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Course Title: Data Structure

Course Instructor: Dr. Khaled Alsheshtawi

## CS-201 Project Documentation

**30 Marks**

# Super market

### Team Members:

Name	ID	Section
Zyad Mostafa Mohamed Khalil	89481	B
Ibrahim Mohamed Abdelhamed Abuziad	89434	B
Hussien Ali Ahmed Ali	89545	B
Waleed Abd-elrhman zaki	89536	B
Yamen Yasser Ahmed Ahmed	73725	B

Presented to:

**Dr. Khaled Alsheshtawi**

**Eng. Shaimaa Bahaa**

**Eng. Mariam Farid**

**Eng. Mariem Reda**



## ➔ Problem Title: super market

### ➔ Abstract:

Project supermarket management system deals with supermarket automation. Includes both buying and selling of items. The project supermarket management system was developed with the aim of making the system reliable, easier, fast and more useful. Large ledger records have to be kept as relevant and irrelevant information has to be stored and it is a very messy and clumsy process. But our system reduces the paperwork.



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## 1. Introduction

Supermarket management system is the system where all the aspects related to the proper management of supermarket is done. These aspects involve managing information about the various products, staff, managers, customers, billing etc. This system provides an efficient way of managing the supermarket information. Also allows the customer to purchase and pay for the items purchased.

This project is based on the sales transaction and billing of items in a supermarket. The first activity is based on adding the items to the system along with the rate which are present in the supermarket and the name of the items which the supermarket will agree to sell. This authority is given only to admin (administrator). Any modifications to be done in the item name and the rate can be done only by admin. He also has the right to delete any item. As the customer buys the products and comes to the billing counter, the user is supposed to enter the item name he purchased and the quantity of the item he had purchased. This is not a huge a task.

This study is to produce software which manages the sales activity done in a supermarket, maintaining the stock details, maintaining the records of the sales done for a particular month/year. The users will consume less time in calculation and the sales activity will be completed within a fraction of seconds whereas manual system will make the user to write it down which is a long procedure and so paper work will be reduced and the user can spend more time on the monitoring the supermarket. The project will be user friendly and easy to use.

The system will display all the items whose name starts with the letter selected by the user. He can select out of those displayed. Finally, a separate bill will be generated for each customer. Any periodic records can be viewed at any time. If the stock is not available, the supermarket orders and buys from a prescribed vendor. The amount will



be paid by deducting the total amount acquired in the sales activity. Admin provides a unique username and password for each employee through which he can login.

The Supermarket Management System is a project that deals with supermarket automation and it includes both purchasing a selling of items. This project is designed with a goal to making the existing system more informative, reliable, fast and easier. There are many reasons for the starting of the project because in the selling of items through the manual system of salesperson faces a lot of inefficiencies. It requires handling of large record books that consist of both irrelevant and important information's thus making it difficult to find out the required information as per necessity.

This is also a clumsy and untidy process that disturbs the smooth flow of work. But this system introduced by us will reduce the huge number of paper works while on the other side there are many more problems that persist in the manual system. They reduce efficiency as well as the productivity level of human. Administrative module, purchase module, employee module, sales module and billing module are some of the various modules that make up our project.

The administrators consist of a unique password and names of the employees. It helps the employees to make secure login. The ids and passwords are kept secret from others. The modules of sales and purchase include all the details of selling and purchasing. In the billing module the details of payments are clearly shown.

This is one of the best system that can be introduced in the supermarket for efficient management. It will also reduce the cumbersome job of finding the most accurate data from the huge log books. It also helps the management to keep efficient records of all the purchases and sales. The introduction of ID and password will further reduce the



manipulation and thus providing the accurate and transparent data. This system will increase the productivity and reduce the need of manual system to a large extent.



## 2. Requirements Analysis and Specification (Classes and their contents)

### 1- Details

- a. ShowDetails ()

### 2- User:

- a. ID
- b. Name
- c. Address
- d. Phone
- e. Gander

### 3- Manager

- a. Profit

### 4- Customer

- a. View ()
- b. Offer ()

### 5- Cashier

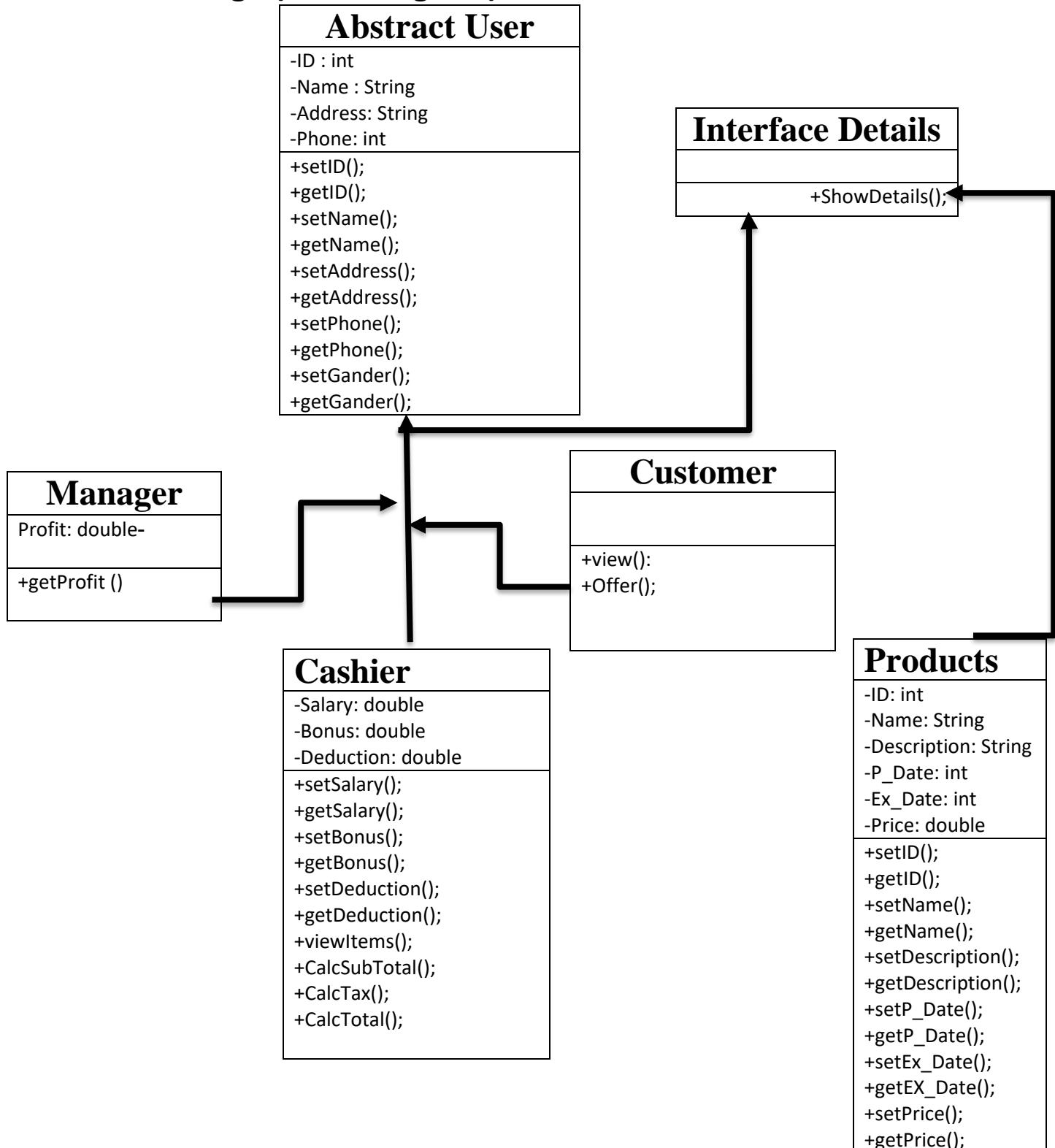
- a. Salary
- b. Bonas
- c. Deduction
- d. CalcSubTotal ()
- e. CalcTax ()
- f. CalcTotal ()



## 6- Product

- a. ID
- b. Name
- c. Description
- d. P\_Data
- e. Ex\_Data
- f. price

### 3. Design (Class Diagram)





## 4. Implementation (Screen Shoots)

### -Login GUI

The screenshot shows the Apache NetBeans IDE 12.1 interface with two code editors open:

- Login.java**: This file contains the implementation of a `Login` class extending `JFrame`. It includes methods for initializing components, handling action events, and displaying messages. A section of the code is highlighted with a red box.
- ViewGUI.java**: This file contains the main application logic, including the `main` method which creates and displays the `Login` form. A section of the code is highlighted with a red box.

