Object-Oriented Programming (CS F213)

Submitted by:

1. Agrim Jain(2020A7PS0143U)
2. Ashwin Shibu(2020A7PS0030U)
3. Jay Parida(2020A7PS0087U)
4. Siddharth Choudhury(2020A7PS0028U)

ABSTRACT

The purpose of this project report is to understand the concepts that we have learned in java and apply them to a supermarket online service that we created.
We have built a system for a Supermarket where customers can add items into their cart, view them, delete them and check out accordingly using their preferred method of payment. In this assignment, the key concepts that we have used are Classes and Objects, Inheritance and many others into which we delve deeper in the report.

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INTRODUCTION

AIM:-

The objective of this project is to create a supermarket online service using the various concepts of OOP learned throughout the course.

Nowadays, with many supermarkets coming up, online services like online shopping are becoming the new meta. It is necessary for the company to create websites which make online shopping easier and convenient for the user. It requires computer programs like this which are used extensively. Hence, it is important to manage and maintain data.

This program lets the user add, modify, delete, search and view information regarding various products such as ingredients used, expiry date, net weight/volume of the product, price(Including taxes) etc. This is what this program aims to do.

PACKAGES

1.	**import java.util.***	**(a) Scanner**	**Used to get input from user**
		(b) Array list	**Used to make a dynamic array for storing different grocery items**
2.	**import java.lang.String**	**(a)equals()**	**Checks the equality of string with the given object**
		(b)equalIgnoreCase()	**Compares another String without matching the case**
		(c) isEmpty()	**Checks if the String is empty**

FUNCTIONS

S.no	CLASSES USED	USES OF CLASS	FUNCTIONS AND DATA MEMBERS
1	Main	• Contains main. • Displays the menu. • Calls different classes based on users' choice.	• public static void main(String []args)
2	Fruits	• Displays the fruits available • Makes an array list to store different fruits	DATA FUNCTIONS • public void display() • public Fruits() DATA MEMBERS • ArrayList<String> s1 • ArrayList<Float> i1
3	Beverage	• Displays the beverages available • Makes an array list to store different beverages	DATA FUNCTIONS • public void display() • public Beverage () DATA MEMBERS • ArrayList<String> s1 • ArrayList<Float> i1
4	Snacks	• Displays the snacks available. • Makes an array list to store different snacks.	DATA FUNCTIONS • public void display() • public Snacks() DATA MEMBERS • ArrayList<String> s1 • ArrayList<Float> i1
5	Cereal	• Displays the cereal available. • Makes an array list to store different cereal.	DATA FUNCTIONS • public void display() • public Cereal() DATA MEMBERS • ArrayList<String> s1 • ArrayList<Float> i1
6	Dairy	• Displays the dairy available. • Makes an array list to store different dairy.	DATA FUNCTIONS • public void display() • public Dairy() DATA MEMBERS

			• ArrayList<String> s1 • ArrayList<Float> i1
7	Breads	• Displays the breads available. • Makes an array list to store different breads.	DATA FUNCTIONS • public void display() • public Breads() DATA MEMBERS • ArrayList<String> s1 • ArrayList<Float> i1
8	Grocery	• Makes an array list to store item name and price. • Also contains totals and count to get the total price of the purchase and the no of items purchased respectively.	DATA FUNCTIONS • public void display() • void delete(int a) • void add(float a,String str) • void clear_basket(int a) DATA MEMBERS • ArrayList<String> item_name • ArrayList<Float> item_price • int count=0; • float total;
9	Card	• Makes a new card for the user and then remembers the details of the user. • Makes an array lists to store details of the user. • Displays the card details.	DATA FUNCTIONS • public void display() • public void new_card(String card_no,int pin,String name,String address) DATA MEMBERS • ArrayList<String> card_no • ArrayList<Integer> pin • ArrayList<String> name • ArrayList<String> address • ArrayList<String> email • ArrayList<String> phone • int count;
10	Meat	• Displays the Meat available. • Makes an array list to store different Meat.	DATA FUNCTIONS • public void display() • public Meat() DATA MEMBERS • ArrayList<String> s1 • ArrayList<Float> i1

