CJP Project: Indus Sundae Parlour (Code)

Manit Shah

This project is made keeping in mind the perspective of someone taking orders at a sundae parlour. It will store the information required when taking an order.

Code:

```
import java.util.Scanner;
public class Driver {
// This is java class 1 which will be followed by another class

   public static void main(String[] args) {
       int totalCount, choice, sundae_num = 0, change;
       Scanner scanner = new Scanner(System.in);
       System.out.println("Welcome to Indus Sundae Parlour\nHow many sundaes could
you make today? ");
       totalCount = scanner.nextInt();
       scanner.nextLine();
       Sundae[] sundaes = new Sundae[totalCount];
       int sundaeCounter = 0;
       do {
           System.out.println("What do you want to do?\n\t1. Enter a new sundae
order\n\t2. Change information of a specific order");
           System.out.println("\t3. Display details of all sundaes of a specific
ice cream flavour\n\t4. Statistics on today's sundaes\n\t5. Quit");
           System.out.println("Please enter your choice > ");
           choice = scanner.nextInt();
           scanner.nextLine();
           int scoop;
           String flavor, nut;
           switch (choice) {
           case 1: {
               if(sundaeCounter<totalCount) {
                   System.out.println("How many scoops of ice cream? ");
                   scoop = scanner.nextInt();
                   scanner.nextLine();
                   System.out.println("What flavour? ");
                   flavor = scanner.nextLine();
                   System.out.println("Any nuts? (y for yes anything else for no)
");
                   nut = scanner.nextLine();
                   sundaes[sundaeCounter++] = new Sundae(scoop, flavor, nut);
               }
               else {
                   System.out.println("Sorry we don't have enough ingredeints to
make another sundae");
               }
               break;
           }
```

```
            case 2: {
                do {
                    System.out.println("Please enter your choice > \n\t Valid
sundae numbers are 0 to "+(sundaeCounter-1));
                    sundae_num = scanner.nextInt();
                    if(sundae_num>=0 && sundae_num<=sundaeCounter) {
                        System.out.println("Sundae # "+sundae_num);
                        System.out.println(sundaes[sundae_num].toString());
                        System.out.println("What would you like to change?");
                        System.out.println("1. Ice cream flavour\n2. Number of
scoops\n3. Nuts or no nuts\n4. Quit");
                        change = scanner.nextInt();
                        scanner.nextLine();
                        switch (change) {
                        case 1: {
                            System.out.println("New Flavour: ");
                            flavor = scanner.nextLine();
                            sundaes[sundae_num].updateFlavour(flavor);
                            System.out.println("Here is what the sundae looks like
now");
                            System.out.println(sundaes[sundae_num].toString());
                            sundae_num = -1;
                            break;
                        }
                        case 2:{
                            System.out.println("How many scoops: ");
                            scoop = scanner.nextInt();
                            scanner.nextLine();
                            sundaes[sundae_num].updateScoops(scoop);
                            System.out.println("Here is what the sundae looks like
now");
                            System.out.println(sundaes[sundae_num].toString());
                            sundae_num = -1;
                            break;
                        }
                        case 3:{
                            if(sundaes[sundae_num].getNuts()) {
                                sundaes[sundae_num].updateNuts("n");
                                System.out.println("Nuts removed from sundae");
                            }
                            else {
                                sundaes[sundae_num].updateNuts("y");
                                System.out.println("Nuts added to sundae");
                            }
                            System.out.println("Here is what the sundae looks like
now");
                            System.out.println(sundaes[sundae_num].toString());
                            sundae_num = -1;
                            break;
                        }
                        case 4:{
                            sundae_num = -1;
                            break;
                        }
                        default:
                            System.out.println("Sorry, you have entered invalid
choice");
                        }
                    }
```

```
                    else {
                        System.out.println("Sorry, no such sundae\nDo you want to
enter another sundae number of return to the main menu (quit to return)");
                        if(scanner.nextLine()=="quit")
                            sundae_num = -1;
                    }

                } while (sundae_num!=-1);
                break;
            }
            case 3: {
                System.out.println("What flavour do you want a list of?\n");
