", tot}};**

**jt=new JTable(data, headers);**

**jt.setSize(350, 350);**

**jt.setRowHeight(30);**

**TableColumnModel columnModel = jt.getColumnModel();**

**columnModel.getColumn(0).setPreferredWidth(250);**

**columnModel.getColumn(1).setPreferredWidth(100);**

**pane8.add(jt);**

**print=new JButton("PRINT REPORT");**

**pane8.add(print);**

**close=new JButton("CLOSE");**

**pane8.add(close);**

**pane8.add(DT);**

**print.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**UIManager.put("swing.boldMetal", Boolean.FALSE);**

**print.addActionListener(new ActionListener(){**

**public int print(Graphics g, PageFormat pf, int page)**

**throws PrinterException**

**{**

**if (page > 0)**

**{**

**return NO\_SUCH\_PAGE;**

**}**

**Graphics2D g2d = (Graphics2D)g;**

**g2d.translate(pf.getImageableX(),**

**pf.getImageableY());**

**report.printAll(g);**

**return PAGE\_EXISTS;**

**}**

**public void actionPerformed(ActionEvent e) {**

**PrinterJob job = PrinterJob.getPrinterJob();**

**boolean ok = job.printDialog();**

**if (ok)**

**{**

**try**

**{**

**job.print();**

**}**

**catch (PrinterException ex)**

**{**

**}**

**}**

**}**

**});**

**}**

**});**

**close.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**report.setVisible(false);**

**mainbutton();**

**}**

**});**

**}**

**});**

**exit.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**main.setVisible(false);**

**terminalframe();**

**}**

**});**

**}**

**public void masterbutton()**

**{**

**terminal.setVisible(false);**

**masterupload=new JFrame("MASTERS PRODUCT UPLOAD");**

**masterupload.setSize(380, 300);**

**masterupload.setVisible(true);**

**addproduct=new JPanel();**

**addproduct.setLayout(new FlowLayout());**

**masterupload.add(addproduct);**

**addproduct.add(H1);**

**addproduct.add(H2);**

**L=new JLabel("MASTERS PRODUCT UPLOAD");**

**L.setFont(f);**

**addproduct.add(L);**

**addproduct.add(new JLabel("Product Description"));**

**jtfm=new JTextField(20);**

**addproduct.add(jtfm);**

**addproduct.add(new JLabel("Price per Unit"));**

**jtfu=new JTextField(20);**

**addproduct.add(jtfu);**

**Masters=new JButton("Add Product to Masters");**

**addproduct.add(Masters);**

**addproduct.add(DT);**

**Masters.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**try**

**{**

**descrptn=(String)jtfm.getText();**

**ppu=Double.parseDouble(jtfu.getText());**

**if(descrptn==null||ppu==0)**

**{**

**JOptionPane.showMessageDialog(null, "NO INFORMATION**

**DETECTED!");**

**}**

**else**

**{**

**fm=new FileWriter("ProductList.txt", true);**

**bm=new BufferedWriter(fm);**

**bm.newLine();**

**bm.write(descrptn+";"+ppu);**

**bm.close();**

**JOptionPane.showMessageDialog(null, "PRODUCT ADDED TO**

**MASTERS!");**

**}**

**}**

**catch(Exception e)**

**{**

**}**

**masterupload.setVisible(false);**

**terminalframe();**

**}**

**});**

**}**

**public void paymentbutton()**

**{**

**try**

**{**

**pay=new JFrame("PAYMENT");**

**pay.setVisible(true);**

**pay.setSize(250,200);**

**pane4=new JPanel();**

**pane4.setLayout(new FlowLayout());**

**pay.add(pane4);**

**F=new Font("Britannic Bold", Font.PLAIN, 13);**

**H1.setFont(F);**

**H2.setFont(F);**

**pane4.add(H1);**

**pane4.add(H2);**

**L=new JLabel("<html>Mode of Payment<br>Cash: F1<br>Credit/Debit**

**Card: F2<br>Sodexo/Ticket Restaurant: F3</html>");**

**L.setFont(F);**

**pane4.add(L);**

**JButton done=new JButton("Done");**

**pane4.add(done);**