The IDE's toolbar, menu bar (File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help), and status bar (Search, Run, Unix/LF) are visible at the top and bottom of the window.

```
package com.mycompany.supermarket;

import javax.swing.JOptionPane;

public class Login extends javax.swing.JFrame {
    public String Us;
    public String ps;

    public Login() {
        initComponents();
    }

    /**
     * This method is called from within the constructor to initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // Generated Code

    private void EnterActionPerformed(java.awt.event.ActionEvent evt) {
        String us =username.getText();
        String ps =password.getText();
        if(us.equals("admin")&& ps.equals("admin"))
        {
            JOptionPane.showMessageDialog(null, "Login sucessfully.");
            ViewGUI view =new ViewGUI();
            view.setVisible(true);
        }
        else
        {
            JOptionPane.showMessageDialog(null, "Invalid Username or Password.");
        }
    }

    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        Look and feel setting code (optional)

        // Create and display the form
        java.awt.EventQueue.invokeLater(new Runnable() {
            @Override
            public void run() {
                new Login().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JButton Enter;
    private javax.swing.JLabel jLabel1;
```

```
// Generated Code

    private void initComponents() {
        jLabel1 = new javax.swing.JLabel();
        Enter = new javax.swing.JButton();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        jLabel1.setText("User Name");

        Enter.setText("Enter");

        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(148, 148, 148)
                .addComponent(jLabel1)
                .addGap(18, 18, 18)
                .addComponent(Enter)
                .addContainerGap(161, Short.MAX_VALUE))
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(148, 148, 148)
                .addComponent(jLabel1)
                .addGap(18, 18, 18)
                .addComponent(Enter)
                .addContainerGap(161, Short.MAX_VALUE))
        );

        pack();
    }

    // Variables declaration - do not modify
    private javax.swing.JButton Enter;
    private javax.swing.JLabel jLabel1;
```



SuberMarket - Apache NetBeans IDE 12.1

```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Navigator Start Page Login.java ViewGUI.java
Source Design History | Search (Ctrl+F) 258.2/198.0MB 🔍 🔍 🔍
public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    Look and feel setting code (optional)

    // Create and display the form *
    java.awt.EventQueue.invokeLater(new Runnable() {
        @Override
        public void run() {
            new Login().setVisible(true);
        }
    });
}

// Variables declaration - do not modify
private javax.swing.JButton Enter;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel7;
private javax.swing.JPanel jPanel1;
private javax.swing.JPanel jPanel2;
private javax.swing.JPasswordField password;
private javax.swing.JTextField username;
// End of variables declaration
}

```

Output Run (SuberMarket) Unix (LF)

## -view GUI code

SuberMarket - Apache NetBeans IDE 12.1

```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Navigator Start Page Login.java ViewGUI.java
Source Design History | Search (Ctrl+F) 334.3/480.0MB 🔍 🔍 🔍
package com.mycompany.subermarket;

import javax.swing.JOptionPane;

/*
 * @author Al Abouzaid
 */
public class ViewGUI extends javax.swing.JFrame {
    int bananaNum, AppleNum, OrangeNum, CoconutNum;
    double bananaPrice, ApplePrice, OrangePrice, CoconutPrice, SubTotal, Taxes, Totals;
    Products banana =new Products(3.5);
    Products apple =new Products(5.5);
    Products orange =new Products(2);
    Products coconut =new Products(7.5);
    Cashier cashier1= new Cashier(89434,"Tony","El Haram","+894346658");
    Manager manager1 =new Manager(89481,"El-ZOZ","El Zmalaik","+89481115");
    Customer customer1=new Customer(89545,"Marten","El Maady","+89545197");

    public ViewGUI() {
        initComponents();
        Billbox.setEditable(false);
    }

    /**
     * This method is called from within the constructor to initialize the form.
     */

```

Output Run (SuberMarket) Unix (LF)



SuberMarket - Apache NetBeans IDE 12.1

```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Source Design History | Search (Ctrl+F) 391.7/480.0MB 🔍 🔍 🔍
Start Page Login.java ViewGUI.java
private void CalcutateActionPerformed(java.awt.event.ActionEvent evt) {
    SubTotal= cashier1.CalcSubTotal(bananaPrice,ApplePrice,OrangePrice,CoconutPrice);
    SubtotalCost.setText(SubTotal + "$");
    Taxes= cashier1.CalcTax(SubTotal);
    TaxCost.setText(Taxes+"$");
    Totals= cashier1.CalcTotal(SubTotal,Taxes);
    TotalCost.setText(Totals+"$");
}

private void BananaCountStateChanged(javax.swing.event.ChangeEvent evt) {
    bananaNum =(Integer) BananaCount.getValue();

    bananaPrice= banana.getPrice() * bananaNum;
    bananaCost.setText(bananaPrice +"$");

}

private void AppleCountStateChanged(javax.swing.event.ChangeEvent evt) {
    AppleNum =(Integer) AppleCount.getValue();

    ApplePrice= apple.getPrice()* AppleNum;
    AppleCost.setText(ApplePrice +"$"); // TODO add your handling code here:
}

private void OrangeCountStateChanged(javax.swing.event.ChangeEvent evt) {
    OrangeNum =(Integer) OrangeCount.getValue();
}

```

Output Run (SuberMarket) Unix (LF)

SuberMarket - Apache NetBeans IDE 12.1

```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Source Design History | Search (Ctrl+F) 237.0/480.0MB 🔍 🔍 🔍
Start Page Login.java ViewGUI.java
private void OrangeCountStateChanged(javax.swing.event.ChangeEvent evt) {
    OrangeNum =(Integer) OrangeCount.getValue();

    OrangePrice= orange.getPrice()* OrangeNum;
    OrangeCost.setText(OrangePrice +"$"); // TODO add your handling code here:
}

private void CoconutCountStateChanged(javax.swing.event.ChangeEvent evt) {
    CoconutNum =(Integer) CoconutCount.getValue();

    CoconutPrice= coconut.getPrice()* CoconutNum;
    CoconutCost.setText(CoconutPrice +"$");

}

private void SaveActionPerformed(java.awt.event.ActionEvent evt) {
    Billbox.setText(".....\n"
    "\t EL-ZOZ SuperMarket\n"
    "+Cashier ID:"+cashier1.getID()+"\n"
    "+Cashier Name:"+cashier1.getName()+"\n"
    +".....\n"
    +"SubTotal\t\t\t"+SubTotal+"\n"
    +"Taxes\t\t\t"+Taxes+"\n"
    +"Totals\t\t\t"+Totals+"\n"
    +".....\n"
    +"\\t\\t\\t\t\t Thank you");
}

private void New_billActionPerformed(java.awt.event.ActionEvent evt) {
    Billbox.setText("");
}

```

Output Run (SuberMarket) Unix (LF)



