/\*

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\* and open the template in the editor.

\*/

package menuis;

/\*\*

\*

\* @author Nilej, Dipesh, Niku, Ganesh

\*/

import java.awt.\*;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import java.awt.image.BufferedImage;

import java.io.File;

import java.util.ArrayList;

import javax.imageio.ImageIO;

import javax.swing.\*;

import javax.swing.border.TitledBorder;

import javax.swing.table.DefaultTableModel;

public class MenuInfo implements ActionListener {

private JFrame frame;

private JLabel Serial,modelName,brandName,vat,price,search,status;

private JTextField txtSerial,txtModelName,txtVat,txtPrice,txtSearch;

private JButton btnInsert, btnClear, btnClearTable, btnView,btnSearch,btnExit;

private JComboBox brand,categorycombo;

private JTable info;

private JRadioButton highEnd,lowEnd,normal,available,notAvail;

private JPanel panel,left,right,left2;

private int tablecounter=0;

private JMenuBar menu;

public static ArrayList<MenuDetails> list;

public MenuInfo()

{

/\*this is the constructor method. this initializes the array list created from MenuDetails class

this method is responsible for creating the layout and components of the GUI\*/

list = new ArrayList <MenuDetails>();

frame = new JFrame ("Hamro Laptop Store");

Container panel = frame.getContentPane();

panel.setBackground(new java.awt.Color(95, 112, 117));

panel.setLayout(null);

JPanel mainPanel = new JPanel();

panel.add(mainPanel);

mainPanel.setBackground(new java.awt.Color(97,212,195));

mainPanel.setLayout(null);

mainPanel.setBounds(0,0,420,700);

JPanel panel1 = new JPanel();

mainPanel.add(panel1);

panel1.setBackground(new java.awt.Color(97,212,195));

panel1.setLayout(null);

panel1.setBounds(10,150,400,500);

menu = new JMenuBar();

frame.setJMenuBar (menu);

JMenu fileMenu = new JMenu ("File");

menu.add(fileMenu);

ImageIcon iconLogo3 = new ImageIcon("Images/Open.png");

JMenuItem openItem = new JMenuItem("Open");

openItem.setIcon(iconLogo3);

fileMenu.add(openItem);

openItem.addActionListener(this);

ImageIcon iconLogo4 = new ImageIcon("Images/exit.png");

JMenuItem exitItem = new JMenuItem("Exit");

exitItem.setIcon(iconLogo4);

fileMenu.add(exitItem);

exitItem.addActionListener(this);

JMenu helpMenu = new JMenu ("Help");

menu.add(helpMenu);

ImageIcon iconLogo5 = new ImageIcon("Images/About.png");

JMenuItem aboutItem = new JMenuItem("About");

aboutItem.setIcon(iconLogo5);

helpMenu.add(aboutItem);

aboutItem.addActionListener(this);

ImageIcon iconLogo6 = new ImageIcon("Images/userguide.png");

JMenuItem helpItem = new JMenuItem("User Guide");

helpItem.setIcon(iconLogo6);

helpMenu.add(helpItem);

helpItem.addActionListener(this);

ImageIcon iconLogo = new ImageIcon("Images/Logo.png");

JLabel lblLogo = new JLabel();

lblLogo.setIcon(iconLogo);

lblLogo.setBounds(0,10,400,120);

mainPanel.add(lblLogo);

ImageIcon iconLogo2 = new ImageIcon("Images/Logo2.png");

JLabel lblLogo2 = new JLabel();

lblLogo2.setIcon(iconLogo2);

lblLogo2.setBounds(430,10,900,120);

panel.add(lblLogo2);

search = new JLabel("Search By Price :");

search.setBounds(600,150, 170, 40);

search.setForeground(Color.white);

search.setFont(new Font("Segoe Script", Font.BOLD, 18));

panel.add(search);

txtSearch = new JTextField();

txtSearch.setBounds(800,150,300,40);

txtSearch.setForeground(new java.awt.Color(51,0, 51));

txtSearch.setFont(new Font("Segoe Script", Font.PLAIN, 14));

panel.add(txtSearch);

