Assignment 3

"You should avoid rinsing and then storing produce because it creates a perfect, wet habitat for bacteria to grow. Too much moisture can cause fruits and vegetables to go bad more quickly."

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Subtopic	Fruit

1. Identify the problem

a. What you should know about Fruit
   - So based on wikipedia a fruit is the seed-bearing structure in flowering plants that is formed from the ovary after flowering.
   - A fruit results from the fertilizing and maturing of one or more flowers.
   - Fruit is eaten both fresh and as jams, marmalade and other fruit preserves.
   - Fruits are also used for socializing and gift-giving in the form of fruit baskets and fruit bouquets.
   - All fruits benefit from proper post harvest care, and in many fruits, the plant hormone ethylene causes ripening.
   - Therefore, maintaining most fruits in an efficient cold chain is optimal for post harvest storage, with the aim of extending and ensuring shelf life.
   - Fruits are an important part of a healthy eating pattern and the source of many vital nutrients, including potassium, folate (folic acid), and antioxidants including polyphenols.
   - The nutrients in fruit are vital for overall health and maintenance of body systems.

b. How to take care of a food and you
   - Some fruit in supermarket isn't washed
   - So it should be rinsed before eating. This recommendation also applies to produce with rinds or skins that are not eaten. It should be done just before preparing or eating to avoid premature spoilage.
   - All cut, peeled, or cooked fruits and vegetables should be refrigerated within two hours. After a certain time, harmful bacteria may grow on them and increase the risk of foodborne illness.
   - Any fruit or 100% fruit juice counts as part of the Fruit Group. Fruits may be fresh, frozen, canned, or dried/dehydrated, and may be whole, cut-up, pureed, or cooked. At least half of the recommended amount of fruit should come from whole fruit, rather than 100% fruit juice.

c. The storage of fruits
    - Some fruits have the shortest shelf life. And it wouldnt stay fresh for long enough. But it varied for every type of fruit.
    - Moreover it also varied if they were to be put in different conditions such as at room temperature (top of your counter), in the refrigerator or in a freezer.
    - Such as when a fruit is left on the kitchen counter, it's rotten within a week but when it is put into the fridge those fruits can provide a good nutrition for months.
    - We can choose to control and delay the ripening of fruits
    - Ripening fruits tend to spoil easily
    - Constant cycle of tossing spoiled fruit in the garbage every week only to replace them with new ones, is a bad habit that everyone should stop doing. So it's best to make it as a fertilizer after a few stages.

2. Understand the problem

- Some fruit in supermarket isn't washed
    - Wash or rinse only before preparing/eating.
    - Soak fruits in 5 mins except berries
    - Rinse with cold water
    - Pat dry
- Peeled fruits in the refrigerator should only be stored for less than 2 hours.
    - As harmful bacteria will start to grow on it.
- Some fruits have the shortest shelf life. And it wouldnt stay fresh for long enough. But it varied for every type of fruit.
    - Provide/Look up fruit shelf life chart
- Moreover it also varied if they were to be put in different conditions such as at room temperature (top of your counter), in the refrigerator or in the freezer.
    - Count shelf life/fruit stay fresh when fruits is in the freezer, refrigerator or at room temperature
- Ripening a fruit
    - Best Around 20C
    - Expose to sun
- Controlling/Delay ripening of food
    - Lower the temperature
    - Provide less oxygen
    - Using synthetic compounds
    - Delayed from one to two weeks
- Ripening food tends to spoil easily. Constant cycle of tossing bad fruit in the garbage every week only to replace them with new ones, is a bad habit that everyone should stop doing.
    - Send a food spoiled and claim voucher for next fruit purchase with us
    - fruit waste is used as fertilizer by
        - Just dig near a small plant mud
        - Add fruits waste
        - Cover it with mud
        - Water daily and it will become organic manure and give power to the plant after two or more weeks

3. Identify alternative ways to solve the problem

- Create a system for customer, staff, manager
- For a customer system it will allow users to buy fruits directly from suppliers where customers can buy fruits online or by walk in. They can check the price for each fruit for every kilogram. Then proceed if they want to continue to order where they need to key in the total kilogram they are going to buy. System will calculate the price of fruit. And if they have received any discount code, they can also key in to the system.
- System saves data of the user. Including their favorite fruits. And suggest fruit based on their data if customers were up to losing/gaining weight or just to normalise a healthy lifestyle.
- System lists out the fruit package that has enough nutrients for customers who want to diet, or a package that covers for a family that lasts for a month.
- System then calculates the price after discount. Then customers can key in the delivery location if they choose to use our delivery system. Then again, the system will check the total price including for the delivery service.
- Moreover the system will show when the expected item is delivered.
- When customers received the item ordered, the can check the details of the fruit received on the systems by key in the code into the system
- Customers can check whether they stored their fruit in the refrigerator, how long would it last to.
- System can also have a part where customers acknowledge how to get the overall benefits from the fruit. Such as how they should take care of their fruit. When they should eat their fruit. As we all know, ripened fruit can easily spoil.
- System will have a part where it can suggest based on our favourite food the best way or time to have your fruit.
- Lastly, customers can also claim a 5 percent voucher in exchange for 500g of spoiled fruit.
- For a staff system, it has functions where the staff can update about the ongoing fruit from which it is planted/picked by putting a code.
- Staff also will update the name and code of fruits on the system and its details. It will be linked directly to the customer system.

- They can check their salary and the system will have a part where they let staff key in hours and the system will calculate expected salary based on how long they want to work over time.
- In the manager system, they can key in and the system will calculate the total modal they plan from plant, planting, growing, picking and preparing of fruits.
- They also key in the salary for workers and they can have bonuses based on the sales the company made. Then
- Based on this data, System will calculate the price for each fruit.
- System compares the price from the company and the price other companies assign.

4. Select the best way to solve the problem

- Create a system which allows users to buy fruits directly from suppliers where customers can buy fruits online or by walk in. They can check the details for each fruit available for every kilogram. Then proceed if they want to continue to order. This is where they need to key in the total kilogram they are going to buy. System will calculate the price of fruit. And if they have received any discount code recently, it's free to claim it for every purchase they make.
- System then calculates the price after discount. Then customers can key in the delivery location if they choose to use our delivery system. Then again, the system will check the total price including for the delivery service.
- When customers received the item ordered, they can check the details of the fruit received on the systems by key in the fruit’s code into the system
- Customers can check if they store their fruit in the refrigerator, how long would it last to. Same goes to the other 2 conditions which are in the freezer or at room temperature.
- Lastly, customers can also claim a 5 percent voucher in exchange for 500g of spoiled fruit.