SuberMarket - Apache NetBeans IDE 12.1

```

private void New_billActionPerfomed(java.awt.event.ActionEvent evt) {
    Billbox.setText("");
    SubtotalCost.setText("0.0$");
    TaxCost.setText("0.0$");

    TotalCost.setText("0.0$");
    bananaCost.setText("0.0 $");
    AppleCost.setText("0.0 $");
    OrangeCost.setText("0.0 $");
    CoconutCost.setText("0.0 $");
    CoconutCount.setValue(0);
    OrangeCount.setValue(0);
    AppleCount.setValue(0);
    BananaCount.setValue(0);

    // TODO add your handling code here:
}

private void MangerinfoActionPerfomed(java.awt.event.ActionEvent evt) {
    JOptionPane.showMessageDialog(null, ""+manager1.toString());
}

private void CashierinfActionPerfomed(java.awt.event.ActionEvent evt) {
    JOptionPane.showMessageDialog(null, ""+cashier1.toString());
}

private void CustomerinfoActionPerfomed(java.awt.event.ActionEvent evt) {
    JOptionPane.showMessageDialog(null, ""+customer1.toString());
}

```

Output

SuberMarket - Apache NetBeans IDE 12.1

```

// Variables declaration - do not modify
private javax.swing.JLabel Apple;
private javax.swing.JLabel AppleCost;
private javax.swing.JSpinner AppleCount;
private javax.swing.JLabel Banana;
private javax.swing.JSpinner BananaCount;
private javax.swing.JTextArea Billbox;
private javax.swing.JButton Calcutate;
private javax.swing.JButton Cashierinf;
private javax.swing.JLabel Coconut;
private javax.swing.JLabel CoconutCost;
private javax.swing.JSpinner CoconutCount;
private javax.swing.JButton Customerinfo;
private javax.swing.JPanel Discount;
private javax.swing.JButton Exitbotton;
private javax.swing.JButton Mangerinfo;
private javax.swing.JButton New_bill;
private javax.swing.JLabel Orange;
private javax.swing.JLabel OrangeCost;
private javax.swing.JSpinner OrangeCount;
private javax.swing.JButton Save;
private javax.swing.JPanel Store;
private javax.swing.JLabel Subtotal;
private javax.swing.JLabel SubtotalCost;
private javax.swing.JLabel TaxCost;
private javax.swing.JLabel Total;
private javax.swing.JLabel TotalCost;
private javax.swing.JPanel Totalboard;
private javax.swing.JLabel BananaCost;
private javax.swing.JPanel front;
private javax.swing.JLabel jLabel12;

```

Output



The screenshot shows the Apache NetBeans IDE 12.1 interface. The title bar reads "SuberMarket - Apache NetBeans IDE 12.1". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for file operations like Open, Save, and Build. The left sidebar has sections for Projects, Navigator, and Help. The central workspace shows a Java file named "ViewGUI.java" with the following code:

```
private javax.swing.JButton Save;
private javax.swing.JPanel Store;
private javax.swing.JLabel Subtotal;
private javax.swing.JLabel SubtotalCost;
private javax.swing.JLabel TaxCost;
private javax.swing.JLabel Total;
private javax.swing.JLabel TotalCost;
private javax.swing.JPanel Totalboard;
private javax.swing.JLabel bananaCost;
private javax.swing.JLabel front;
private javax.swing.JLabel jLabel12;
private javax.swing.JLabel jLabel13;
private javax.swing.JLabel jLabel14;
private javax.swing.JLabel jLabel15;
private javax.swing.JLabel jLabel16;
private javax.swing.JLabel jLabel17;
private javax.swing.JLabel jLabel18;
private javax.swing.JPanel jPanel1;
private javax.swing.JPanel jPanel3;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JLabel vat;
// End of variables declaration
}
```

The status bar at the bottom shows "Run (SuberMarket)" and "Unix (F)". The bottom dock contains icons for Windows, Photoshop, Microsoft Word, Microsoft Excel, Microsoft Powerpoint, Mozilla Firefox, and Docker.

### **-Details**

The screenshot shows the Apache NetBeans IDE 12.1 interface with the title "SuberMarket - Apache NetBeans IDE 12.1". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for file operations like Open, Save, Print, and Build. The status bar shows memory usage (202.4/378.0MB) and system information (INS Windows (CRLF)).

The code editor displays the following Java code:

```
1  /*
2   * To change this license header, choose License Headers in Project Properties.
3   * To change this template file, choose Tools | Templates
4   * and open the template in the editor.
5   */
6  package com.mycompany.supermarket;
7
8  /**
9   *
10  * @author Al Abouzaid
11  */
12 public interface Details {
13
14     public void Show_Details();
15 }
16
```

The code editor has tabs for Start Page, Login.java, ViewGUI.java, Customer.java, Cashier.java, and Details.java. The Details.java tab is active. The Navigator panel on the left shows the class structure.

## User class



SuberMarket - Apache NetBeans IDE 12.1

```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Source History Projects Navigator StartPage Login.java ViewGUI.java Customer.java Cashier.java User.java Details.java Manager.java
1 package com.mycompany.subermarket;
2
3 enum Gender {Male,Female};
4 public abstract class User {
5     public int ID;
6     public String name;
7     public String Address;
8     public String phone_num;
9     public Gender g;
10
11     public User()
12     {
13     }
14
15
16
17     public User(int id ,String n ,String add ,String ph )
18     {
19         ID = id;
20         name = n;
21         Address = add;
22         phone_num = ph;
23     }
24
25
26     public User(int id ,String n ,String add ,String ph , Gender gan )
27     {
28         ID = id;
29         name = n;
30         Address = add;
31         phone_num = ph;
32     }

```

Output

16:1 | INS|Windows (CRLF)

SuberMarket - Apache NetBeans IDE 12.1

```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Source History Projects Navigator StartPage Login.java ViewGUI.java Customer.java Cashier.java User.java Details.java Manager.java
35
36
37     public void setID(int ID) {
38         this.ID = ID;
39     }
40
41     public void setName(String name) {
42         this.name = name;
43     }
44
45     public void setAddress(String Address) {
46         this.Address = Address;
47     }
48
49     public void setPhone_num(String phone_num) {
50         this.phone_num = phone_num;
51     }
52
53     public void setG(Gender g) {
54         this.g = g;
55     }
56
57
58
59
60     public int getID() {
61         return ID;
62     }
63
64     public String getName() {
65         return name;
66     }

```

Output

16:1 | INS|Windows (CRLF)



The screenshot shows the Apache NetBeans IDE interface with the title "SuberMarket - Apache NetBeans IDE 12.1". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has icons for file operations like Open, Save, and Build. The status bar at the bottom right shows "16:1 INS Windows (CRLF)" and the date "1/8/2021".

The code editor displays the following Java code:

```
57  
58  
59  
60  
61     public int getID() {  
62         return ID;  
63     }  
64  
65     public String getName() {  
66         return name;  
67     }  
68  
69     public String getAddress() {  
70         return Address;  
71     }  
72  
73     public String getPhone_num() {  
74         return phone_num;  
75     }  
76  
77     public Gender getG() {  
78         return g;  
79     }  
80  
81  
82 }  
83  
84 }
```

# manager class

SuberMarket - Apache NetBeans IDE 12.1

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Start Page Login.java ViewGUI.java Customer.java Cashier.java Details.java Manager.java

Source History

```
1  /*
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5  */
6 package com.mycompany.subermarket;
7
8
9     public class Manager extends User implements Details
10 {
11     public double Profit;
12
13     public Manager() {
14
15     }
16     public Manager(int id, String n, String add, String ph) {
17         super(id, n, add, ph);
18     }
19
20     public Manager(int id, String n, String add, String ph, Gender gan) {
21         super(id, n, add, ph, gan);
22     }
23
24
25     public double getProfit()
26     {
27         return Profit;
28     }
29     public double calcProfit()
30     {
31
32         return Profit;
33     }
34 }
```