CODE FOR OUR PROGRAM:

```
import java.util.*;
public class Cereal
{
   ArrayList<String> s1 = new ArrayList<>();
   ArrayList<Float> i1 = new ArrayList<>();
   public Cereal()
   {
      s1.add("Rice (1kg)          ");
      s1.add("Dal  (1kg)          ");
      s1.add("Wheat  (1kg)        ");
      s1.add("Cornflakes (1kg)    ");
      s1.add("Barley  (1kg)       ");
      s1.add("Maize   (1kg)       ");
      s1.add("Oats    (1kg)       ");
      i1.add((float) 40.00);
      i1.add((float) 70.00);
      i1.add((float) 40.00);
      i1.add((float) 120.00);
      i1.add((float) 70.00);
      i1.add((float) 50.00);
      i1.add((float) 70.00);
   }
   public void display()
   {
      System.out.println("--------------------------------");
```

```
        System.out.println("          Cereal Items          ");
        System.out.println("--------------------------------");
        for(int i = 0 ; i < 7 ; i++)
        {
              System.out.println((i+1) + ". " + s1.get(i).replace("[","").replace("]","").replace(",","") +
        "     $" + i1.get(i).toString().replace("[","").replace("]","").replace(",",""));
        }
    }
}
```

```
import java.util.*;
public class Beverage
{
    ArrayList<String> s1 = new ArrayList<>();
    ArrayList<Float> i1 = new ArrayList<>();
    public Beverage()
    {
        s1.add("Soft Drinks         ");
        s1.add("Soda                ");
        s1.add("Water               ");
        s1.add("Juice               ");
        s1.add("Coffee              ");
        s1.add("Coconut Water       ");
        s1.add("Energy Drink        ");
        s1.add("Iced Tea            ");
        s1.add("Smoothies           ");
```

```
        s1.add("Lassi               ");
        i1.add((float) 40.00);
        i1.add((float) 20.00);
        i1.add((float) 20.00);
        i1.add((float) 35.00);
        i1.add((float) 40.00);
        i1.add((float) 40.00);
        i1.add((float) 100.00);
        i1.add((float) 50.00);
        i1.add((float) 70.00);
        i1.add((float) 30.00);
    }
    public void display()
    {
        System.out.println("---------------------------------");
        System.out.println("          Beverage           ");
        System.out.println("---------------------------------");
        for(int i = 0 ; i < 7 ; i++)
        {
              System.out.println((i+1) + ". " + s1.get(i).replace("[","").replace("]","").replace(",","") +
        "     Rs" + i1.get(i).toString().replace("[","").replace("]","").replace(",",""));
        }
    }
}


import java.util.*;
public class Meat
{
```

```
ArrayList<String> s1 = new ArrayList<>();
ArrayList<Float> i1 = new ArrayList<>();
public Meat()
{
   s1.add("Chicken (1kg)          ");
   s1.add("Mutton  (1kg)          ");
   s1.add("Squid   (1kg)          ");
   s1.add("Beef    (1kg)          ");
   s1.add("Turkey  (1kg)          ");
   s1.add("Prawns  (1kg)          ");
   s1.add("Fish    (1kg)          ");
   i1.add((float) 200.00);
   i1.add((float) 600.00);
   i1.add((float) 300.00);
   i1.add((float) 250.00);
   i1.add((float) 500.00);
   i1.add((float) 800.00);
   i1.add((float) 300.00);
}
public void display()
{
   System.out.println("--------------------------------");
   System.out.println("          Meat Items          ");
   System.out.println("--------------------------------");
   for(int i = 0 ; i < 7 ; i++)
   {
         System.out.println((i+1) + ". " + s1.get(i).replace("[","").replace("]","").replace(",","") +
   "     Rs" + i1.get(i).toString().replace("[","").replace("]","").replace(",",""));
   }
```

```
    }
}


import java.util.*;
public class Snacks
{
    ArrayList<String> s1 = new ArrayList<>();
    ArrayList<Float> i1 = new ArrayList<>();
    public Snacks()
    {
        s1.add("Lays Chips/packet      ");
        s1.add("Kurkure/packet         ");
        s1.add("Biscuits/packet        ");
        s1.add("Wafers/packet          ");
        s1.add("Aloo Bhujiya           ");
        s1.add("Cheetos/packet         ");
        s1.add("Pringles/packet        ");
        s1.add("Dairy Milk/packet      ");
        s1.add("5 Star/packet          ");
        s1.add("Sour Punk/packet       ");
        i1.add((float) 20.00);
        i1.add((float) 10.00);
        i1.add((float) 20.00);
        i1.add((float) 40.00);
        i1.add((float) 50.00);
        i1.add((float) 20.00);
        i1.add((float) 100.00);
        i1.add((float) 20.00);
```

```
        i1.add((float) 10.00);
        i1.add((float) 30.00);
    }
    public void display()
    {
        System.out.println("------------------------------");
        System.out.println("          Snacks           ");
        System.out.println("------------------------------");
        for(int i = 0 ; i < 7 ; i++)
        {
              System.out.println((i+1) + ". " + s1.get(i).replace("[","").replace("]","").replace(",","") +
        "     Rs" + i1.get(i).toString().replace("[","").replace("]","").replace(",",""));
        }
    }
}



import java.util.*;
public class Dairy
{
        ArrayList<String> s1 = new ArrayList<>();
        ArrayList<Float> i1 = new ArrayList<>();
        public Dairy()
        {
              s1.add("Cheese          ");
              s1.add("Milk            ");
              s1.add("Butter          ");
              s1.add("Ice cream       ");
```

```
            s1.add("Yogurt           ");
            s1.add("Whipped cream    ");
            s1.add("Sour cream       ");
            i1.add((float) 200.50);
            i1.add((float) 80.25);
            i1.add((float) 40.00);
            i1.add((float) 50.00);
            i1.add((float) 100.00);
            i1.add((float) 60.00);
            i1.add((float) 120.00);
        }
        public void display()
        {
            System.out.println("------------------------------");
            System.out.println("         Dairy Items         ");
            System.out.println("------------------------------");
            for(int i = 0 ; i < 7 ; i++)
            {
                System.out.println((i+1) + ". " + s1.get(i).replace("[","").replace("]","").replace(",","") +
       "    Rs" + i1.get(i).toString().replace("[","").replace("]","").replace(",",""));
            }
        }
}



import java.util.*;
public class Breads
{
   ArrayList<String> s1 = new ArrayList<>();
```

```
ArrayList<Float> i1 = new ArrayList<>();
public Breads()
{
   s1.add("White Bread      ");
   s1.add("Brown bread      ");
   s1.add("Pita             ");
   s1.add("Banana bread     ");
   s1.add("Toast            ");
   s1.add("Baguette         ");
   s1.add("Brioche          ");
   s1.add("Croissant        ");
   s1.add("Sour Dough       ");
   i1.add((float) 40.00);
   i1.add((float) 40.00);
   i1.add((float) 80.00);
   i1.add((float) 120.00);
   i1.add((float) 45.00);
   i1.add((float) 80.00);
   i1.add((float) 75.00);
   i1.add((float) 45.00);
   i1.add((float) 80.00);
}
public void display()
{
   System.out.println("-------------------------------");
   System.out.println("          Breads           ");
   System.out.println("-------------------------------");
   for(int i = 0 ; i < 7 ; i++)
   {
```

```
            System.out.println((i+1) + ". " + s1.get(i).replace("[","").replace("]","").replace(",","") +
      "     Rs" + i1.get(i).toString().replace("[","").replace("]","").replace(",",""));
      }
   }
}



import java.util.*;
public class Card
{
      ArrayList<String> card_no = new ArrayList<>();
      ArrayList<Integer> pin = new ArrayList<>();
      ArrayList<String> name = new ArrayList<>();
      ArrayList<String> address = new ArrayList<>();
      ArrayList<String> email = new ArrayList<>();
      ArrayList<String> phone = new ArrayList<>();
      int count = 0;
      public void new_card(String card_no, int pin, String name, String address, String email, String
phone)
      {
                  this.card_no.add(card_no);
                  this.pin.add(pin);
                  this.name.add(name);
                  this.address.add(address);
                  this.email.add(email);
                  this.phone.add(phone);