5. List instructions (steps) that enable you to solve the problem using the selected solution.

- Declare and Initialize all the variable
- Customer will input the date then system display fruits available
- Next they will decide either to check the fruit details or just skip this process
- System ask customer if they want to proceed with fruits order where if the customer will enter how many items they going to buy only up to 3 items, followed by total fruits weight needed, claim discount voucher and delivery service.
- Then the next program where customers enter the fruit name and code to check the details of the fruit bought.
- System shows the fruit's resistance and its durability in 3 conditions: room temperature, refrigerator and freezer.
- Customers can claim a 5 percent voucher for every 500g of spoiled fruit sent to the shop.

Name	Formula	keyword

Total fruit price	totalorder = (fruitprice * kilogram1);
	totalorder = (totalorder + (fruitprice*kilogram2));
	totalorder = (totalorder + (fruitprice * kilogram3))	

Claim discount voucher	totalorder1 = (percentage * totalorder);	
Delivery service	total= totalorder1 + cajpenghantaran;	
Get voucher <= 500 g	gramneeded = 500 - gram	

6. Evaluate the solution.

- This solution can help customer to track down the fruit details they bought
- This will make their life easier as they can predict when the fruit is going to spoil. Or which condition will help their fruit to last longer.
- Plus it's the best solution to help customers plan when they are going to eat the fruits. where it's best to delay the ripening of food to prevent food spoiling.
- Help to lessen the fruit waste. And recycle it in a more earthly way.

7. Algorithm

Step

1. Start
2. Declare method for tarikh.
3. For method date(tarikh), Display "Please enter the date of month below"
4. Read Date, Month and Year from user
5. Date = Date.Month.Year
6. Display Date
7. Exit method for date (tarikh)
8. Declare method for list of fruit(listbuah)
9. Display fruits available now using array
10. Exit method for list of fruit(listbuah)
11. Declare method to check the fruit details(checkharga)
12. Display "This system will check the price of fruit by entering the name of the fruit
13. Read customer input(choice) to either check the fruit price or skip
14. System stop/skip when user input is N
15. Read Fruit name(buah)
16. Execute Fruit price, Fruit code
17. Display "Ready to take order" if user enter sentinel value = N
18. Exit method for check fruit price
19. Declare method for user to order
20. Read Y(user choice) for users to proceed the order or skip
21. If user input is Y
22. Read number of items purchased
23. Executed statement after system read fruit name and kilogram needed
24. Display Total fruit price based on number of items purchased
25. Read user input to proceed to claim voucher or not
26. Execute after system read voucher code and execute voucher percentage and fruit price after user enter Y to proceed to claim voucher
27. Read user input to proceed with the delivery or not
28. Execute after the system reads the user's delivery location and it execute the location distance and fee or else display "Sorry your address is not in our delivery range" when user input is not in the system
29. Display total payment cost and “Thank you for purchasing with us”
30. If user input is not equal to Y then display “We're sorry to see you go. Thank You”
31. Declare method for resistance condition and return array
32. Using call method return array display Fruit resistance condition
33. Exit method for resistance condition
34. Declare method for fruit resistance
35. Read user input to check the resistance of the fruit
36. Execute Fruit resistance in 3 different conditions and the durability of fruits after the system reads the fruit name or code and the fruit storage method.
37. Exit method for resistance condition and return array
38. Declare method for user to get vouchers

39. Read user input to proceed to get voucher or not
40. Display "Send your spoiled fruits to our marchandise and get up to 5 percent off from SDN for every purchase you made with us."
41. Read total weight of users' spoiled fruit.
42. Execute voucher percentage, and voucher code if they are eligible to get if they send more than 500grams spoiled fruits or else the system displays “You are not valid to claim voucher yet" and total grams need to claim voucher.
43. Display “Thank you for your contribution”
44. Executed “Thank You for using our service" when user enter sentinel value when they prefer not to proceed
45. Display “Have a nice day”
46. Exit method for users to get vouchers.

Stop

8. Pseudocode

```
Begin
        Declare
                        static int fruitprice;
                        int kilogram = 0;
                        static int gram;
                        int voucher;
                        static int gramneeded;
                        static int peratusdiskaun1;
                        static int choice;
                        static int item;
                        static int kilogram1;
                        static int kilogram2;
                        static int kilogram3;
                        static String orderbuah;
                        static String buah;
                        static String location = null;
                        static String suhubilik;
                        static String buah1;
                        static double totalorder = 0;
                        static double percentage;
                        static double totalorder1 = 0;
                        static double total = 0;
                        double peratusdiskaun;
                        static char Y;
                        static char GetVoucher;
                        static char checkFruitResistance;
                        static char deliveryProceed;
                        static char claimVoucher;

        Initialize
                //initialize
                        static int k_buah_bilik = 5;
                        static int k_buah_sejuk = 25;
                        static int k_buah_peti = 15;
                        static int tanggal = 0;
                        static int bulan = 0;
                        static int tahun = 0;
                        int tarikh = 0;
                        static int jaraklokasi = 0;
                        static int cajpenghantaran = 0;
                        static int order;
                        static int l = 1;
```

```
// emoji
        static String satu = "😄";
```

For main method

```
**Start**
        tarikh();
        listbuah();
        checkharga();
        order();
        resistancecondition();
        resistance();
        discount();
**End**
```

For tarikh(); method

```
**Start**
Display "Please enter the date of month below"
Read Date, Month, Year
tarikh2=tanggal1 + "." + bulan1+"." + tahun1
Display "Date today: " + tarikh2
**End**
```

For listbuah(); method

```
**Start**
Display  “Fruits available now”
Declare array
String[] barang = { "Apple🍎", "Anggur🍇", "Lain\"" };
for (order = 0; order < barang.length; order++)
        System.out.println(l++ + ". " + barang[order] + "\t");
**End**
```