                flavor = scanner.nextLine();
                for(int i=0;i<sundaeCounter;i++) {
                    if(sundaes[i].getFlavour().contentEquals(new
StringBuffer(flavor))) {
                        System.out.println("Sundae # "+Integer.toString(i));
                        System.out.println(sundaes[i].toString());
                    }
                }
                break;
            }
            case 4: {
                System.out.println("What information would you like?");
                System.out.println("\t1. List all sundaes sold today");
                System.out.println("\t2. Details of cheapest sundae");
                System.out.println("\t3. Number of sundaes sold today");
                System.out.println("\t4. Number of sundaes with specific # of
scoops");
                System.out.println("\t5. Average cost of sundaes");
                System.out.println("\t6. Quit");
                int c = scanner.nextInt();
                scanner.nextLine();
                switch (c) {
                case 1: {
                    for(int i=0;i<sundaeCounter;i++) {
                        System.out.println(sundaes[i].toString());
                    }
                    break;
                }
                case 2: {
                    int cheapest_index = 0;
                    double min = sundaes[0].getCost();
                    for(int k=1;k<sundaeCounter;k++) {
                        if(sundaes[k].getCost()<min) {
                            min = sundaes[k].getCost();
                            cheapest_index = k;
                        }
                    }
                    System.out.println(sundaes[cheapest_index].toString());
                    break;
                }
                case 3: {
                    System.out.println((sundaeCounter-1) + " sundaes sold today");
                    break;
                }
                case 4: {
                    System.out.println("How many scoops? ");
                    scoop = scanner.nextInt();
```

```
                    scanner.nextLine();
                    for(int k=1;k<sundaeCounter;k++) {
                        if(sundaes[k].getScoops()==scoop) {
                            System.out.println("Sunday # "+k);
                            System.out.println(sundaes[k].toString());
                        }
                    }
                    break;
                }
                case 5: {
                    double sum = 0;
                    for(int k=0;k<sundaeCounter;k++) {
                            sum += sundaes[k].getCost();
                        }
                    System.out.println("Average price of "+sundaeCounter+" sundaes
is ₹"+Double.toString(sum/(sundaeCounter-1)));
                    break;
                }
                case 6: {

                    break;
                }
                default:
                    System.out.println("Sorry, you have entered invalid choice");
                }

                break;
            }
            case 5: {

                break;
            }
            default:
                System.out.println("Please enter valid choice");
            }

        } while (choice!=5);
    }

}

import java.util.Scanner;

class Sundae{
// This is java class 2
    private int scoops;
    private String flavour;
    private boolean nuts;
    private double cost;
    private static int sundaeCount = 0;

    public Sundae() {
        scoops = 0;
        flavour = "";
        cost = 0;
        nuts = false;
        sundaeCount++;
    }
```

```
    public Sundae(int s, String f, String nut) {
        scoops = s;
        flavour = f;
        if(nut=="y")
            nuts = true;
        else
            nuts = false;
        calcCost();
        sundaeCount++;
    }

    public Sundae(Sundae s) {
        this.flavour = s.getFlavour();
        this.scoops = s.getScoops();
        this.nuts = s.getNuts();
        calcCost();
        sundaeCount++;
    }
    public int getScoops() {
        return scoops;
    }
    public String getFlavour() {
        return flavour;
    }
    public boolean getNuts() {
        return nuts;
    }
    public double getCost() {
        return cost;
    }
    public int getSundaeCount() {
        return sundaeCount;
    }
    public void updateScoops(int s) {
        scoops = s;
        updateCost();
    }
    public void updateFlavour(String f) {
        flavour = f;
    }
    public void updateNuts(String n) {
        if(n=="y")
            nuts = true;
        else
            nuts = false;
        updateCost();
    }
    public void updateCost() {
        calcCost();
    }
    private void calcCost() {
        cost = scoops*23;
        if(nuts)
            cost= cost + 7;
    }
    public String toString() {
        String message = "\nSundae with "+Integer.toString(scoops)+" scoops of
"+flavour;
        if(nuts)
```

```
            message += " with nuts";
        message += " for a cost of: ₹"+Double.toString(cost);
        //System.out.println(message);
        return message;
    }
    public boolean equals(Sundae s) {
        if(this.scoops==s.getScoops() && this.flavour==s.getFlavour() && this.nuts
== s.getNuts())
            return true;
        else
            return false;
    }

}
```