                  count++;
      }
      public void display()
```

```
        {
            System.out.println("--------------------");
            System.out.println("    Saved cards    ");
            System.out.println("--------------------");
            for(int i = 0 ; i < count ; i++)
            {
                System.out.println((i+1) + ".Card number: " + card_no.get(i) + "\n  Name: " + name.get(i) +
          "\n  Email: " + email.get(i) + "\n  Address: " + address.get(i) + "\n  Phone number: " +
          phone.get(i) + "\n  Pin: **" + pin.get(i).toString().substring(2, 4));
            }
        }
}

import java.util.*;
public class Fruits
{
   ArrayList<String> s1 = new ArrayList<>();
   ArrayList<Float> i1 = new ArrayList<>();
   public Fruits()
   {
      s1.add("Orange (1kg)          ");
      s1.add("Apple (1kg)           ");
      s1.add("Banana (1 dozen)      ");
      s1.add("Grapes (1kg)          ");
      s1.add("Pineapple (1kg)       ");
      s1.add("Kiwi (250g)           ");
      s1.add("Mango (1kg)           ");
      i1.add((float) 60.00);
      i1.add((float) 150.00);
```

```
        i1.add((float) 60.00);
        i1.add((float) 200.00);
        i1.add((float) 80.00);
        i1.add((float) 500.00);
        i1.add((float) 150.00);
    }
    public void display()
    {
        System.out.println("------------------------------");
        System.out.println("          Fruits            ");
        System.out.println("------------------------------");
        for(int i = 0 ; i < 7 ; i++)
        {
              System.out.println((i+1) + ". " + s1.get(i).replace("[","").replace("]","").replace(",","") +
        "     $" + i1.get(i).toString().replace("[","").replace("]","").replace(",",""));
        }
    }
}



import java.util.*;
public class Grocery
{
    ArrayList<String> item_name = new ArrayList<>();
    ArrayList<Float> item_price = new ArrayList<>();
    int count = 0;
    float total;

    public void add(float a, String str)
```

```
{
   Meat m = new Meat();
   Cereal c = new Cereal();
   Dairy d = new Dairy();
   Fruits f = new Fruits();
   Snacks s = new Snacks();
   Breads b = new Breads();
   Beverage br = new Beverage();
   if(str.equals("m"))
   {
      item_name.add(m.s1.get((int) (a-1)));
      item_price.add(m.i1.get((int) (a-1)));
      count++;
      total += m.i1.get((int) (a-1));
   }
   if(str.equals("c"))
   {
         item_name.add(c.s1.get((int) (a-1)));
         item_price.add(c.i1.get((int) (a-1)));
         count++;
         total += c.i1.get((int) (a-1));
   }
   if(str.equals("d"))
   {
         item_name.add(d.s1.get((int) (a-1)));
         item_price.add(d.i1.get((int) (a-1)));
         count++;
         total += d.i1.get((int) (a-1));
   }
```

```
    if(str.equals("f"))
    {
       item_name.add(f.s1.get((int) (a-1)));
       item_price.add(f.i1.get((int) (a-1)));
       count++;
       total += f.i1.get((int) (a-1));
    }
    if(str.equals("s"))
    {
       item_name.add(s.s1.get((int) (a-1)));
       item_price.add(s.i1.get((int) (a-1)));
       count++;
       total += s.i1.get((int) (a-1));
    }
    if(str.equals("b"))
    {
       item_name.add(b.s1.get((int) (a-1)));
       item_price.add(b.i1.get((int) (a-1)));
       count++;
       total += b.i1.get((int) (a-1));
    }
    if(str.equals("br"))
    {
       item_name.add(br.s1.get((int) (a-1)));
       item_price.add(br.i1.get((int) (a-1)));
       count++;
       total += br.i1.get((int) (a-1));
    }
}
```

```
    public void delete(int a)
    {
        item_name.remove(a-1);
        total -= item_price.get(a-1);
        item_price.remove(a-1);
        count--;
        System.out.println("Item has been deleted!");
    }
    public void clear_basket()
    {
        item_name.clear();
        item_price.clear();
        count = 0;
        total = 0;
    }
    public void display()
    {
       if(!item_name.isEmpty())
       {
          System.out.println("------------------------------");
          System.out.println("        YOUR BASKET         \n");
          for (int i = 0; i < count; i++)
          {
             System.out.print((i+1) + ". " + item_name.get(i).replace("[","").replace("]","").replace(",",""));
             System.out.println("     " +
item_price.get(i).toString().replace("[","").replace("]","").replace(",",""));
          }
          System.out.println("\nTotal items: " + count);
```

```
            String s = String.valueOf(total).substring(0, 4);
            System.out.println("Total cost: Rs" + s);
            System.out.println("------------------------------\n\n");
        }
        if(item_name.isEmpty()) {
            System.out.println("------------------------------");
            System.out.println("    YOUR BASKET IS EMPTY!     ");
            System.out.println("------------------------------\n");
        }
    }
}


import java.util.*;
import javax.swing.*;
public class Main extends Grocery
{
        public static void main(String[] args)
        {
            Scanner sc = new Scanner(System.in);

            Main g = new Main();
            Card c1 = new Card();
            boolean bc = true;

            System.out.println("--------------------------------------------------------------------------");
            System.out.println("                Welcome to SK Supermaket Shopping!                    ");
            System.out.println("--------------------------------------------------------------------------\n\n");
```

```
do {

    System.out.println("_____");
    System.out.println("       This is the Main Menu       ");
    System.out.println("_____");
    System.out.println("1.Add item to basket");
    System.out.println("2.Delete item from basket");
    System.out.println("3.View basket");
    System.out.println("4.View your cart and proceed to payment");
    System.out.println("5.Exit");
    System.out.println("Enter which one you'd like to proceed to");
    int a = sc.nextInt();

    if(a == 1)        //to add to basket opens here
        {
          do {
                System.out.println("1.Meats");
                System.out.println("2.Cereal");
                System.out.println("3.Dairy");
                System.out.println("4.Fruits");
                System.out.println("5.Snacks");
                System.out.println("6.Breads");
                System.out.println("7.Beverage");
                System.out.println("8.Go back to main menu\n");
                System.out.println("Choose your section: ");

                  int b = sc.nextInt();

                  if (b == 1) // meats open here
```

```
  {
Meat meats = new Meat();
            do {
               meats.display();

               System.out.println("11. Go back to sections menu\n");
               System.out.println("Choose item which you want to add: ");

                  int c = sc.nextInt();
               if (c == 1) {
                  g.add(1, "m");
                     }
               if (c == 2) {
                  g.add(2, "m");
                  }
               if (c == 3) {
                  g.add(3, "m");
                  }
               if (c == 4) {
                  g.add(4, "m");
                  }
               if (c == 5) {
                  g.add(5, "m");
                  }
               if (c == 6) {
                  g.add(6, "m");
                  }
               if (c == 7) {
                  g.add(7, "m");
```

```
                    }
                    if(c == 11){
                        bc = false;
                        }
                }while (bc);
            bc = true;
}   //meats close here


      if (b == 2) //cereals open here
      {
Cereal cereals = new Cereal();
          do {
              cereals.display();
              System.out.println("11. Go back to sections menu\n");
              System.out.println("Choose item which you want to add: ");

              int l = sc.nextInt();
                 if (l == 1) {
                    g.add(1, "c");
                 }
                 if (l == 2) {
                    g.add(2, "c");
                 }
                 if (l == 3) {