**JTextArea jta=new JTextArea();**

**pane4.add(jta);**

**done.addKeyListener(new KeyAdapter() {**

**public void keyReleased(KeyEvent ke)**

**{**

**}**

**public void keyTyped(KeyEvent ke)**

**{**

**msg+=ke.getKeyChar();**

**repaint();**

**}**

**public void keyPressed(KeyEvent ke)**

**{**

**int key=ke.getKeyCode(); due=subtotal;**

**if(key==KeyEvent.VK\_F1)**

**{**

**cash=new JFrame("CASH");**

**cash.setVisible(true);**

**cash.setSize(150,150);**

**pane5=new JPanel();**

**pane5.setLayout(new FlowLayout());**

**cash.add(pane5);**

**pane5.add(new JLabel("Amount due: "+(due-(t1+t2+t3))));**

**pane5.add(new JLabel("Amount Tendered"));**

**jtfc=new JTextField(15);**

**pane5.add(jtfc);**

**jtfc.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**t1=t1+Double.parseDouble(jtfc.getText());**

**cash.setVisible(false);**

**}**

**});**

**}**

**if(key==KeyEvent.VK\_F2)**

**{**

**card=new JFrame("CREDIT/DEBIT CARD");**

**card.setVisible(true);**

**card.setSize(150,150);**

**pane6=new JPanel();**

**pane6.setLayout(new FlowLayout());**

**card.add(pane6);**

**t2=t2+subtotal;**

**pane6.add(new JLabel("Amount due: "+(due-(t1+t2+t3))));**

**pane6.add(new JLabel("Transaction Amount: "+t2));**

**pane6.add(new JLabel("Enter pin:"));**

**pin=new JTextField(10);**

**pane6.add(pin);**

**pin.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**boolean b=true;**

**for(int i=0;i<(pin.getText()).length();i++)**

**{**

**if(!Character.isDigit((pin.getText()).charAt(i)))**

**{**

**b=false;**

**break;**

**}**

**}**

**if((pin.getText()).length()!=6 || b==false)**

**{**

**JOptionPane.showMessageDialog(null, "WRONG PIN**

**NUMBER! PLEASE REENTER!");**

**}**

**else**

**{**

**JOptionPane.showMessageDialog(null,**

**"TRANSACTION SUCCESSFUL!");**

**card.setVisible(false);**

**}**

**}**

**});**

**}**

**if(key==KeyEvent.VK\_F3)**

**{**

**coupon=new JFrame("SODEXO/TICKET RESTAURANT");**

**coupon.setVisible(true);**

**coupon.setSize(150,150);**

**pane7=new JPanel();**

**pane7.setLayout(new FlowLayout());**

**coupon.add(pane7);**

**pane7.add(new JLabel("Amount due: "+(due-(t1+t2+t3))));**

**pane7.add(new JLabel("Amount Tendered"));**

**jtfx=new JTextField(15);**

**pane7.add(jtfx);**

**jtfx.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**t3=t3+Double.parseDouble(jtfx.getText());**

**if(t3>subtotal)**

**{**

**JOptionPane.showMessageDialog(null, "BALANCE**

**CANNOT BE TENDERED FOR COUPONS! PLEASE**

**PROVIDE CORRECT AMOUNT!");**

**t3=t3-Double.parseDouble(jtfx.getText());**

**}**

**else**

**{**

**coupon.setVisible(false);**

**}**

**}**

**});**

**}**

**}**

**public void paint(Graphics g)**

**{**

**g.drawString(msg, X, Y);**

**}**

**});**

**done.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**H1.setFont(f);**

**H2.setFont(f);**

**L.setFont(f);**

**tendered=t1+t2+t3;**

**if(tendered<subtotal)**

**{**

**JOptionPane.showMessageDialog(null, "INSUFFICIENT**

**PAYMENT!");**

**}**

**else**

**{**

**balance=tendered-subtotal;**

**cashsales=cashsales+t1-balance;**

**cardsales=cardsales+t2;**

**couponsales=couponsales+t3;**

**totalsales=totalsales+subtotal;**

**try**

**{**

**main.setVisible(false);**

**bill=new JFrame("BILL");**

**bill.setVisible(true);**

**bill.setSize(380,500);**

**display=new JPanel();**

**display.setLayout(new FlowLayout());**

**bill.add(display);**

**display.add(H1);**

**display.add(H2);**

**display.add(new