For checkharga(); method

```
**Start**
Display "This system will check the price of fruit by entering the name of the
fruit”
Display "Enter N to stop checking the price of fruit
Read choice

While choice != ‘N’
        Display "Please enter the fruit name: ”
        Read buah
        If (buah = “Anggur”) then
                Fruitprice = 8
                Display "Fruit price per kilogram”
```

```
                    Display "Fruit code 111111”

                Else if (buah = “Apple”)
                    Fruitprice = 10
                    Display "Fruit price per kilogram”
                    Display "Fruit code “000000”
                Else
                    Fruitprice = 15
                    Display "Fruit price per kilogram”
                    Display preorder
                    Display "Fruit code xxxxxx”

                Display “Enter N to stop checking the price of fruit”
                Read choice
                    Choice = N
                    Display “Ready to take order"
        End
```

For order(); method

```
        Start
        Display “Proceed if you want to order(Y/N)”
        Read Y
        Switch (Y)
            Case ‘Y’
                Display "Enter the number of item(s) purchased (Only below 3):
                "
                Read item
                Fruitprice = 0
                Switch (item)
                    Case 1:
                        Display "What do you want to order: "
                        Read orderbuah
                        If orderbuah = Anggur
                            fruitprice = 8
                            Display "Fruit price per kilogram”
                        Else if orderbuah = Apple
                            fruitprice = 10
                            Display "Fruit price per kilogram”
                        Else
                            fruitprice = 15
                            Display "Fruit price per kilogram”
                        Display "Total Kilogram you need (KG): "
                        Read kilogram1
                        totalorder = (fruitprice * kilogram1)
                        Display “Total fruit Price”
                    Case 2:
```

```
                    Display "What is your first order: "
                    Read orderbuah
                    If orderbuah = Anggur
                            fruitprice = 8
                            Display "Fruit price per kilogram”
                    Else if orderbuah = Apple
                            fruitprice = 10
                            Display "Fruit price per kilogram”
                    Else
                            fruitprice = 15
                            Display "Fruit price per kilogram”
                    Display "Total Kilogram you need (KG): "
                    Read kilogram1
                    totalorder = (fruitprice * kilogram1)

                    Display "What is your second order: "
                    Read orderbuah
                    If orderbuah = Anggur
                            fruitprice = 8
                            Display "Fruit price per kilogram”
                    Else if orderbuah = Apple
                            fruitprice = 10
                            Display "Fruit price per kilogram”
                    Else
                            fruitprice = 15
                            Display "Fruit price per kilogram”
                    Display "Total Kilogram you need (KG): "
                    Read kilogram2
                    totalorder = ( totalorder + (fruitprice * kilogram2))
                    Display “Total fruit Price”
            Case 3:
                    Display "What is your first order: "
                    Read orderbuah
                    If orderbuah = Anggur
                            fruitprice = 8
                            Display "Fruit price per kilogram”
                    Else if orderbuah = Apple
                            fruitprice = 10
                            Display "Fruit price per kilogram”
                    Else
                            fruitprice = 15
                            Display "Fruit price per kilogram”
                    Display "Total Kilogram for your first item (KG): "
                    Read kilogram1
                    totalorder = (fruitprice * kilogram1)

                    Display "What is your second order: "
```

```
                    Read orderbuah
                    If orderbuah = Anggur
                        fruitprice = 8
                        Display "Fruit price per kilogram”
                    Else if orderbuah = Apple
                        fruitprice = 10
                        Display "Fruit price per kilogram”
                    Else
                        fruitprice = 15
                        Display "Fruit price per kilogram”
                    Display "Total Kilogram for your second item
                    (KG): "
                    Read kilogram2
                    totalorder = (totalorder + (fruitprice * kilogram2));

                    Display "What is your third order: "
                    Read orderbuah
                    If orderbuah = Anggur
                        fruitprice = 8
                        Display "Fruit price per kilogram”
                    Else if orderbuah = Apple
                        fruitprice = 10
                        Display "Fruit price per kilogram”
                    Else
                        fruitprice = 15
                        Display "Fruit price per kilogram”
                    Display "Total Kilogram for your third order (KG):
                    "
                    Read kilogram3

                    totalorder = ( totalorder + (fruitprice * kilogram3))
                    Display “Total fruit Price”
            default:
                    Display “Your order is not valid”

Initialize peratusdiskaun1 = 0
Display "Do you want to claim your voucher(Y/N): "
Read claimVoucher
Switch (claimVoucher)
        Case ‘Y’
                Display “Enter your voucher code here: "
                Read  peratusdiskaun1
                If (peratusdiskaun1 == 1111)
                        Display "You've claimed your 5
                        percent voucher"
                        Initialize percentage= 0.95
                        Calculate totalorder1 =
```

```
                                        (percentage * totalorder);
                                        Display Total fruit price
                                If (peratusdiskaun1 == 1101)
                                        Display "You've claimed your 8
                                        percent voucher"
                                        Initialize percentage= 0.92
                                        Calculate totalorder1 =
                                        (percentage * totalorder);
                                        Display Total fruit price
                                else
                                        Display "Discount voucher not valid"
                        Display “Please enter Y to proceed with the delivery: "
                        Read deliveryProceed
                        Switch (deliveryProceed)
                                Case Y
                                        Display "Enter the delivery location\t: "
                                        Read delivery location
                                        If (location = Kg Bubul)
                                                jaraklokasi = 8
                                                Cajpenghantaran = 8
                                                Display “Location distance”
                                                Display “Delivery Fee”
                                                total= totalorder1+cajpenghantaran
                                        Else if (location = sepagaya)
                                                jaraklokasi = 5
                                                Cajpenghantaran = 5
                                                Display “Location distance”
                                                Display “Delivery Fee”
                                                total= totalorder1+cajpenghantaran
                                        Else
                                                Display "Sorry your address is not in our
                                                delivery range"
                                                total= totalorder1 + cajpenghantaran;

                                        Display “Total payment cost
                                        Display ”Thank you for purchasing with us.”
                        Case ‘N’
                                Display “We're sorry to see you go. Thank You”
        End
```

For resistancecondition(); method

```
        Start
        String[] str_Array = return_Array();
        Display ("Fruit resistant in:” + Arrays.toString(str_Array) + " condition")
        End
```