                    g.add(3, "c");
                 }
                 if (l == 4) {
                    g.add(4, "c");
```

```
                }
                if (l == 5) {
                   g.add(5, "c");
                }
                if(l == 6){
                   g.add(6, "c");
                }
                if(l == 7) {
                   g.add(7, "c");
                }
                if(l == 11){
                   bc = false;
                }
            }while (bc);
        bc = true;
        } //cereals closes here


    if (b == 3)//dairy starts here
    {
Dairy dairy = new Dairy();
            do {
                dairy.display();
                System.out.println("11. Go back to sections menu\n");
                System.out.println("Choose item which you want to add: ");

                int c = sc.nextInt();
                if (c == 1) {
                   g.add(1, "d");
```

```
                    }
                    if (c == 2) {
                       g.add(2, "d");
                    }
                    if (c == 3) {
                       g.add(3, "d");
                    }
                    if (c == 4) {
                       g.add(4, "d");
                    }
                    if (c == 5) {
                       g.add(5, "d");
                    }
                    if (c == 6) {
                       g.add(6, "d");
                    }
                    if (c == 7) {
                       g.add(7, "d");
                    }
                    if(c == 11){
                       bc = false;
                    }
                }while (bc);
            bc = true;
        }//diary closes here

        if (b == 4)//fruits starts here
        {
    Fruits fruits = new Fruits();
```

```
do {
   fruits.display();
   System.out.println("11. Go back to sections menu\n");
   System.out.println("Choose item which you want to add: ");
   int c = sc.nextInt();
      if (c == 1) {
         g.add(1, "f");
       }
      if (c == 2) {
         g.add(2, "f");
       }
      if (c == 3) {
         g.add(3, "f");
      }
      if (c == 4) {
         g.add(4, "f");
      }
      if (c == 5) {
         g.add(5, "f");
      }
      if(c == 6){
         g.add(6, "f");
      }
      if (c == 7) {
         g.add(7, "f");//supposed to be f noee
      }
      if(c == 11){
         bc = false;
      }
```

```
            }while (bc);
           bc = true;
        }//fruits closes here

        if (b == 5)//snacks open here
        {
Snacks snack = new Snacks();
                do {
                    snack.display();
                    System.out.println("11. Go back to sections menu\n");
                    System.out.println("Choose item which you want to add: ");

                    int c = sc.nextInt();
                    if (c == 1) {
                    g.add(1, "s");
                    }
                    if (c == 2) {
                    g.add(2, "s");
                    }
                    if (c == 3) {
                    g.add(3, "s");
                    }
                    if (c == 4) {
                    g.add(4, "s");
                    }
                    if (c == 5) {
                    g.add(5, "s");
                    }
                    if(c == 6){
```

```
                    g.add(6, "s");
                    }
                if (c == 7) {
                    g.add(7, "s");
                    }

                if (c == 8) {
                    g.add(8, "s");
                    }

                if (c == 9) {
                    g.add(9, "s");
                    }

                if (c == 10) {
                    g.add(10, "s");
                    }

                if(c == 11){
                     bc = false;
                    }
              }while (bc);
            bc = true;
        }//snacks closes here

        if(b == 6)//breads starts here
{
            Breads breads = new Breads();
              do {
```

```
breads.display();
System.out.println("11. Go back to sections menu\n");
System.out.println("Choose item which you want to add: ");

   int c = sc.nextInt();
if (c == 1) {
   g.add(1, "b");
   }

if (c == 2) {
   g.add(2, "b");
   }

if (c == 3) {
   g.add(3, "b");
   }

if (c == 4) {
   g.add(4, "b");
   }

if (c == 5) {
   g.add(5, "b");
   }

if (c == 6) {
   g.add(6, "b");
   }
```

```
                    if (c == 7) {
                        g.add(7, "b");
                        }

                    if (c == 8) {
                        g.add(8, "b");
                        }

                    if (c == 9) {
                        g.add(9, "b");
                        }

                    if(c == 11){
                        bc = false;
                        }
                }while (bc);
                bc = true;
        }//breads closes here

        if(b == 7)//beverages starts here
{
                Beverage bvg= new Beverage();
                do {
                    bvg.display();
                     System.out.println("11. Go back to sections menu\n");
                     System.out.println("Choose item which you want to add: ");

                     int c = sc.nextInt();
```

```
if (c == 1) {
   g.add(1, "br");
   }

if (c == 2) {
      g.add(2, "br");
   }

if (c == 3) {
      g.add(3, "br");
   }

if (c == 4) {
      g.add(4, "br");
   }

if (c == 5) {
      g.add(5, "br");
   }

if (c == 6) {
      g.add(6, "br");
   }

if (c == 7) {
      g.add(7, "br");
   }

if (c == 8) {
```

```
                    g.add(8, "br");
                }

                if (c == 9) {
                    g.add(9, "br");
                }

                if (c == 10) {
                    g.add(9, "br");
                }

                if(c == 11){
                    bc = false;
                }
            }while (bc);
        bc = true;
    }

    if(b == 8)
        {
            bc = false;
        }
    }while(bc);
bc = true;
}

if(a == 2)
{
    g.display();
```

```
        if(!g.item_name.isEmpty())
        {
           System.out.println("Choose item which you want to delete: ");
           int d = sc.nextInt();
           g.delete(d);
           g.display();
           if(!g.item_name.isEmpty())
           {
              do {
                 System.out.println("Do you want to delete another item(Y/N): ");
                 String str = sc.next();
                 if (str.equalsIgnoreCase("y"))
                 {
                    System.out.println("Choose item which you want to delete: ");
                    int e = sc.nextInt();
                    g.delete(e);
                    g.display();
                 }
                 else {
                    bc = false;
                 }
              }
              while (bc);
              bc = true;
           }
        }
     }

     if(a == 3){
```

```
   g.display();
}

if(a == 4){
      g.display();
      if(!g.item_name.isEmpty()) {
         do {
            System.out.println("1.Credit card/ Debit card");
            System.out.println("2.Cash on delivery\n");
            System.out.println("Choose payment method: ");
            int f = sc.nextInt();
            if (f == 1) {
               System.out.println("1.New Credit card/ Debit card");
               System.out.println("2.Use existing Credit card/ Debit card");
               int j = sc.nextInt();
               if (j == 1) {
                  System.out.println("Enter your name: ");
                  sc.nextLine();
                  String name = sc.nextLine();
                  System.out.println("Enter your email: ");
                  String email = sc.nextLine();
                  System.out.println("Enter your address: ");
                  String address = sc.nextLine();
                  System.out.println("Enter your phone number: ");
                  String phone = sc.nextLine();
                  System.out.println("Enter card number: ");
                  String card_no = sc.nextLine();
                  System.out.println("Enter pin: ");
                  int pin = sc.nextInt();
```