SuberMarket - Apache NetBeans IDE 12.1

```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Source History <default config> 269.4/378.0MB Search (Ctrl+)
Start Page Login.java ViewGUI.java Customer.java Cashier.java Details.java Manager.java

Projects Navigator Output 49:37 INS Windows (CRLF)
Source 1: Manager.java [line 50]


```

        System.out.println(" Manager Name: : " + this.getName());
        System.out.println(" Manager ID: : " + this.getID());
        System.out.println(" Manager Address: : " + this.getAddress());
        System.out.println(" Manager Phone: : " + this.getPhone_num());
    }

    @Override
    public void Show_Details()
    {
        System.out.println(" Manager Name: : " + this.getName());
        System.out.println(" Manager ID: : " + this.getID());
        System.out.println(" Manager Address: : " + this.getAddress());
        System.out.println(" Manager Phone: : " + this.getPhone_num());
    }
}

```


```

## customer class

SuberMarket - Apache NetBeans IDE 12.1

```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Source History <default config> 185.5/378.0MB Search (Ctrl+)
Start Page Login.java ViewGUI.java Customer.java

Projects Navigator Output 76:1 INS Windows (CRLF)
Source 1: Customer.java [line 32]


```

/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package com.mycompany.subermarket;

/**
 *
 * @author Al Abouzaid
 */
public class Customer extends User implements Details
{
    public static double Discounts;

    public Customer()
    {

    }

    public Customer(int id, String n, String add, String ph, Gender gan)
    {
        super(id, n, add, ph, gan);
    }

    public Customer(int id, String n, String add, String ph)
    {
        super(id, n, add, ph);
    }

    public static double offer ( double Total)
}

```


```



```

SuberMarket - Apache NetBeans IDE 12.1
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Start Page Login.java ViewGUI.java Customer.java
Projects Source History | Search (Ctrl+F) 285.5/678.0MB 🔍
31
32
33     public static double offer ( double Total)
34     {
35         if (Total> 200 && Total<500)
36         {
37             Discounts=0.10;
38             return Discounts;
39         }
40         else if (Total> 500 && Total<1000)
41         {
42             Discounts=0.15;
43             return Discounts;
44         }
45         else if (Total> 1000 && Total<2000)
46         {
47             Discounts=0.25;
48             return Discounts;
49         }
50         else if (Total> 2000 )
51         {
52             Discounts=0.30;
53             return Discounts;
54         }
55         else
56             Discounts=0;
57             return Discounts;
58     }
59     @Override
60     public String toString()
61     {
62         return " Customer Name: : " + this.getName() + "\n"
63         + " Customer ID: : " + this.getID() + "\n";
64     }
65     @Override
66     public void Show_Details()
67     {
68         System.out.println(" Customer Name: : " + this.getName());
69         System.out.println(" Customer ID: : " + this.getID());
70         System.out.println(" Customer Address: : " + this.getAddress());
71         System.out.println(" Customer Phone: : " + this.getPhone_num());
72     }
73
74
75
76
77
    }

Output 76:1 INS|Windows (CRLF)
Windows Ps N1 Firefox WhatsApp Output 76:1 INS|Windows (CRLF)
ENG 4:38 AM 1/8/2021

SuberMarket - Apache NetBeans IDE 12.1
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Start Page Login.java ViewGUI.java Customer.java
Projects Source History | Search (Ctrl+F) 170.3/678.0MB 🔍
52
53
54
55
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64
65
66
67
68
69
70
71
72
73
74
75
76
77
    }

@Override
public String toString()
{
    return " Customer Name: : " + this.getName() + "\n"
    + " Customer ID: : " + this.getID() + "\n"
    + " Customer Address: : " + this.getAddress() + "\n"
    + " Customer Phone: : " + this.getPhone_num();
}

@Override
public void Show_Details()
{
    System.out.println(" Customer Name: : " + this.getName());
    System.out.println(" Customer ID: : " + this.getID());
    System.out.println(" Customer Address: : " + this.getAddress());
    System.out.println(" Customer Phone: : " + this.getPhone_num());
}

Output 76:1 INS|Windows (CRLF)
Windows Ps N1 Firefox WhatsApp Output 76:1 INS|Windows (CRLF)
ENG 4:38 AM 1/8/2021

```



## Casher class

The screenshot shows two instances of the Apache NetBeans IDE 12.1 interface, each displaying the same Java file, `Cashier.java`. The file contains the following code:

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package com.mycompany.supermarket;

import static com.mycompany.supermarket.Customer.offer;

/**
 *
 * @author Al Abouzaid
 */
public class Cashier extends User implements Details {
    public double salary;
    public double bouns;
    public double deduction;
    public Cashier () {
    }

    public Cashier(int id, String n, String add, String ph) {
        super(id, n, add, ph);
    }

    public Cashier(double salary, double bouns, double deduction, int id, String n, String add, String ph, Gender gan) {
        super(id, n, add, ph, gan);
        this.salary = salary;
        this.bouns = bouns;
        this.deduction = deduction;
    }

    public void setsalary (double salary)
    {
        this.salary=salary;
    }
    public void setbouns (double bouns)
    {
        this.bouns=bouns;
    }
    public void setdeduction (double deduction)
    {
        this.deduction=deduction;
    }
    public double getsalary ()
    {
        return salary;
    }
    public double getbouns ()
    {
        return bouns ;
    }
    public double getdeduction ()
    {
        return deduction ;
    }
    public static double CalcSubTotal(double... numbers)
    {
        return 0;
    }
}
```



SuberMarket - Apache NetBeans IDE 12.1

```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Source History <default config> 814.4/494.0MB Search (Ctrl+F)
StartPage Login.java ViewGUI.java Cashier.java
Projects Source History <default config> 814.4/494.0MB Search (Ctrl+F)
61     public double CalcSubTotal(double... numbers)
62     {
63         double calc = 0;
64         for (double number : numbers) {
65             calc=calc+number;
66         }
67         return calc;
68     }
69     public double CalcTax(double subtot )
70     {
71         final double Tax=0.14;
72
73         subtot=subtot*Tax;
74         subtot=Math.floor(subtot*100) / 100;
75         return subtot;
76     }
77     public double CalcTotal(double subtot ,double Taxes)
78     {
79         double Total=0;
80         Total= subtot+Taxes-(subtot*offer(subtot));
81         Total=Math.floor(Total*100) / 100;
82         return Total;
83     }
84     @Override
85     public String toString()
86     {
87         return " Cashier Name: : " + this.getName() + "\n"
88             + " Cashier ID: : " + this.getID() + "\n"
89             + " Cashier Address: : " + this.getAddress() + "\n"
90             + " Cashier Phone: : " + this.getPhone_num();
91     }
92     @Override

```

Run (SuberMarket) 1:1 INS Windows (CRLF)

Output

SuberMarket - Apache NetBeans IDE 12.1

```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Source History <default config> 183.4/251.0MB Search (Ctrl+F)
StartPage Login.java ViewGUI.java Products.java Cashier.java
Projects Source History <default config> 183.4/251.0MB Search (Ctrl+F)
77     }
78     public double CalcTotal(double subtot ,double Taxes)
79     {
80         double Total=0;
81         Total= subtot+Taxes-(subtot*offer(subtot));
82         Total=Math.floor(Total*100) / 100;
83         return Total;
84     }
85     @Override
86     public String toString()
87     {
88         return " Cashier Name: : " + this.getName() + "\n"
89             + " Cashier ID: : " + this.getID() + "\n"
90             + " Cashier Address: : " + this.getAddress() + "\n"
91             + " Cashier Phone: : " + this.getPhone_num();
92     }
93     @Override
94     public void Show_Details()
95     {
96         System.out.println(" Cashier Name: : " + this.getName());
97         System.out.println(" Cashier ID: : " + this.getID());
98         System.out.println(" Cashier Address: : " + this.getAddress());
99         System.out.println(" Cashier Phone: : " + this.getPhone_num());
100    }
101   }
102   }
103   }
104   }
105   }

```

Run (SuberMarket) 1:1 INS Windows (CRLF)

Output

Windows (CRLF)



## Product class

The screenshot shows the Apache NetBeans IDE interface with the title "SuberMarket ~ Apache NetBeans IDE 12.1". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, and Help. The toolbar has icons for file operations like New, Open, Save, and Run. The status bar at the bottom right shows "1:1 INS Windows (CRLF)" and the date "1/9/2021".

The code editor displays the `Products.java` file:

```
31
32     public Products(double price) {
33         this.price = price;
34     }
35
36
37
38     public Products(int id ,String N ,String descrip ,String exd ,double p)
39     {
40         ID = id;
41         name = N;
42         description = descrip;
43         ex_data = exd;
44         price = p;
45
46     }
47
48     public void setID(int ID) {
49         this.ID = ID;
50     }
51
52     public void setName(String name) {
53         this.name = name;
54     }
55
56     public void setDescription(String description) {
57         this.description = description;
58     }
59
60
61
62 }
```



SuberMarket - Apache NetBeans IDE 12.1

```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Source History Projects Login.java ViewGUI.java Products.java
61
62     public void setEx_data(String ex_data) {
63         this.ex_data = ex_data;
64     }
65
66     public void setPrice(double price) {
67         this.price = price;
68     }
69
70     public int getID() {
71         return ID;
72     }
73
74     public String getName() {
75         return name;
76     }
77
78     public String getDescription() {
79         return description;
80     }
81
82     public String getEx_data() {
83         return ex_data;
84     }
85
86     public double getPrice() {
87         return price;
88     }
89
90
91     @Override
92

```

Output

SuberMarket - Apache NetBeans IDE 12.1

```

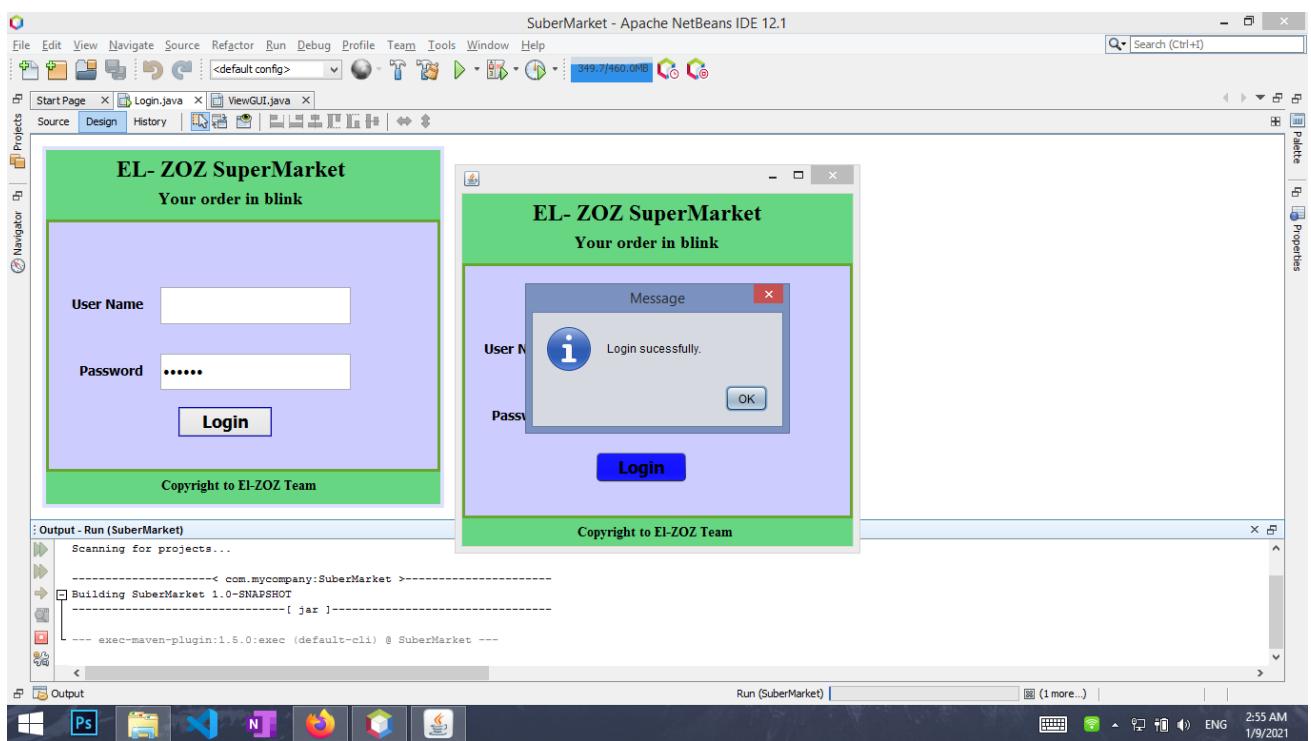
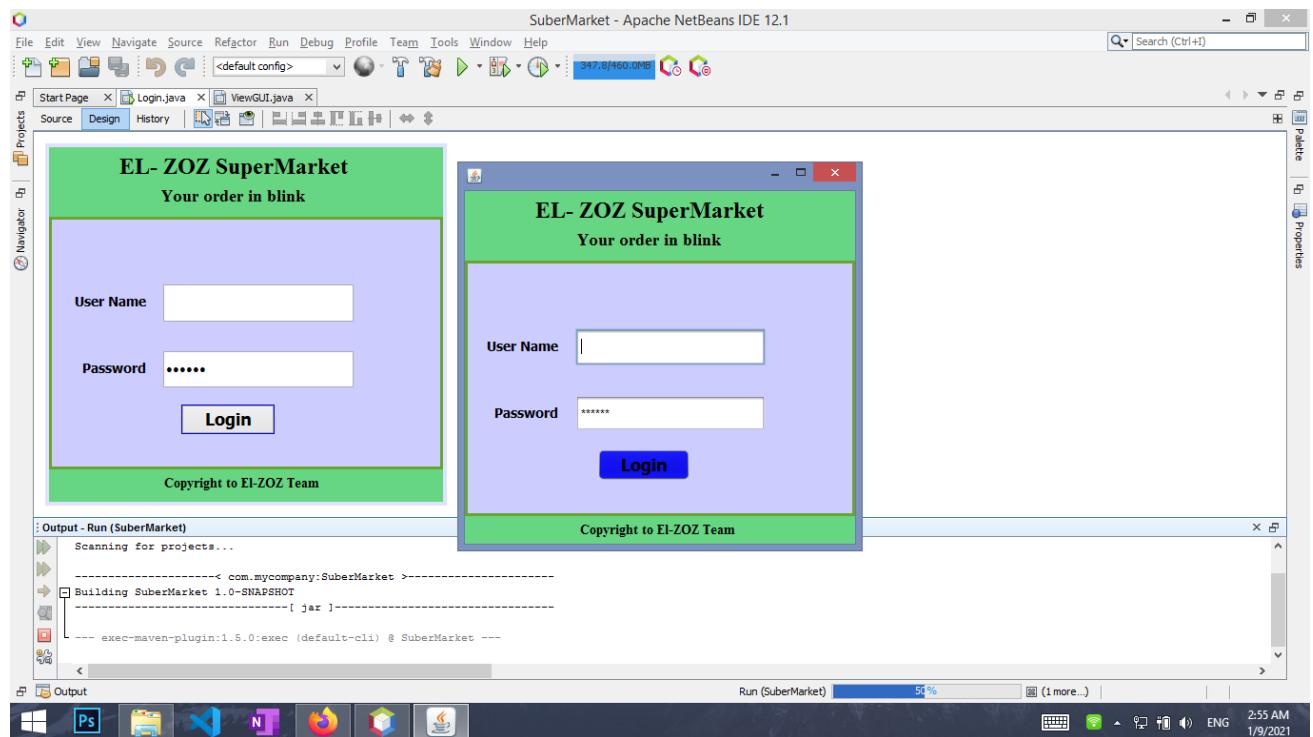
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Source History Projects Login.java ViewGUI.java Products.java
76     public String getName() {
77         return name;
78     }
79
80     public String getDescription() {
81         return description;
82     }
83
84     public String getEx_data() {
85         return ex_data;
86     }
87
88     public double getPrice() {
89         return price;
90     }
91
92     @Override
93     public void Show_Details()
94     {
95     }
96
97
98 }