For String[] return_Array() method

```
Start
// define string array
String[] ret_Array = { RTP, Refrigerator, Freezer,
                       RTP/Refrigerator, RTP/Freezer
                       Refrigerator/Freezer, RTP/Refrigerator/Freezer};
// return string array
return ret_Array;
End
```

For resistance(); method

```
Start
Display "Do you want to check the resistance of the fruits received(Y/N)?: "
Read checkFruitResistance
Switch (checkFruitResistance)
        Case Y
                Display "System to check the resistance of the fruits received”
                Display "Enter the fruit name or code: "
                Read buah1
                Switch buah1
                        Case 00000011 & Apple
                                Display "Enter the fruit storage
                                method(RTP/Refrigerator/Freezer): "
                                Read suhubilik
                                Switch
                                        Case RTP
                                                Display Fruit resistance
                                                Display Fruit durability
                                        Case Refrigerator
                                                Display Fruit resistance
                                                Display Fruit durability
                                        Case Freezer
                                                Display Fruit resistance
                                                Display Fruit durability
                                        Case RTP/Refrigerator
                                                Display Fruit resistance
                                                Display Fruit durability
                                        Case RTP/Freezer
                                                Display Fruit resistance
                                                Display Fruit durability
                                        Case Refrigerator/Freezer
                                                Display Fruit resistance
                                                Display Fruit durability
                                        Case RTP/Refrigerator/Freezer
```

```
                                        Display Fruit resistance
                                        Display Fruit durability
                                Case 111111100 & Anggur
                                        Display "Enter the fruit storage
                                        method(RTP/Refrigerator/Freezer): "
                                        Read suhubilik
                                        Switch
                                                Case RTP
                                                        Display Fruit resistance
                                                        Display Fruit durability
                                                Case Refrigerator
                                                        Display Fruit resistance
                                                        Display Fruit durability
                                                Case Freezer
                                                        Display Fruit resistance
                                                        Display Fruit durability
                                                Case RTP/Refrigerator
                                                        Display Fruit resistance
                                                        Display Fruit durability
                                                Case RTP/Freezer
                                                        Display Fruit resistance
                                                        Display Fruit durability
                                                Case Refrigerator/Freezer
                                                        Display Fruit resistance
                                                        Display Fruit durability
                                                Case RTP/Refrigerator/Freezer
                                                        Display Fruit resistance
                                                        Display Fruit durability
                                Default:
                                        Display "Please reach our staff"
        End
```

For discount() method

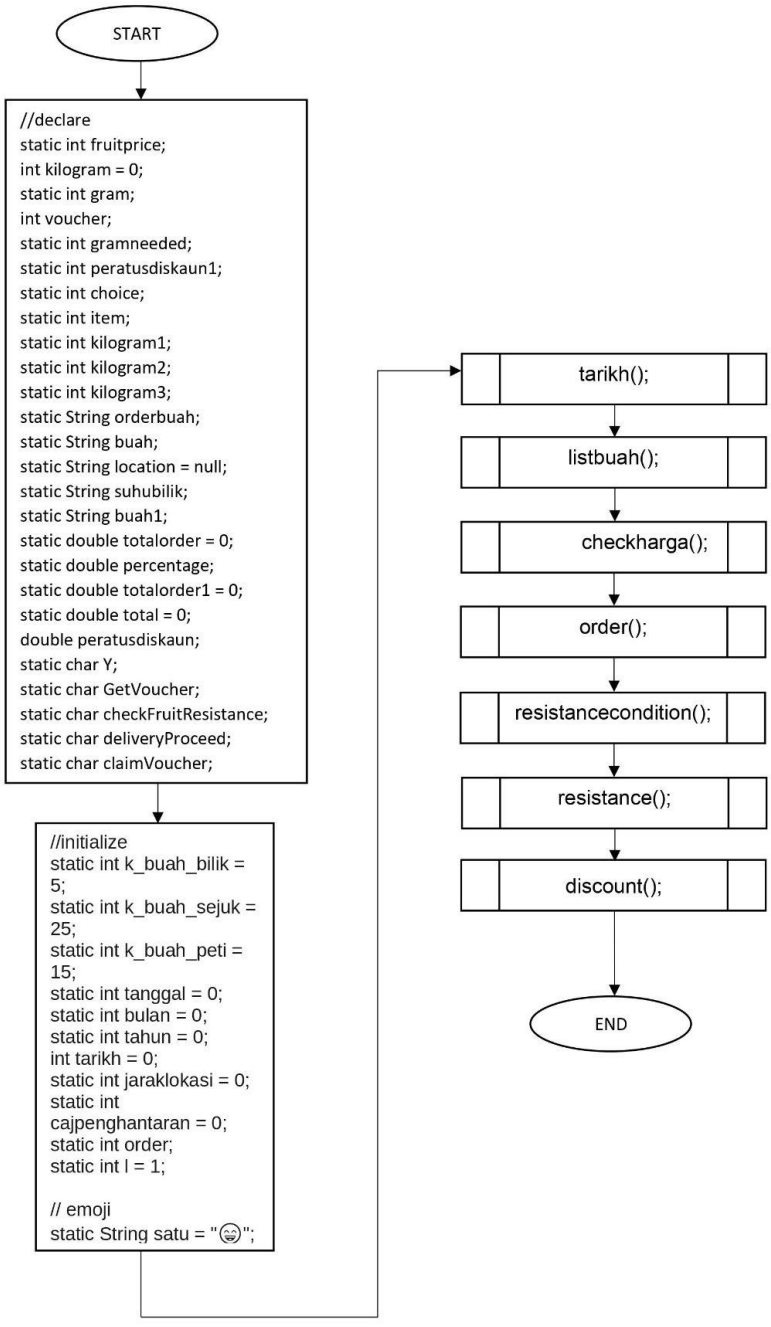
```
        Start
        Display "Enter Y to claim your voucher here: "
        Read GetVoucher
        Switch (GetVoucher)
                Case Y
                        Display "Send your spoiled fruits to our marchandise and get up
                        to 5 percent off from SDN for every purchase you made with
                        us."
                        Display "Please enter the total weight of your spoiled fruit: "
                        Read gram

                        If (gram <= 499)
```