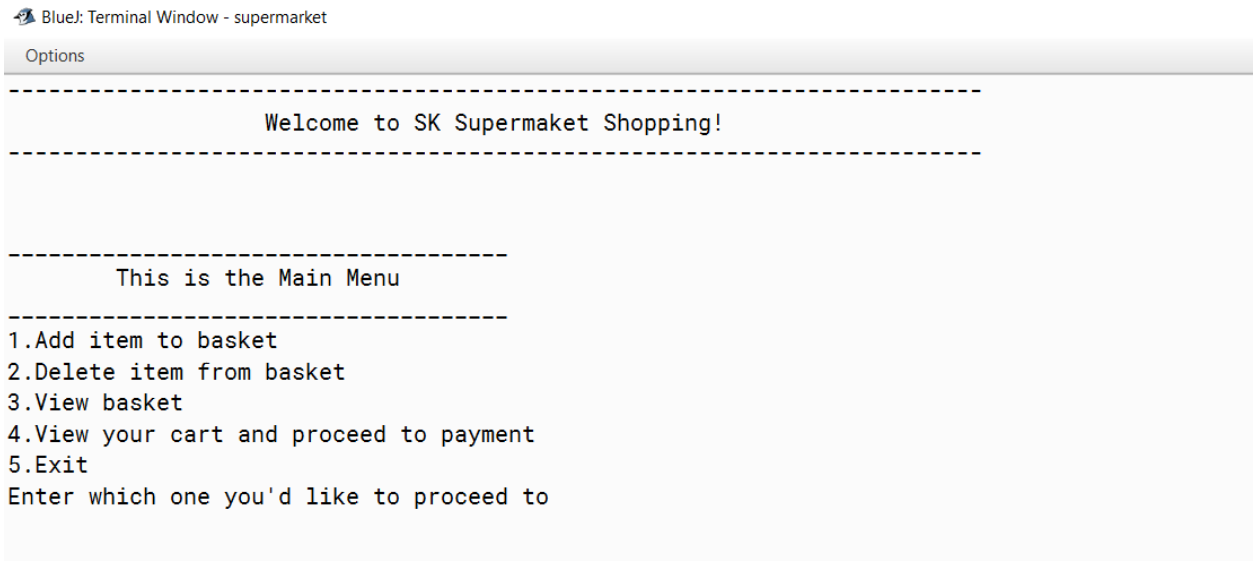
```
                    System.out.println("Do you want to save your card details(Y/N): ");
                    String s = sc.next();
                    if (s.equalsIgnoreCase("y")) {
                        c1.new_card(card_no, pin, name, address, email, phone);
                        System.out.println("Your card has been saved");
                        System.out.println("\nPayment successful!! \nYou will receive your order
within a week :)\n");
                    } else {
                        System.out.println("Payment successful!! \nYou will receive your order within
a week :)\n");
                    }
                    bc = false;
                    g.clear_basket();
                    g.display();
                }
                if (j == 2) {
                    if (c1.card_no.isEmpty()) {
                        System.out.println("You have no saved cards!!\n");
                        bc = true;
                    } else {
                        c1.display();
                        System.out.println("Select the card which you want to use: ");
                        int h = sc.nextInt();
                        System.out.println("Payment successful!! \nYou will receive your order within
a week :)\n");
                        g.clear_basket();
                        g.display();
                        bc = false;
                    }
                }
```