JLabel(" Product Details "));**

**display.add(new JLabel(" Quantity"));**

**display.add(new JLabel("Price"));**

**display.add(new JLabel("Amount"));**

**display.add(jspn);**

**display.add(new JLabel());**

**display.add(jspq);**

**display.add(new JLabel());**

**display.add(jspp);**

**display.add(new JLabel());**

**display.add(jspa);**

**display.add(jlab2);**

**display.add(new JLabel(" Amount Tendered:**

**"+tendered+" "));**

**display.add(new JLabel(" Balance: "+balance+"**

**"));**

**display.add(new JLabel(" Cash Amount: "+(t1-**

**balance)));**

**display.add(new JLabel(" Card Amount: "+t2));**

**display.add(new JLabel(" Coupon Amount: "+t3+"**

**"));**

**print=new JButton("PRINT BILL");**

**display.add(print);**

**close=new JButton("CLOSE");**

**display.add(close);**

**display.add(DT);**

**print.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**UIManager.put("swing.boldMetal", Boolean.FALSE);**

**print.addActionListener(new ActionListener(){**

**public int print(Graphics g, PageFormat pf, int**

**page) throws PrinterException**

**{**

**if (page > 0)**

**{**

**return NO\_SUCH\_PAGE;**

**}**

**Graphics2D g2d = (Graphics2D)g;**

**g2d.translate(pf.getImageableX(),**

**pf.getImageableY());**

**bill.printAll(g);**

**return PAGE\_EXISTS;**

**}**

**public void actionPerformed(ActionEvent e) {**

**PrinterJob job = PrinterJob.getPrinterJob();**

**boolean ok = job.printDialog();**

**if (ok)**

**{**

**try**

**{**

**job.print();**

**}**

**catch (PrinterException ex)**

**{**

**}**

**}**

**}**

**});**

**}**

**});**

**close.addActionListener(new ActionListener(){**

**public void actionPerformed(ActionEvent ae)**

**{**

**bill.setVisible(false);**

**mainbutton();**

**}**

**});**

**b1.write("Total "+subtotal);**

**b1.newLine();**

**b1.write("Amount Tendered: "+tendered);**

**b1.newLine();**

**b1.write(" Balance: "+balance);**

**b1.newLine();**

**b1.write(" Cash Amount: "+(t1-balance));**

**b1.newLine();**

**b1.write(" Card Amount: "+t2);**

**b1.newLine();**

**b1.write(" Coupon Amount: "+t3);**

**b1.newLine();**

**b1.write(" Items: "+items);**

**b1.newLine();**

**b1.close();**

**b2.write("Cash:"+cashsales);**

**b2.newLine();**

**b2.write("Coupon[Sodexo/Ticket**

**Restaurant]:"+couponsales);**

**b2.newLine();**

**b2.write("Card[Credit/Debit]:"+cardsales);**

**b2.newLine();**

**b2.write("Number of overrides:"+overridect);**

**b2.newLine();**

**b2.write("Override Amount:"+overrideamount);**

**b2.newLine();**

**b2.write("Total sales:"+totalsales);**

**b2.close();**

**}**

**catch(Exception e)**

**{**

**}**

**t1=0.0; t2=0.0; t3=0.0;**

**pay.setVisible(false);**

**}**

**}**

**});**

**}**

**catch(Exception e)**

**{**

**}**

**}**

**public void keyPressed(KeyEvent ke)**

**{**

**}**

**public void keyReleased(KeyEvent ke)**

**{**

**}**

**public void keyTyped(KeyEvent ke)**

**{**

**msg+=ke.getKeyChar();**

**repaint();**

**}**

**public void paint(Graphics g)**

**{**

**g.drawString(msg, X, Y);**

**}**

**public int print(Graphics g, PageFormat pf, int page) throws**

**PrinterException**

**{**

**return 0;**

**}**

**public void actionPerformed(ActionEvent e)**

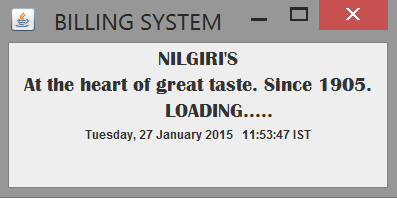
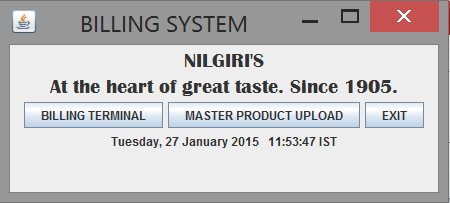
**{**

**}**

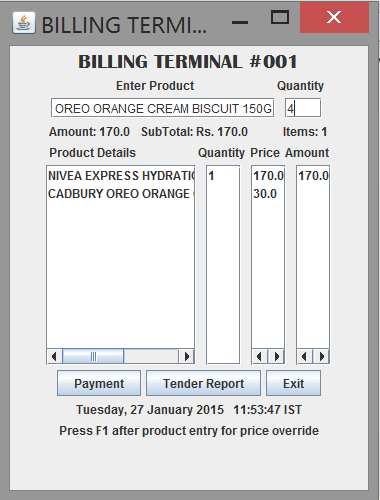
**}**

**OUTPUT SCREENS**

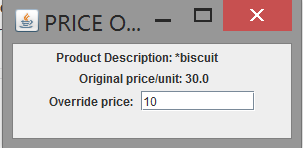
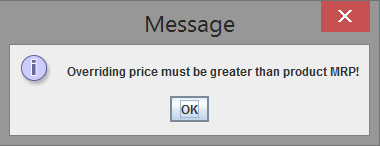
**Start Screen Menu Window**