ImageIcon search = new ImageIcon("Images/search.png");

btnSearch = new JButton("Search");

btnSearch.setIcon(search);

btnSearch.setBounds(1150,150,140,40);

btnSearch.setForeground(new java.awt.Color(51,0, 51));

btnSearch.setFont(new Font("Segoe Script", Font.PLAIN, 18));

panel.add(btnSearch);

btnSearch.addActionListener(this);

left = new JPanel();

left.setLayout(null);

left.setBorder (BorderFactory.createTitledBorder(BorderFactory.createEtchedBorder (),

"Define Laptop Info",TitledBorder.CENTER,TitledBorder.TOP,

new java.awt.Font("Segoe Script", 1, 20), new java.awt.Color(0,0,0)));

left.setBackground(new java.awt.Color(97,212,195));

left.setBounds(0,0,400,500);

panel1.add(left);

Serial = new JLabel ("Serial Number");

Serial.setBounds (20,40,140,40);

Serial.setForeground(new java.awt.Color(51,0, 51));

Serial.setFont(new Font("Segoe Script", Font.PLAIN, 16));

left.add(Serial);

txtSerial = new JTextField();

txtSerial.setBounds(170,40,180,40);

txtSerial.setEnabled(false);

txtSerial.setText("1");

left.add(txtSerial);

modelName = new JLabel ("Model Name");

modelName.setBounds(20, 90, 140, 40);

modelName.setForeground(new java.awt.Color(51,0, 51));

modelName.setFont(new Font("Segoe Script", Font.PLAIN, 16));

left.add(modelName);

txtModelName = new JTextField();

txtModelName.setBounds(170,90,180,40);

left.add(txtModelName);

brandName = new JLabel("Brand Name");

brandName.setBounds(20,140,140,40);

brandName.setForeground(new java.awt.Color(51,0, 51));

brandName.setFont(new Font("Segoe Script", Font.PLAIN, 16));

left.add(brandName);

brand = new JComboBox();

brand.addItem("DELL");

brand.addItem("LENOVO");

brand.addItem("HP");

brand.addItem("ASUS");

brand.addItem("ACER");

brand.addItem("MSI");

brand.addItem("TOSHIBA");

brand.setBounds (170,140,180,40);

brand.setForeground(new java.awt.Color(51,0, 51));

brand.setFont(new Font("Segoe Script", Font.PLAIN, 16));

left.add(brand);

left2 = new JPanel();

left2.setBounds(30,195,330,70);

left2.setLayout(new FlowLayout());

left2.setBorder (BorderFactory.createTitledBorder(BorderFactory.createEtchedBorder (),

"Category",TitledBorder.CENTER,TitledBorder.TOP ,

new java.awt.Font("Segoe Script", 1, 15), new java.awt.Color(0,0,0)));

left2.setBackground(new java.awt.Color(97,212,195));

left.add(left2);

lowEnd = new JRadioButton ("Low End");

lowEnd.setSelected(true);

lowEnd.setBackground(new java.awt.Color(97,212,195));

lowEnd.setForeground(new java.awt.Color(51,0, 51));

lowEnd.setFont(new Font("Segoe Script", Font.PLAIN, 16));

left2.add(lowEnd);

normal = new JRadioButton ("Normal");

normal.setBackground(new java.awt.Color(97,212,195));

normal.setForeground(new java.awt.Color(51,0, 51));

normal.setFont(new Font("Segoe Script", Font.PLAIN, 16));

left2.add(normal);

highEnd = new JRadioButton ("High End");

highEnd.setBackground(new java.awt.Color(97,212,195));

highEnd.setForeground(new java.awt.Color(51,0, 51));

highEnd.setFont(new Font("Segoe Script", Font.PLAIN, 16));

left2.add(highEnd);