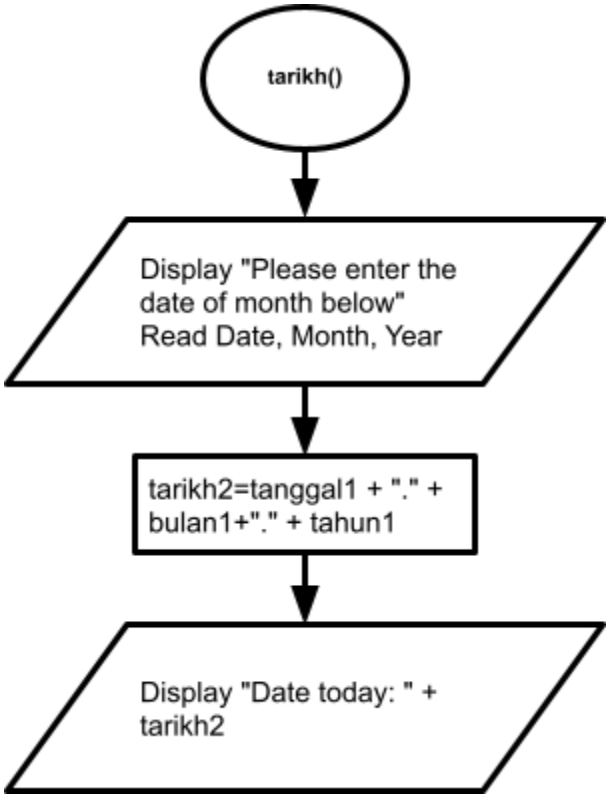
```
                    Display “You are not valid to claim voucher yet"
                    Calculate gramneeded = 500 - gram
                    Display Total needed for user to claim voucher
                Else if (gram>=500 && gram <=999)
                    Display "You just got a 5% voucher code"
                    Display "Use the code below for your next purchase with
                    us"
                    Display “1101”
                Else
                    Display "You just got a 8% voucher code"
                    Display "Use the code below for your next purchase with
                    us"
                    Display “1111”
                Display “Thank you for your contribution"
            Default
                Display “Thank You for using our service"
        Display “Have a nice day”
        End
```