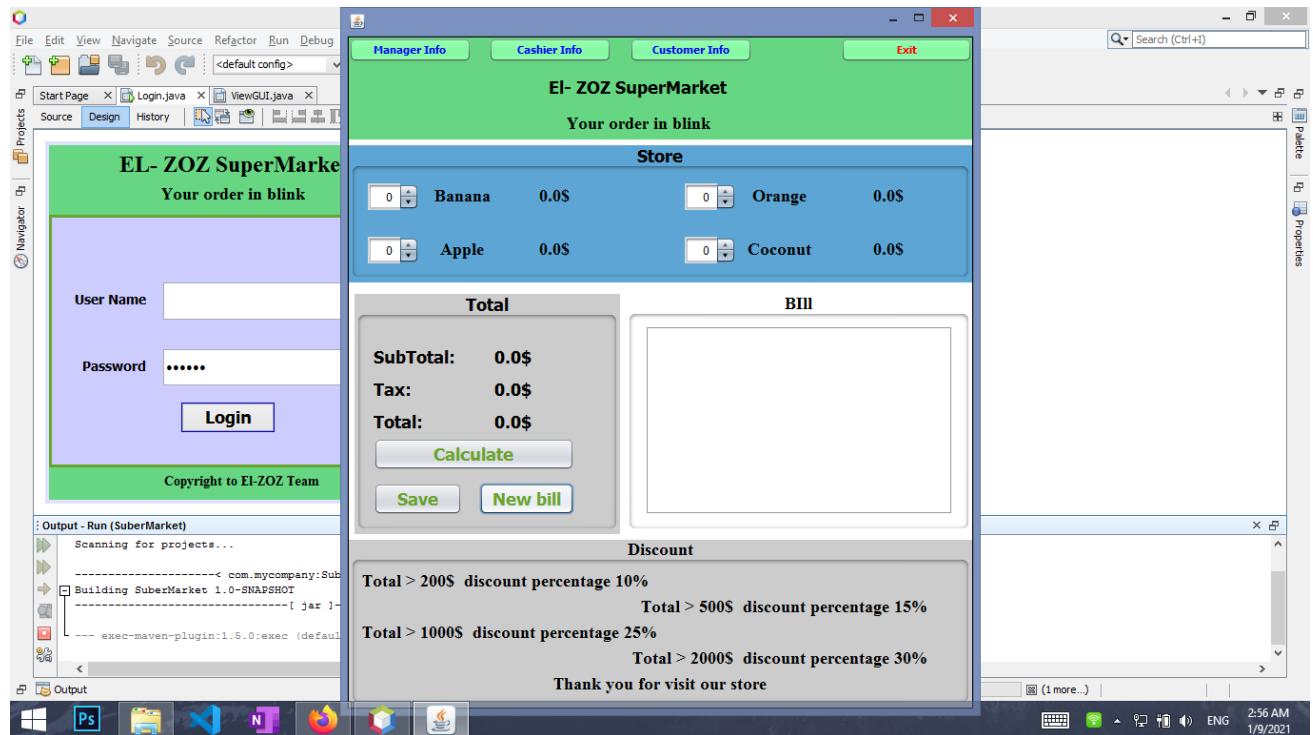
```

Output



## Project run







SuberMarket - Apache NetBeans IDE 12.1

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Start Page Login.java ViewGUI.java

Source Design History

Projects Navigator

EL-ZOZ SuperMarket Your order in blink

User Name

Password  **Login**

Copyright to El-ZOZ Team

Output - Run (SuberMarket)

```
Scanning for projects...
-----< com.mycompany:SuberMarket >-----
Building SuberMarket 1.0-SNAPSHOT
[ jar ]
--- exec-maven-plugin:1.5.0:exec (default-cli) @ SuberMarket ---
```

Run (SuberMarket) 2:55 AM 1/9/2021

SuberMarket - Apache NetBeans IDE 12.1

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Start Page Login.java ViewGUI.java

Source Design History

Projects Navigator

EL-ZOZ SuperMarket Your order in blink

User Name

Password  **Login**

Copyright to El-ZOZ Team

Output - Run (SuberMarket)

```
Scanning for projects...
-----< com.mycompany:SuberMarket >-----
Building SuberMarket 1.0-SNAPSHOT
[ jar ]
--- exec-maven-plugin:1.5.0:exec (default-cli) @ SuberMarket ---
```

Run (SuberMarket) 2:55 AM 1/9/2021

SuberMarket - Apache NetBeans IDE 12.1

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Start Page Login.java ViewGUI.java

Source Design History

Projects Navigator

EL-ZOZ SuperMarket Your order in blink

User Name

Password  **Login**

Message

User Name Login sucessfully.

OK

Copyright to El-ZOZ Team

Output - Run (SuberMarket)