ButtonGroup categoryGroup = new ButtonGroup();

categoryGroup.add(lowEnd);

categoryGroup.add(normal);

categoryGroup.add(highEnd);

vat = new JLabel("VAT (0-20)");

vat.setBounds(20,275,180,40);

vat.setForeground(new java.awt.Color(51,0, 51));

vat.setFont(new Font("Segoe Script", Font.PLAIN, 16));

left.add(vat);

txtVat = new JTextField();

txtVat.setBounds(170,275,180,40);

left.add(txtVat);

price = new JLabel("Price");

price.setBounds(20,325,140,40);

price.setForeground(new java.awt.Color(51,0, 51));

price.setFont(new Font("Segoe Script", Font.PLAIN, 16));

left.add(price);

txtPrice = new JTextField();

txtPrice.setBounds(170,325,180,40);

left.add(txtPrice);

status = new JLabel ("Staus");

status.setBounds(20,370,140,40);

status.setForeground(new java.awt.Color(51,0, 51));

status.setFont(new Font("Segoe Script", Font.PLAIN, 16));

left.add(status);

available = new JRadioButton("Available");

available.setSelected(true);

available.setBounds(130,370,100,40);

available.setBackground(new java.awt.Color(97,212,195));

available.setForeground(new java.awt.Color(51,0, 51));

available.setFont(new Font("Segoe Script", Font.PLAIN, 14));

left.add(available);

notAvail = new JRadioButton("Not Available");

notAvail.setBounds(240,370,140,40);

notAvail.setBackground(new java.awt.Color(97,212,195));

notAvail.setForeground(new java.awt.Color(51,0, 51));

notAvail.setFont(new Font("Segoe Script", Font.PLAIN, 14));

left.add(notAvail);

ButtonGroup statusGroup = new ButtonGroup();

statusGroup.add(available);

statusGroup.add(notAvail);

ImageIcon insrt = new ImageIcon("Images/insert.png");

btnInsert = new JButton ("Insert");

btnInsert.setIcon(insrt);

btnInsert.setBounds(25,445,140,40);

btnInsert.setForeground(new java.awt.Color(51,0, 51));

btnInsert.setFont(new Font("Segoe Script", Font.PLAIN, 18));

left.add(btnInsert);

btnInsert.addActionListener(this);

ImageIcon clear = new ImageIcon("Images/clear.png");

btnClear = new JButton ("Clear");

btnClear.setIcon(clear);

btnClear.setBounds(230,445,140,40);

btnClear.setForeground(new java.awt.Color(51,0, 51));

btnClear.setFont(new Font("Segoe Script", Font.PLAIN, 18));

left.add(btnClear);

btnClear.addActionListener(this);

right = new JPanel();

right.setBounds (430,200,900,450);

right.setBackground(new java.awt.Color(95, 112, 117));

right.setLayout(null);

right.setBorder (BorderFactory.createTitledBorder(BorderFactory.createEtchedBorder (),

"Laptop Details",TitledBorder.CENTER,TitledBorder.TOP,

new java.awt.Font("Segoe Script", 1, 20), new java.awt.Color(255, 255, 255)));

panel.add(right);

String data[][] = new String [18][6];

String tableHeader[] = {"SerialNumber","Model Number","BrandName","Category","Price","Status"};

info = new JTable(data,tableHeader);

JScrollPane sp = new JScrollPane(info,ScrollPaneConstants.VERTICAL\_SCROLLBAR\_ALWAYS,

ScrollPaneConstants.HORIZONTAL\_SCROLLBAR\_ALWAYS);

sp.setBounds(10,30,880,300);

right.add(sp);

ImageIcon catView = new ImageIcon("Images/view.png");

btnView = new JButton("Category View");

btnView.setIcon(catView);

btnView.setBounds(200,350,180,40);

btnView.setForeground(new java.awt.Color(51,0, 51));

btnView.setFont(new Font("Segoe Script", Font.PLAIN, 14));

right.add(btnView);

btnView.addActionListener(this);

categorycombo = new JComboBox();

categorycombo.addItem("High End");

categorycombo.addItem("Normal");

categorycombo.addItem("Low End");

categorycombo.setBounds(40,350,140,40);

categorycombo.setForeground(new java.awt.Color(51,0, 51));

categorycombo.setFont(new Font("Segoe Script", Font.PLAIN, 16));

right.add(categorycombo);