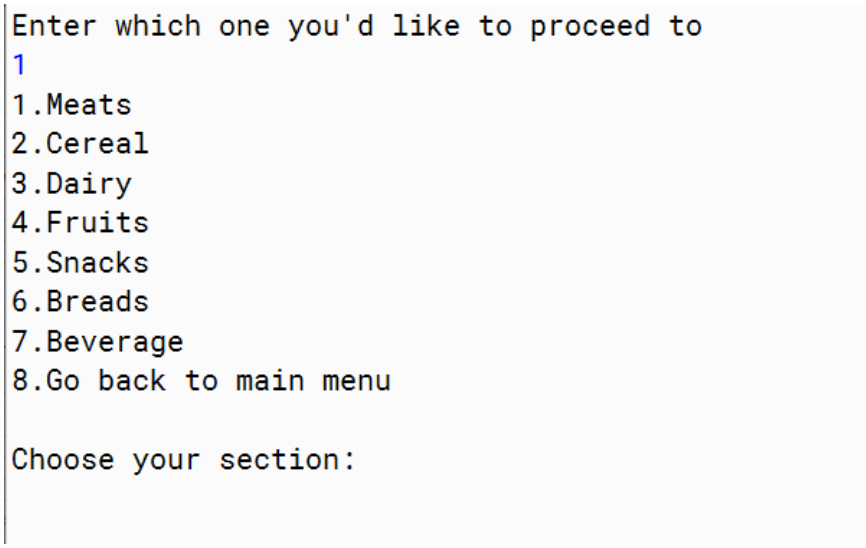
```
                    }
                    if (f == 2) {
                        System.out.println("Enter your name: ");
                        sc.nextLine();
                        String name = sc.nextLine();
                        System.out.println("Enter your email: ");
                        String email = sc.nextLine();
                        System.out.println("Enter your address: ");
                        String address = sc.nextLine();
                        System.out.println("Enter your phone number: ");
                        String phone = sc.nextLine();
                        System.out.println("\nYour order has been placed!! \nYou will receive your order
within a week :)");
                        System.out.println("\nPlease pay total amount $" + g.total + " on receiving the
delivery\n");
                        g.clear_basket();
                        g.display();
                        bc = false;
                    }
                }
                while(bc);
                bc = true;
            }
        }

        if(a == 5)
        {
            bc = false;
        }
```

```
        }while(bc);
    }
}
```