```
Scanning for projects...
-----< com.mycompany:SuberMarket >-----
Building SuberMarket 1.0-SNAPSHOT
[ jar ]
--- exec-maven-plugin:1.5.0:exec (default-cli) @ SuberMarket ---
```

Run (SuberMarket) 2:55 AM 1/9/2021



**EL-ZOZ SuperMarket**

Your order in blink

**Store**

<input type="text" value="0"/> Banana	0.0\$	<input type="text" value="0"/> Orange	0.0\$
<input type="text" value="0"/> Apple	0.0\$	<input type="text" value="0"/> Coconut	0.0\$

**Total**

SubTotal: 0.0\$
Tax: 0.0\$
Total: 0.0\$

**BILL**

**Discount**

Total > 200\$ discount percentage 10%  
 Total > 500\$ discount percentage 15%  
 Total > 1000\$ discount percentage 25%  
 Total > 2000\$ discount percentage 30%

Thank you for visit our store

**EL-ZOZ SuperMarket**

Your order in blink

**Store**

<input type="text" value="10"/> Banana	31.55\$	<input type="text" value="10"/> Orange	20.0\$
<input type="text" value="9"/> Apple	49.55\$	<input type="text" value="9"/> Coconut	67.55\$

**Total**

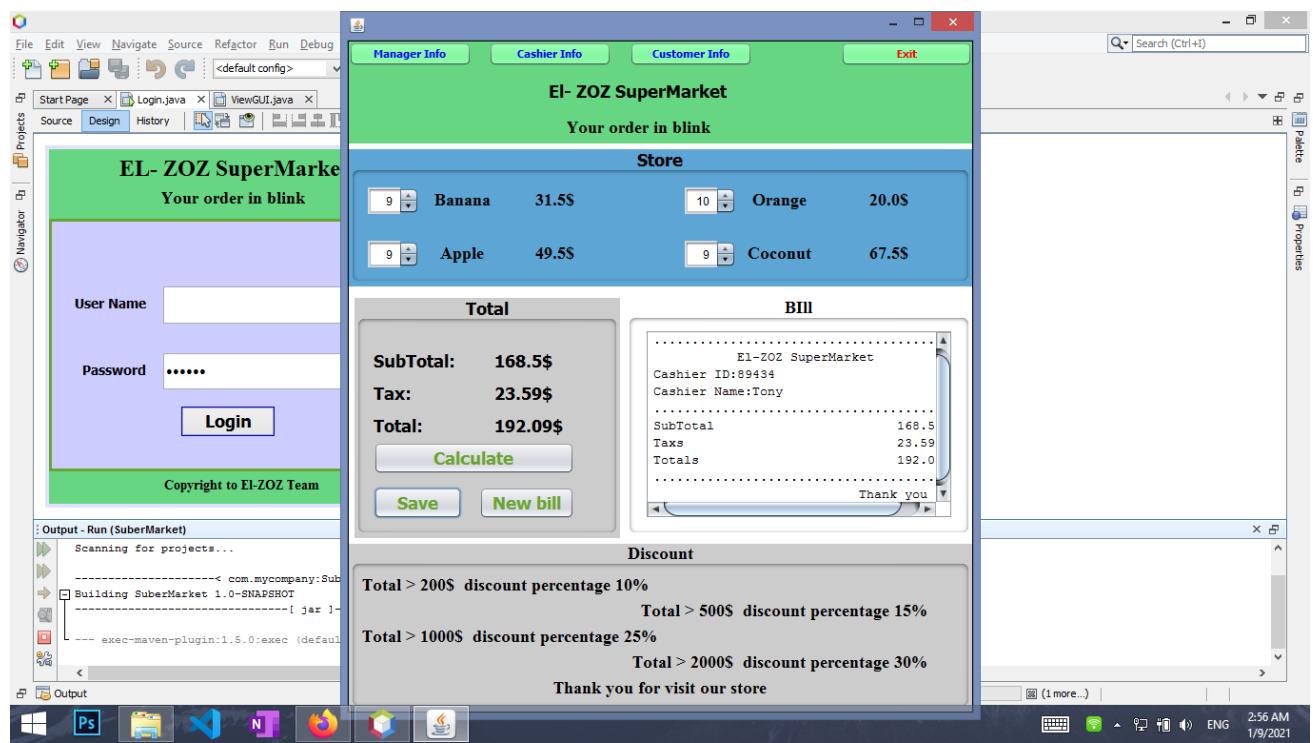
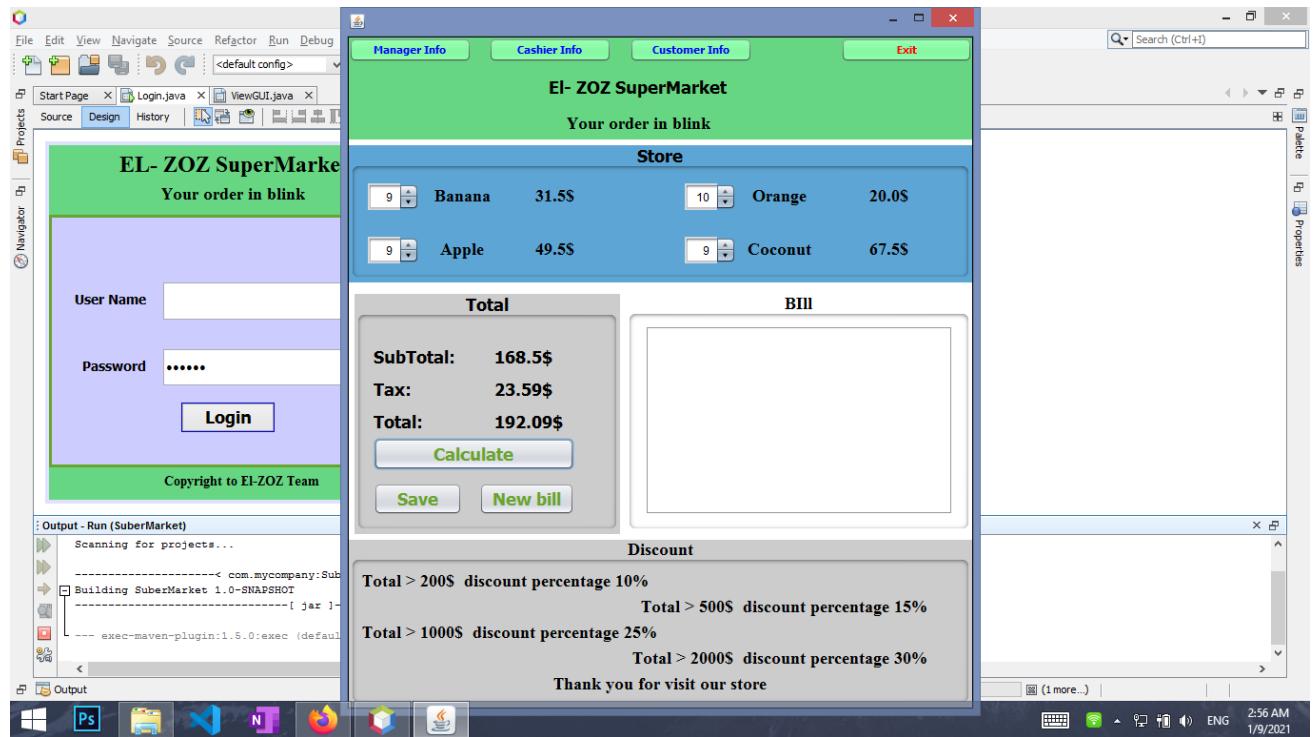
SubTotal: 0.0\$