ImageIcon clrTable = new ImageIcon("Images/clear.png");

btnClearTable = new JButton("Clear Table");

btnClearTable.setIcon(clrTable);

btnClearTable.setBounds(740,350,150,40);

btnClearTable.setForeground(new java.awt.Color(51,0, 51));

btnClearTable.setFont(new Font("Segoe Script", Font.PLAIN, 14));

right.add(btnClearTable);

btnClearTable.addActionListener(this);

ImageIcon exit = new ImageIcon("Images/close.png");

btnExit = new JButton("Exit");

btnExit.setIcon(exit);

btnExit.setBounds(750,400,140,40);

btnExit.setForeground(new java.awt.Color(51,0, 51));

btnExit.setFont(new Font("Segoe Script", Font.PLAIN, 18));

right.add(btnExit);

btnExit.addActionListener(this);

frame.setSize(1366,760);

frame.setVisible(true);

frame.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

frame.setResizable(false);

}

public String getCategory()

{/\*this method is used to get the category from radio button group

it stored the selected button in form of string.\*/

if(highEnd.isSelected())

{

return highEnd.getText();

}

else if(normal.isSelected())

{

return normal.getText();

}

else

{

return lowEnd.getText();

}

}

public String getStatus()

{/\*this method is used to get the availibility status from radio button group

it stored the selected button in form of string.\*/

if(available.isSelected())

{

return available.getText();

}

else

{

return notAvail.getText();

}

}

public void onClickOfExitButton()

{// terminates the program when exit button is clicked

System.exit(0);

}

public void onClickOfInsertButton()

{/\*this button retrieves the data entered by user in left panel of the GUI

which includes modelname,brand,category,price,vat,status

then the values are added in the table as well as arraylist\*/

String serial = txtSerial.getText();

String model = txtModelName.getText();

String selectedBrand = (String) brand.getSelectedItem();

String vat = txtVat.getText();

String price = txtPrice.getText();

String category = this.getCategory();

String status = this.getStatus();

if(model !=null && !model.equals("") && vat != null && !vat.equals("") && price!=null && !price.equals(""))

{

try{

int intvat = Integer.parseInt(vat);

int intprice = Integer.parseInt(price);

double dvat = (double) intvat;

double dprice = (double) intprice;

double tprice = 0;

int serialcounter;

String totalprice = "";

boolean stat ;

if(status == "Available"){

stat = true;

}

else{

stat=false;

}

if (intvat <=20 && intvat >=0){

tablecounter ++;

int row = tablecounter-1;

serialcounter = tablecounter +1;

String scount = Integer.toString(serialcounter);

tprice = dprice + ((dvat/100)\*dprice);

totalprice = Double.toString(tprice);

info.setValueAt(serial,row,0);

info.setValueAt(model,row,1);

info.setValueAt(selectedBrand,row,2);

info.setValueAt(category,row,3);

info.setValueAt(totalprice,row,4);

info.setValueAt(status,row,5);

txtSerial.setText(scount);

intprice = (int) tprice;

MenuDetails details = new MenuDetails (serial,model,category,selectedBrand,intvat,intprice,stat);

list.add(details);

//pricelist.add(intprice);

}

else {

JOptionPane.showMessageDialog(frame, "Error Message\n Enter Vat in range (0-20)", "ERROR", JOptionPane.ERROR\_MESSAGE);

}

}catch(NumberFormatException e){

JOptionPane.showMessageDialog(frame, "Error Message\n Please enter valid number \n For VAT: Decimals not allowed.",

"ERROR", JOptionPane.ERROR\_MESSAGE);

}

}

else{

JOptionPane.showMessageDialog(frame, "Error Message\n Do not leave field blank!!", "ERROR", JOptionPane.ERROR\_MESSAGE);

}

}

public void onClickOfClearButton(){

//clears the fields in left panel of gui where user enters laptop details

txtModelName.setText("");

txtVat.setText("");

txtPrice.setText("");

lowEnd.setSelected(true);