9. Flowchart

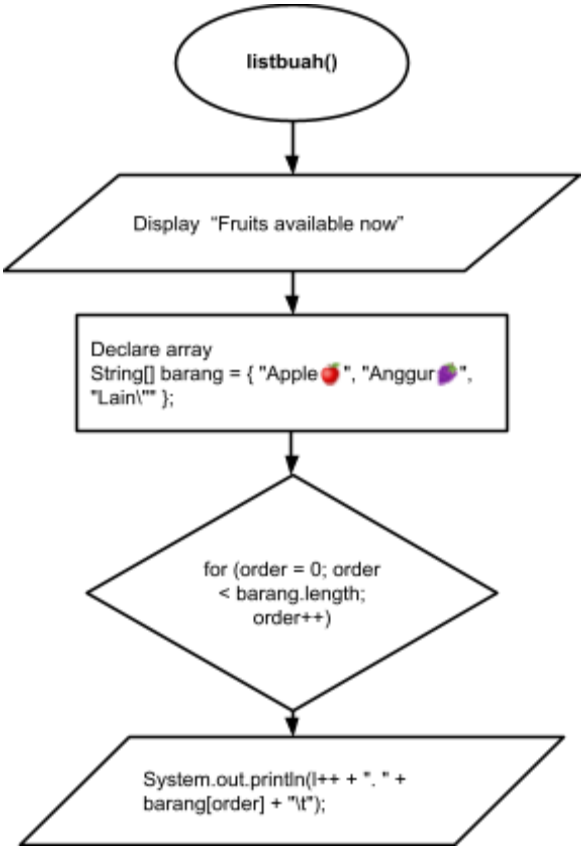
For main method



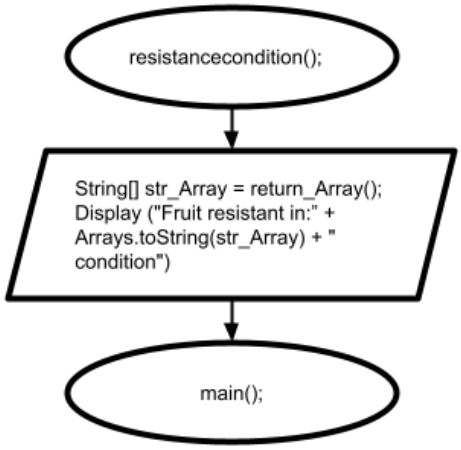
For tarikh() method



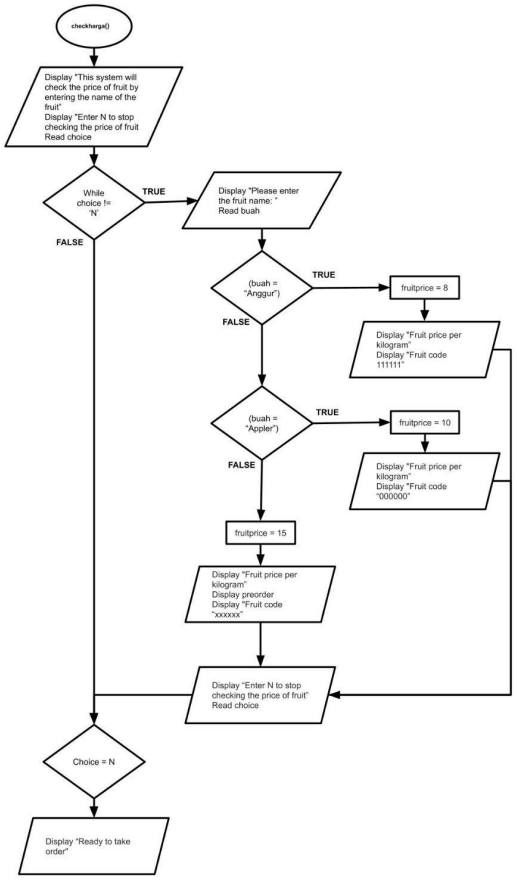
For listbuah() method



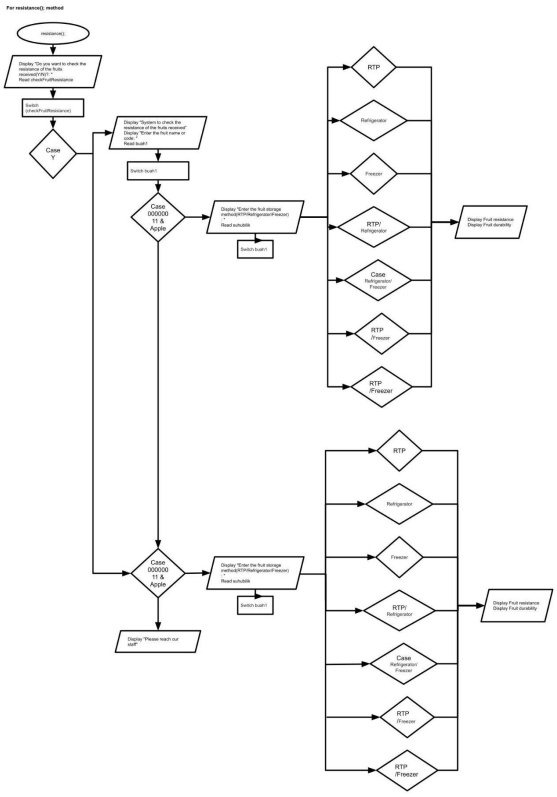
For **resistancecondition(); method**



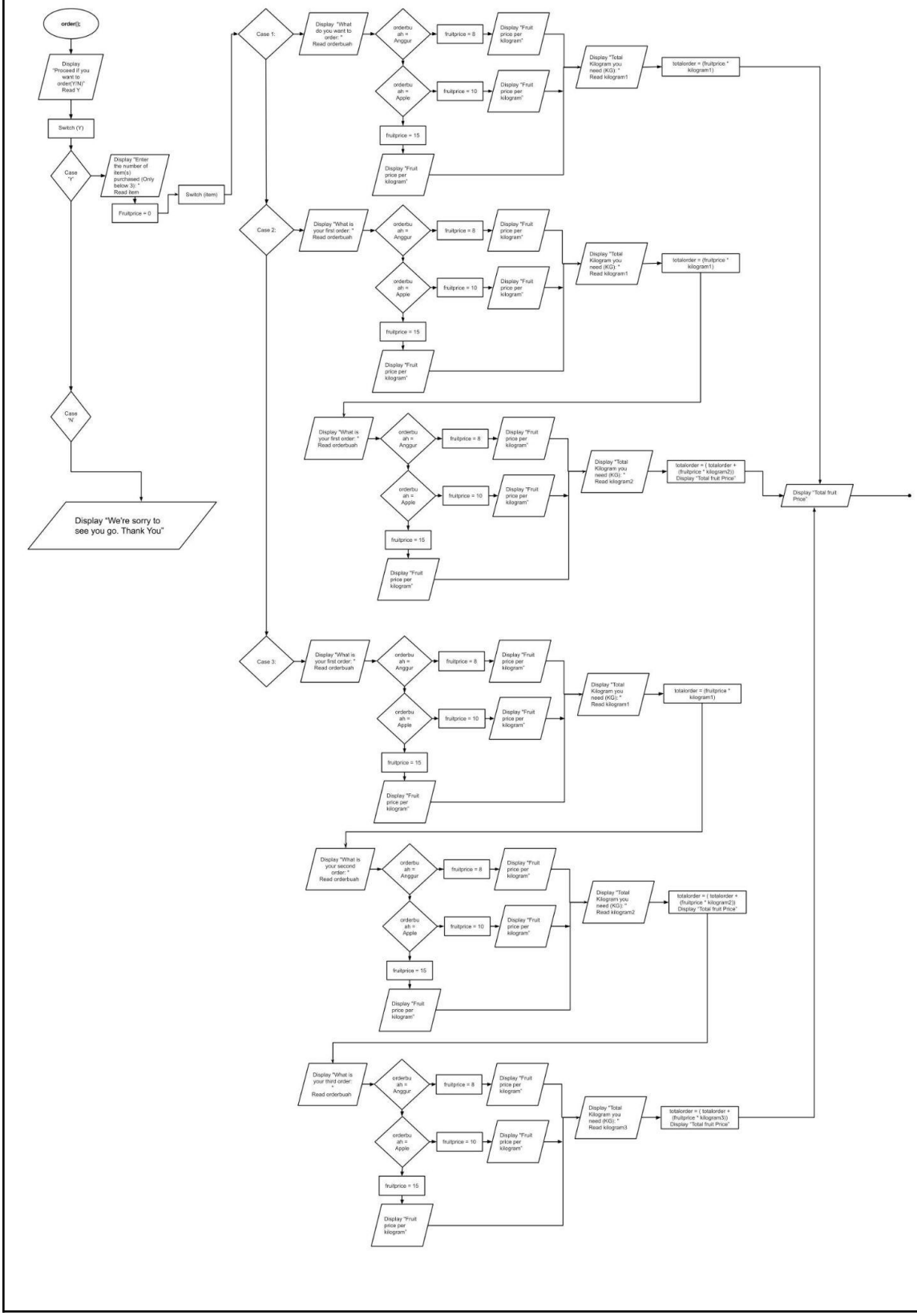
For checkharga();