Tax: 0.0\$
Total: 0.0\$

**BILL**

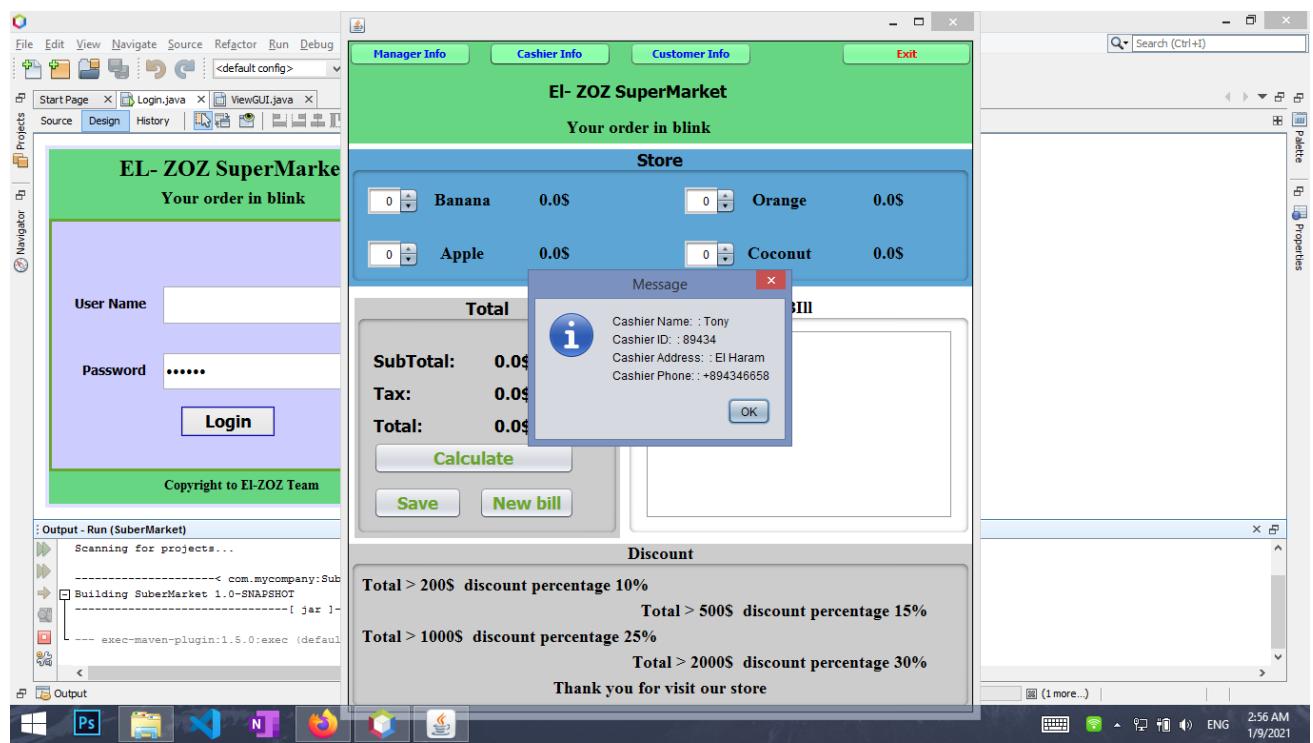
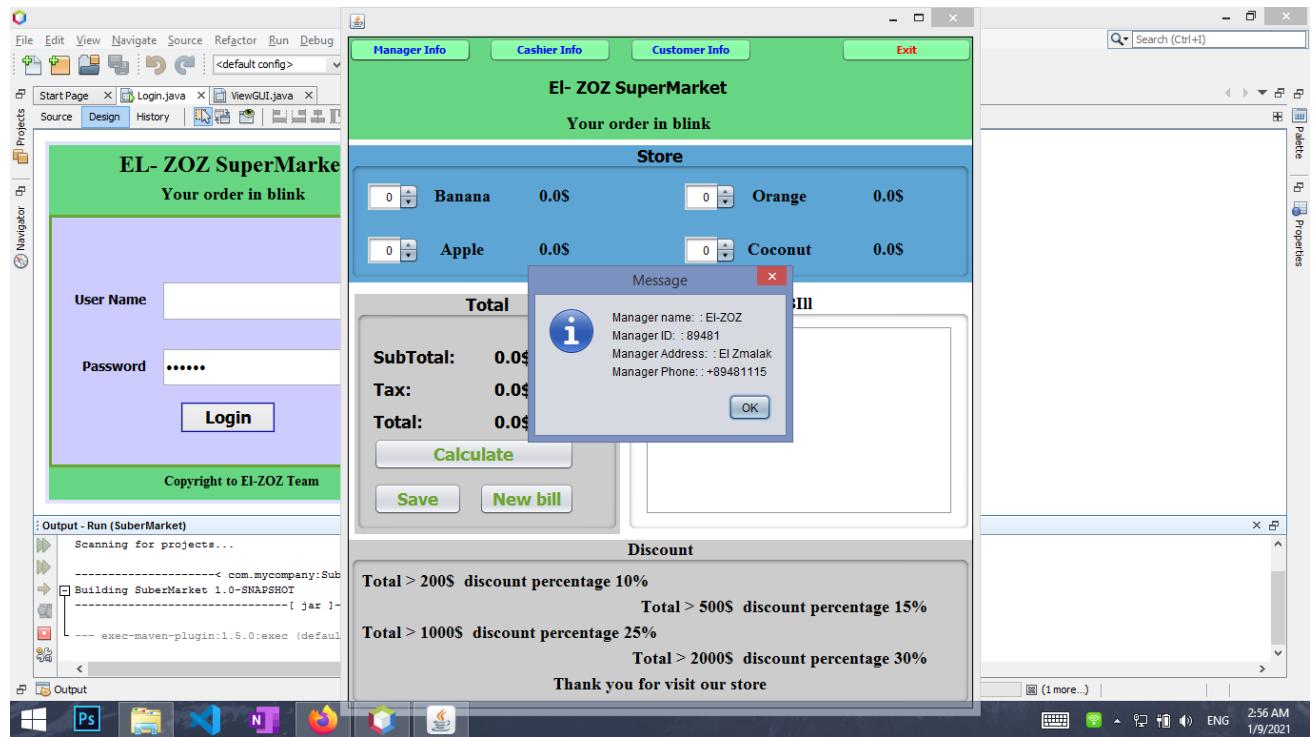
**Discount**

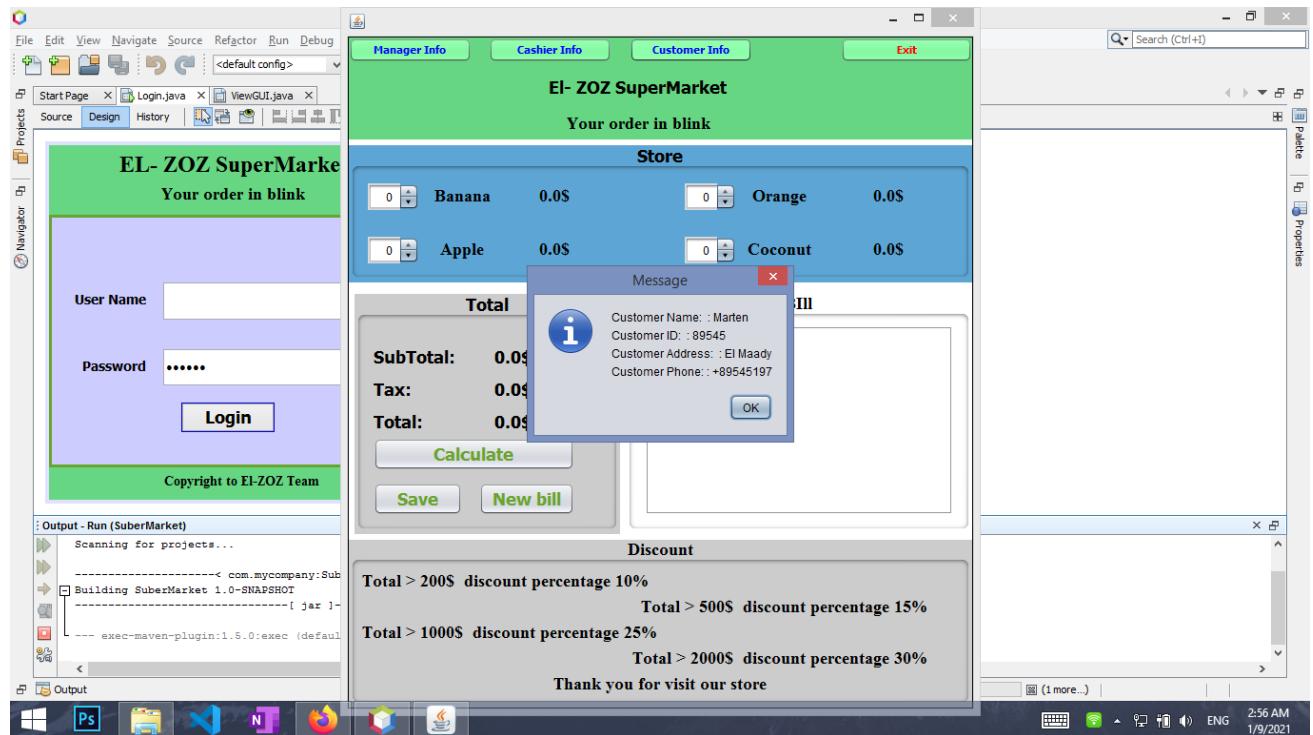
Total > 200\$ discount percentage 10%  
 Total > 500\$ discount percentage 15%  
 Total > 1000\$ discount percentage 25%  
 Total > 2000\$ discount percentage 30%

Thank you for visit our store



**Misr University for Science and Technology**  
**Information Technology College**







## 5. Summary (from 7 to 10 lines)

Supermarket management system has to do with proper effort to stop the growing problem of all manual supermarket operations in order to promote the operation of this supermarket. In this project, a program or system has been developed which can be used to assist all supermarkets still operating manually successfully. The program can be implemented in all types of supermarkets. The program contains a large memory to store all goods in the supermarket and also keep all kinds of records, whether they are customer or employee records. It is very effective and accurate.