}

public void onClickOfClearTableButton(){

// clears the values in table which is on right side of GUI

tablecounter = 0;

for(int index=0; index<20; index++)

{

info.setValueAt("", index, 0);

info.setValueAt("", index, 1);

info.setValueAt("", index, 2);

info.setValueAt("", index, 3);

info.setValueAt("", index, 4);

info.setValueAt("", index, 5);

}

}

public void onClickOfCategoryViewButton(){

/\*this method is used to view products based on category. this method checks the category selected by user

then it compares the data in arraylist and displays models with the selected brand\*/

int itemcounter = 0;

String msg = ",";

String a = " ";

String selectedCat = (String) categorycombo.getSelectedItem();

if (selectedCat =="High End")

{

for (MenuDetails d : list)

{

String categ = d.getCategory();

boolean avail = d.getStatus();

if(categ==selectedCat){

if (avail == true){

itemcounter++;

a = a+d.getBrand()+": "+d.getModelName()+msg+"\n" ;

}

}

}

}

else if(selectedCat == "Normal"){

for (MenuDetails d : list)

{

String categ = d.getCategory();

boolean avail = d.getStatus();

if(categ==selectedCat){

if (avail == true){

itemcounter++;

a = a+d.getBrand()+": "+d.getModelName()+msg+"\n" ;

}

}

}

}

else if(selectedCat == "Low End"){

for (MenuDetails d : list)

{

String categ = d.getCategory();

boolean avail = d.getStatus();

if(categ==selectedCat){

if (avail == true){

itemcounter++;

a = a+d.getBrand()+": "+d.getModelName()+msg+"\n" ;

}

}

}

}

String num = Integer.toString(itemcounter);

String aa = a.substring(0, a.length() - 2);

JOptionPane.showMessageDialog(null,"There are " + num +" " + selectedCat

+ " models available. \n" + aa + ".");

}

public void onClickOfOpenButton(){

//opens a sample file

try{

Runtime.getRuntime().exec("rundll32 url.dll, FileProtocolHandler "+"Docs\\code.docx");

}

catch (Exception e)

{

JOptionPane.showMessageDialog(null, "Error");

}

}

public void onClickOfAboutButton(){

//opens aboutus pop up

JOptionPane.showMessageDialog(frame, "HAMRO LAPTOP STORE \n Version :1.0 \n Developed by : Dipesh Koirala, Ganesh Oli,Niku Thapa,Nilej Sthapit"

+ "\n Designed by :Dipesh Koirala, Ganesh Oli,Niku Thapa,Nilej Sthapit ","About",JOptionPane.INFORMATION\_MESSAGE);

}

public void onClickOfUserGuideButton(){

//opens user guidefile

try{

Runtime.getRuntime().exec("rundll32 url.dll, FileProtocolHandler "+"Docs\\help.pdf");

}

catch (Exception e)

{

JOptionPane.showMessageDialog(null, "Error");

}

}

public void onClickOfSearchButton(){

/\*this method is used to search a product based on price

it retieves the price entered by user then searches the array list to find

product with the price entered by user. \*/

try {

String searched = txtSearch.getText();

if(searched != null && searched != "" && !searched.isEmpty()){

int keyprice = Integer.parseInt(searched); // get the search keyword

MenuDetails.sort(list);

int low = 0;

int high = list.size() - 1;

int searchResult = MenuDetails.binarySearch(list, low, high, keyprice);

if (searchResult == -1){

txtSearch.setText("");

JOptionPane.showMessageDialog(frame, "No products have the price that you have entered.");

}

else{

txtSearch.setText("");

boolean avab = list.get(searchResult).getStatus();

String Savab;

if (avab == true){

Savab = "Available";

}

else{

Savab = "Not Available";

}

JOptionPane.showMessageDialog(frame,"Serial No.: "+list.get(searchResult).getSerialNo()

+"\nBrand: "+list.get(searchResult).getBrand()+"\nCategory: "+

list.get(searchResult).getCategory()+"\nModel Name: "+list.get(searchResult).getModelName()

+"\n Availability:"+Savab,

"Available laptop",JOptionPane.INFORMATION\_MESSAGE);

}

}

else{

JOptionPane.showMessageDialog(frame, "Error Message\n do not leave field blank!!", "ERROR", JOptionPane.ERROR\_MESSAGE);

}

}

catch(Exception e){

JOptionPane.showMessageDialog(frame, "Enter a valid number.", "ERROR", JOptionPane.ERROR\_MESSAGE);

}

}

public void actionPerformed(ActionEvent ae)

{//calls methods based on button clicked.