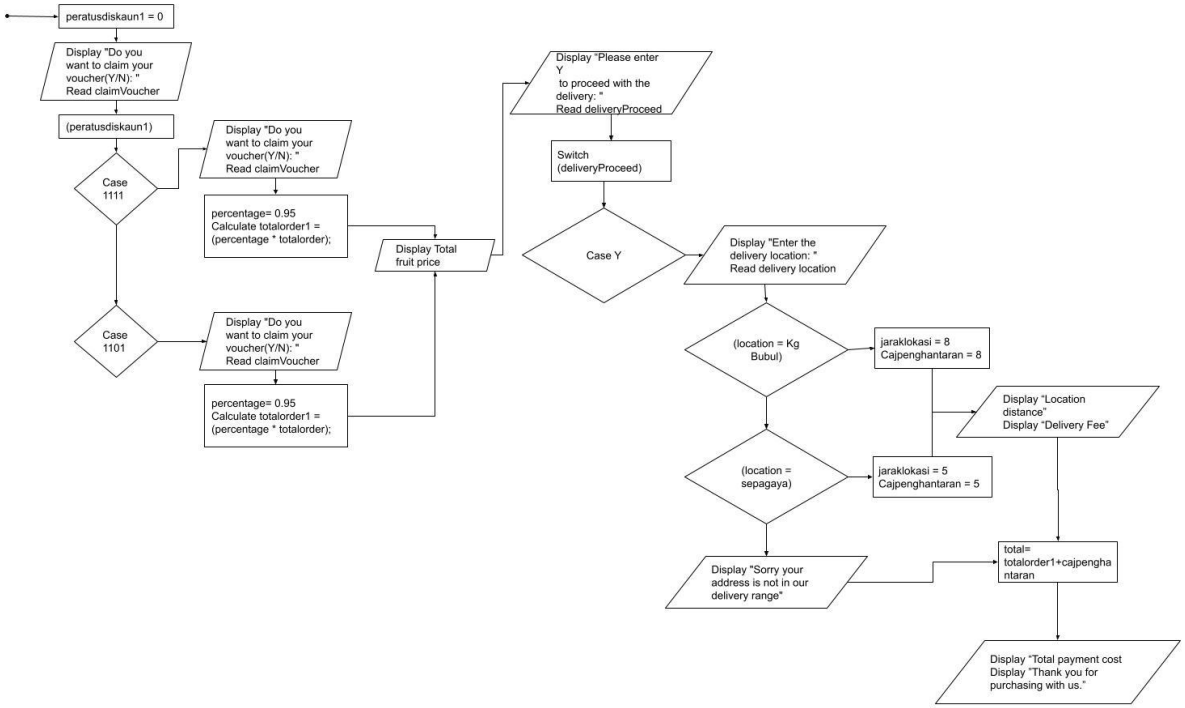


For resistance();

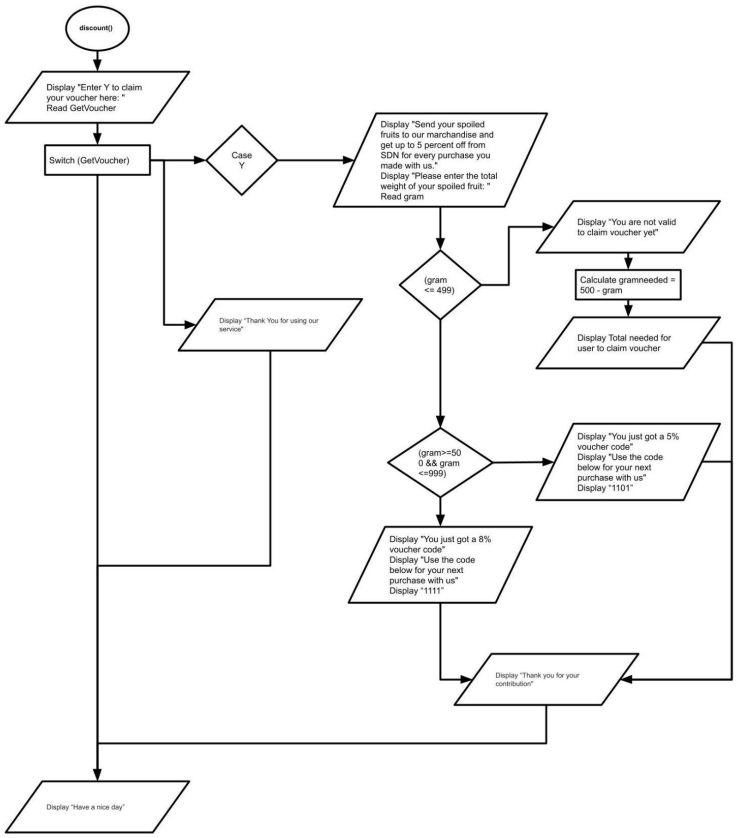


For order() method


order();
Display "Proceed if you want to order(Y/N)" Read Y
Switch (Y)
Case 'Y'
Display "Enter the number of item(s) purchased (Only below 3): " Read item
Fruitprice = 0
Switch (item)
Case 1:
Display "What do you want to order: " Read orderbuah
orderbuah = Anggur
fruitprice = 8
Display "Fruit price per kilogram"
orderbuah = Apple
fruitprice = 10
Display "Fruit price per kilogram"
fruitprice = 15
Display "Fruit price per kilogram"
Display "Total Kilogram you need (KG) " Read kilogram1
totalorder = (fruitprice * kilogram1)
Case 2:
Display "What is your first order: " Read orderbuah
orderbuah = Anggur
fruitprice = 8
Display "Fruit price per kilogram"
orderbuah = Apple
fruitprice = 10
Display "Fruit price per kilogram"
fruitprice = 15
Display "Fruit price per kilogram"
Display "Total Kilogram you need (KG) " Read kilogram1
totalorder = (fruitprice * kilogram1)
Display "What is your first order: " Read orderbuah
orderbuah = Anggur
fruitprice = 8
Display "Fruit price per kilogram"
orderbuah = Apple
fruitprice = 10
Display "Fruit price per kilogram"
fruitprice = 15
Display "Fruit price per kilogram"
Display "Total Kilogram you need (KG): " Read kilogram2
totalorder = (totalorder + (fruitprice * kilogram2)) Display "Total fruit Price"
Case 3:
Display "What is your first order: " Read orderbuah
orderbuah = Anggur
fruitprice = 8
Display "Fruit price per kilogram"
orderbuah = Apple
fruitprice = 10
Display "Fruit price per kilogram"
fruitprice = 15
Display "Fruit price per kilogram"
Display "Total Kilogram you need (KG): " Read kilogram1
totalorder = (fruitprice * kilogram1)
Display "What is your second order: " Read orderbuah
orderbuah = Anggur
fruitprice = 8
Display "Fruit price per kilogram"
orderbuah = Apple
fruitprice = 10
Display "Fruit price per kilogram"
fruitprice = 15
Display "Fruit price per kilogram"
Display "Total Kilogram you need (KG): " Read kilogram2
totalorder = (totalorder + (fruitprice * kilogram2)) Display "Total fruit Price"
Display "What is your third order: " Read orderbuah
orderbuah = Anggur
fruitprice = 8
Display "Fruit price per kilogram"
orderbuah = Apple
fruitprice = 10
Display "Fruit price per kilogram"
fruitprice = 15
Display "Fruit price per kilogram"
Display "Total Kilogram you need (KG): " Read kilogram3
totalorder = (totalorder + (fruitprice * kilogram3)) Display "Total fruit Price"
Display "Total fruit Price"
Case 'N'
Display "We're sorry to see you go. Thank You"