** **

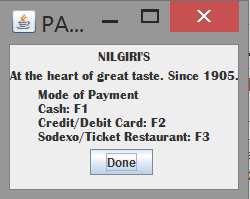
**Billing Terminal Product Search**

** **

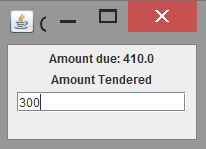
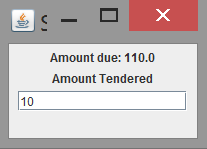
**Price Override**

** **

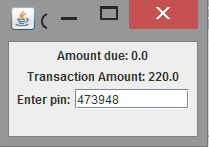
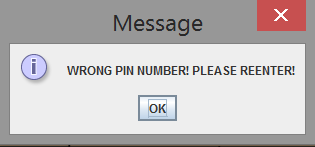
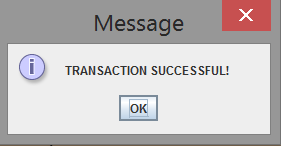
**Payment**

****

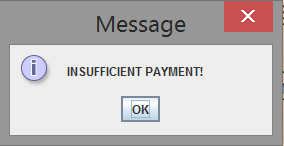
**Cash Coupon**

** **

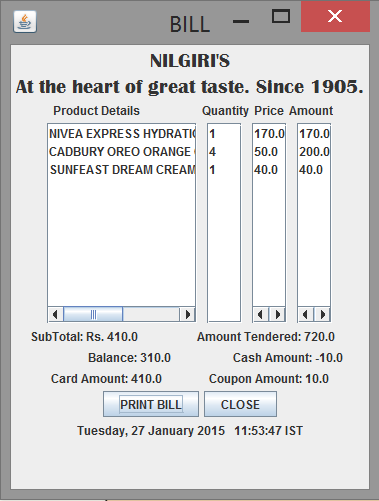
**Card**

**  **

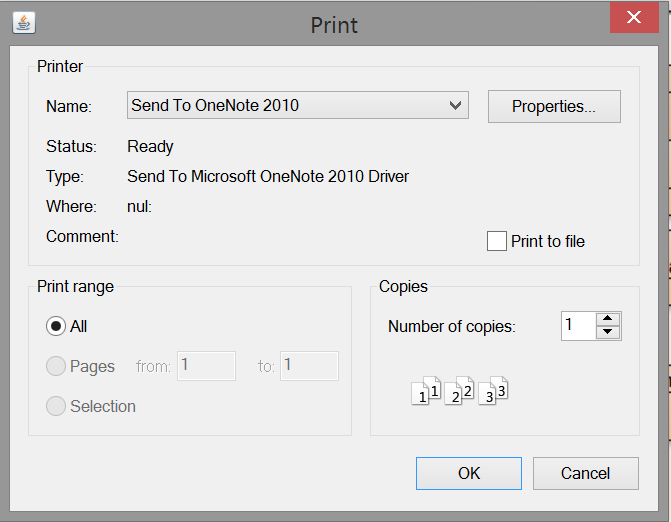
**Insufficient Payment**

****

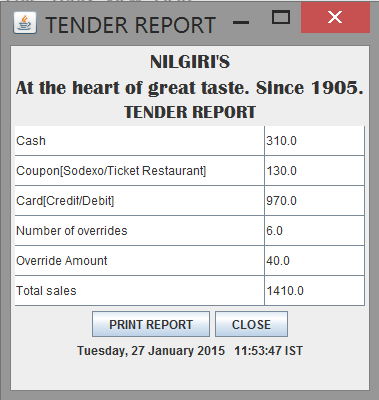
**Bill**

****

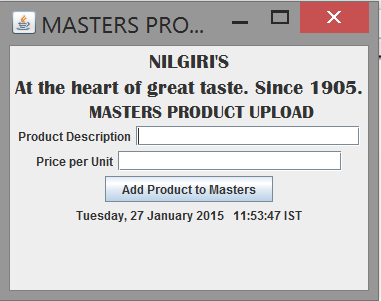
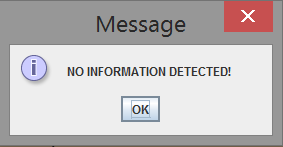
**Print**

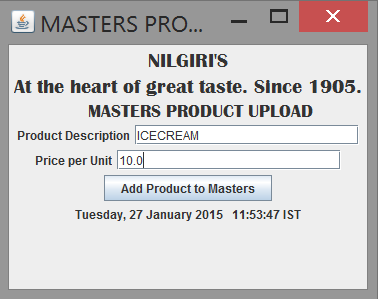
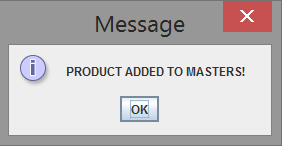
****

**Tender Report**

****

**Master Product Upload**

** **

** **

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**Credits: Monique Nagi, Computer Science teacher**