OUTPUT

Main menu





1.To Add an Item

Displaying the items

```
Choose your section:
4
--------------------------------
             Fruits
--------------------------------
1. Orange (1kg)                  Rs60.0
2. Apple (1kg)                   Rs150.0
3. Banana (1 dozen)              Rs60.0
4. Grapes (1kg)                  Rs200.0
5. Pineapple (1kg)               Rs80.0
6. Kiwi (250g)                   Rs500.0
7. Mango (1kg)                   Rs150.0
11. Go back to sections menu

Choose item which you want to add:
```

After adding returns to fruits goes back to menu

```
Choose your section:
4
--------------------------------
            Fruits
--------------------------------
1. Orange (1kg)                 Rs60.0
2. Apple (1kg)                  Rs150.0
3. Banana (1 dozen)             Rs60.0
4. Grapes (1kg)                 Rs200.0
5. Pineapple (1kg)              Rs80.0
6. Kiwi (250g)                  Rs500.0
7. Mango (1kg)                  Rs150.0
11. Go back to sections menu

Choose item which you want to add:
1
--------------------------------
            Fruits
--------------------------------
1. Orange (1kg)                 Rs60.0
2. Apple (1kg)                  Rs150.0
3. Banana (1 dozen)             Rs60.0
4. Grapes (1kg)                 Rs200.0
5. Pineapple (1kg)              Rs80.0
6. Kiwi (250g)                  Rs500.0
7. Mango (1kg)                  Rs150.0
11. Go back to sections menu

Choose item which you want to add:
```

2.Deletes item from the basket

```
-------------------------------------
        This is the Main Menu
-------------------------------------
1.Add item to basket
2.Delete item from basket
3.View basket
4.View your cart and proceed to payment
5.Exit
Enter which one you'd like to proceed to
2
------------------------------
         YOUR BASKET

1. Orange (1kg)                60.0

Total items: 1
Total cost: Rs60.0
------------------------------


Choose item which you want to delete:
```