String action = ae.getActionCommand();

if (action.equals("Exit"))

{

this.onClickOfExitButton();

}

else if(action.equals("Insert"))

{

this.onClickOfInsertButton();

}

else if (action.equals("Clear"))

{

this.onClickOfClearButton();

}

else if (action.equals("Clear Table"))

{

this.onClickOfClearTableButton();

}

else if (action.equals("Category View"))

{

this.onClickOfCategoryViewButton();

}

else if (action.equals("Open"))

{

this.onClickOfOpenButton();

}

else if (action.equals("About"))

{

this.onClickOfAboutButton();

}

else if (action.equals("Search"))

{

this.onClickOfSearchButton();

}

else if (action.equals("User Guide"))

{

this.onClickOfUserGuideButton();

}

}

public static void main(String[] args) {

try {

for (UIManager.LookAndFeelInfo info : UIManager.getInstalledLookAndFeels()) {

if ("Nimbus".equals(info.getName())) {

UIManager.setLookAndFeel(info.getClassName());

break;

}

}

}

catch (Exception e) {

// If Nimbus is not available, fall back to cross-platform

try {

UIManager.setLookAndFeel(UIManager.getCrossPlatformLookAndFeelClassName());

} catch (Exception ex) {

}

}

new MenuInfo();

}

}

/\*

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\* and open the template in the editor.

\*/

package menuis;

import java.util.ArrayList;

/\*\*

\*

\* @author Nilej, Dipesh, Niku, Ganesh

\*/

public class MenuDetails {

private String serialNo;

private String modelName;

private String category;

private String brand;

private int vat;

private int price;

private boolean status;

public MenuDetails(String serial, String model, String cat, String brnd, int vatt, int prc, boolean stat)

{/\*Constructor which initializes the attributes of class\*/

serialNo = serial;

modelName = model;

category = cat;

brand = brnd;

vat = vatt;

price = prc;

status = stat;

}

public String getSerialNo() {

return serialNo;

}

public void setSerialNo(String serialNo) {

this.serialNo = serialNo;

}

public String getModelName() {

return modelName;

}

public void setModelName(String modelName) {

this.modelName = modelName;

}

public String getCategory() {

return category;

}

public void setCategory(String category) {

this.category = category;

}

public String getBrand() {

return brand;

}

public void setBrand(String brand) {

this.brand = brand;

}

public int getVat() {

return vat;

}

public void setVat(int vat) {

this.vat = vat;

}

public int getPrice() {

return price;

}

public void setPrice(int price) {

this.price = price;

}

public boolean getStatus() {

return status;

}

public void setStatus(boolean status) {

this.status = status;

}

public static void sort(ArrayList<MenuDetails> list){

/\*method to arrange values in array list according to price \*/

int max,i,j;

MenuDetails temp;

for(i=0; i < list.size()-1;i++){

max = i;

for(j=i+1;j<list.size();j++){

if(list.get(j).getPrice()<(list.get(max).getPrice()))

{

max=j;

}

}

temp = list.get(i);

list.set(i, list.get(max));

list.set(max, temp);

}

}

public static int binarySearch(ArrayList<MenuDetails> list, int low, int high, int keyprice) {

/\*method to search the price entered by user\*/

if (low <= high) {

int mid = (low + high) / 2;

int midval = list.get(mid).getPrice();

if (midval == keyprice) {

return mid;

} else if (midval > keyprice) {

return binarySearch(list, low, mid - 1, keyprice);

}

else{

return binarySearch(list, mid + 1, high, keyprice);

}

}

else{

return -1;

}

}

}