After item is Deleted

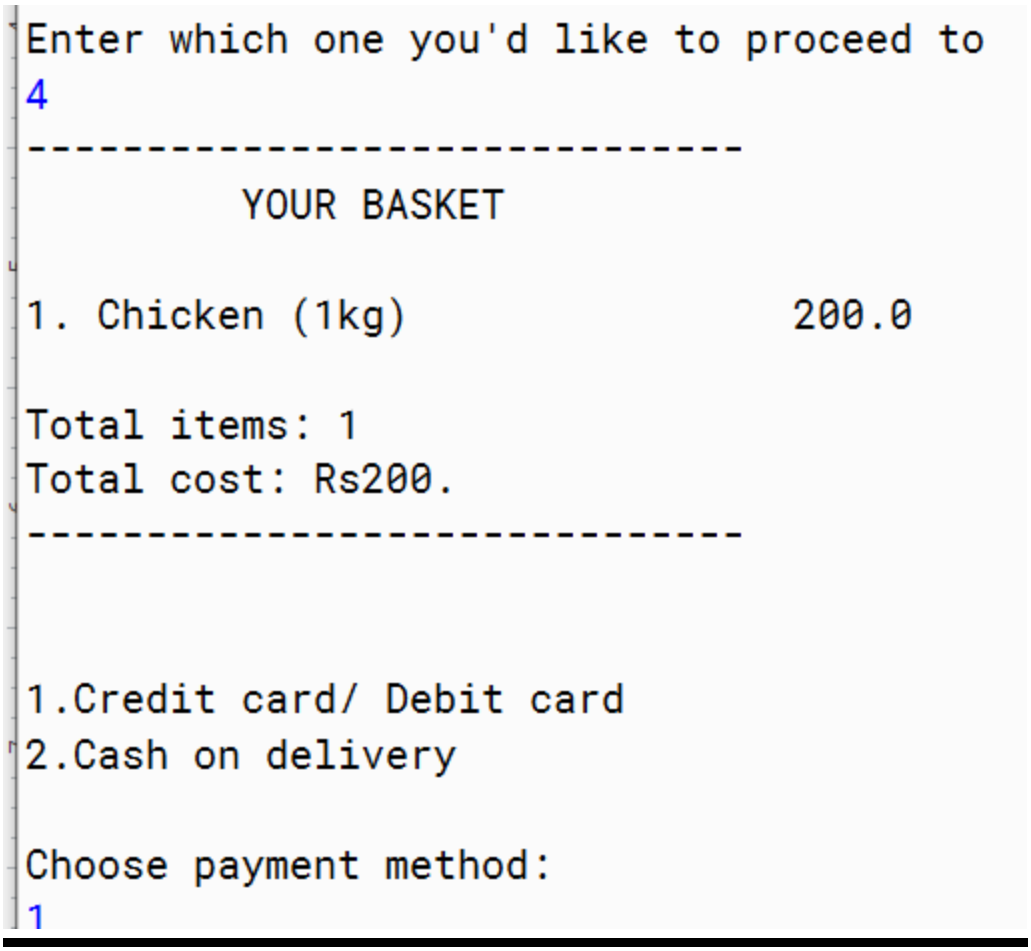
```
Choose item which you want to delete:
1
Item has been deleted!
------------------------------
    YOUR BASKET IS EMPTY!
------------------------------
```

Back to menu to

3.View the basket

```
-------------------------------------
        This is the Main Menu
-------------------------------------
1.Add item to basket
2.Delete item from basket
3.View basket
4.View your cart and proceed to payment
5.Exit
Enter which one you'd like to proceed to
3
-------------------------------
         YOUR BASKET

1. Chicken (1kg)                200.0

Total items: 1
Total cost: Rs200.
-------------------------------
```

4. View cart and proceed to payment



Gets Card Details and proceed to payment

```
1.Credit card/ Debit card
2.Cash on delivery

Choose payment method:
1
1.New Credit card/ Debit card
2.Use existing Credit card/ Debit card
1
Enter your name:
Ashwin
Enter your email:
ashwinshibu11@gmail.com
Enter your address:
Hostel C block,Bits pilani dubai campus,Academic City,Dubai
Enter your phone number:
0525348459
Enter card number:
250370
Enter pin:
3333
Do you want to save your card details(Y/N):
Y
Your card has been saved

Payment successful!!
You will receive your order within a week :)
```

Card payment from existing card

```
------------------------------
         YOUR BASKET

1. Chicken (1kg)               200.0
2. Chicken (1kg)               200.0
3. Chicken (1kg)               200.0
4. Mutton  (1kg)               600.0
5. Squid   (1kg)               300.0

Total items: 5
Total cost: Rs1500
------------------------------


1.Credit card/ Debit card
2.Cash on delivery

Choose payment method:
1
1.New Credit card/ Debit card
2.Use existing Credit card/ Debit card
2
-------------------
    Saved cards
-------------------
1.Card number: 250370
  Name: Ashwin
  Email: ashwinshibu11@gmail.com
  Address: Hostel C block,Bits pilani dubai campus,Academic City,Dubai
  Phone number: 0525348459
  Pin: **33
Select the card which you want to use:
```

CONCLUSION

This project helped us to use the concepts that we've thoroughly learned in class and apply everything into one program. We used many concepts such as Inheritance, Array List, Strings, Encapsulation, Interface, Object instantiation, and many more to make our program user-friendly in which the user is given options to make his/her choice accordingly. All in all, this has given us, as a group, an opportunity to succeed in making a program using the concepts that we learned. The software we used was BlueJ and it helped in creating the program in an organized manner.

REFERENCES

1. https://www.youtube.com/watch?v=nixQyPIAnOQ
2. https://www.educative.io/blog/object-oriented-programming

3. https://daily.noon.com/uae-en/