For discount() method



10. Coding

```
package assignment3;

import java.util.Arrays;
import java.util.Scanner;

public class One4 {

//declare
	static int fruitprice;
	int kilogram = 0;
	static int gram;
	int voucher;
	static int gramneeded;
	static int peratusdiskaun1;
	static int choice;
	static int item;
	static int kilogram1;
	static int kilogram2;
	static int kilogram3;
	static String orderbuah;
	static String buah;
	static String location = null;
	static String suhubilik;
	static String buah1;
	static double totalorder = 0;
	static double percentage;
	static double totalorder1 = 0;
	static double total = 0;
	double peratusdiskaun;
	static char Y;
	static char GetVoucher;
	static char checkFruitResistance;
	static char deliveryProceed;
	static char claimVoucher;

//initialize
	static int k_buah_bilik = 5;
	static int k_buah_sejuk = 25;
	static int k_buah_peti = 15;
	static int tanggal = 0;
	static int bulan = 0;
	static int tahun = 0;
	int tarikh = 0;
```

```
	static int jaraklokasi = 0;
	static int cajpenghantaran = 0;
	static int order;
	static int l = 1;

// emoji
	static String satu = "😄";

	static Scanner input = new Scanner(System.in);

	public static void main(String[] args) {

		// start program
		tarikh();
		listbuah();
		checkharga();
		order();
		resistancecondition();
		resistance();
		discount();

	}

	public static void tarikh() {
		System.out.println("Please enter the date of month below");
		System.out.print("Date\t: ");
		tanggal = input.nextInt();
		System.out.print("Month\t: ");
		bulan = input.nextInt();
		System.out.print("Year\t: ");
		tahun = input.nextInt();

		// tarikh2= tanggal1+bulan1+tahun1;
		String tarikh2 = new String(), tanggal1 = Integer.toString(tanggal), bulan1 =
Integer.toString(bulan),
				tahun1 = String.valueOf(tahun);

		tarikh2 = tanggal1 + "." + bulan1 + "." + tahun1;

		System.out.println("Date today: " + tarikh2);
	}

	// array
	public static void listbuah() {

		System.out.println("");
```

```
                System.out.println("\t\t" + satu + "Fruits available now" + satu);
                String[] barang = { "Apple🍎", "Anggur🍇", "Lain\"" };

                for (order = 0; order < barang.length; order++)
                        System.out.println(l++ + ". " + barang[order] + "\t");

        }

        public static void checkharga() {
                System.out.println("");
                System.out.println("🤑This system will check the price of fruit by entering the
name of the fruit💰\n");

                System.out.print("Enter N to stop checking fruit details\t: ");
                choice = input.next().charAt(0);
                System.out.println("");

                while (choice != 'N') {

                        System.out.printf("Please enter the fruit name\t: ");
                        buah = input.next();

                        if (buah.equals("Anggur")) {
                                fruitprice = 8;
                                System.out.printf("Fruit price per kilogram\t: " + "RM" + fruitprice
+ "\n");
                                System.out.print("Fruit code is\t\t\t: 111111\n");

                        } else if (buah.equals("Apple")) {
                                fruitprice = 10;
                                System.out.printf("Fruit price per kilogram\t: " + "RM" + fruitprice
+ "\n");
                                System.out.print("Fruit code is\t\t\t: 000000\n");

                        } else {
                                fruitprice = 15;
                                System.out.printf("Fruit price per kilogram\t: " + "RM" + fruitprice
+ "\n");
                                System.out.print("Fruit code is\t\t\t: xxxxxx\n");
                                System.out.println("This item is preorder");

                        }
                        System.out.print("\nEnter N to stop checking the price of fruit\t: ");
                        choice = input.next().charAt(0);

                        System.out.println("");
                } // looping
```

```
                System.out.println("\t\t" + satu + "Ready to take order" + satu);
        }

        public static void order() {
                // user proceed order
                System.out.print("\nProceed if you want to order(Y/N)\t: ");
                Y = input.next().charAt(0);
                System.out.println();
                // OTW Order
                switch (Y) {

                case 'Y':

                        // system taking order
                        System.out.print("Enter the number of item(s) purchased (Only below
3): ");
                        item = input.nextInt();

                        fruitprice = 0;
                        // double totalorder1 ;

                        switch (item) {
                        case 1:

                                System.out.print("What do you want to order\t\t: ");
                                orderbuah = input.next();

                                if (orderbuah.equals("Anggur")) {
                                        fruitprice = 8;
                                        System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                        // System.out.print("\n");

                                } else if (orderbuah.equals("Apple")) {
                                        fruitprice = 10;
                                        System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                        // System.out.print("\n");

                                } else {
                                        fruitprice = 15;
                                        System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                        System.out.println("preorder");
                                        // System.out.print("\n");
                                }
```

```
                        System.out.print("Total Kilogram you need (KG)\t\t: ");
                        kilogram1 = input.nextInt();

                        // Detect the price and kilogram
                        totalorder = (fruitprice * kilogram1);
                        System.out.println("\nTotal fruit price : " + "RM" + totalorder);
                        break;

                case 2:

                        System.out.print("What is your first order\t\t: ");
                        orderbuah = input.next();

                        if (orderbuah.equals("Anggur")) {
                                fruitprice = 8;
                                System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                // System.out.print("\n");

                        } else if (orderbuah.equals("Apple")) {
                                fruitprice = 10;
                                System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                // System.out.print("\n");

                        } else {
                                fruitprice = 15;
                                System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                System.out.println("preorder");
                                // System.out.print("\n");
                        }

                        System.out.print("Total Kilogram for your first item (KG)\t: ");
                        kilogram1 = input.nextInt();
                        System.out.print("\n");

                        totalorder = fruitprice * kilogram1;

                        System.out.print("What is your second order\t\t: ");
                        orderbuah = input.next();

                        if (orderbuah.equals("Anggur")) {
                                fruitprice = 8;
                                System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
```

```
                                        // System.out.print("\n");

                                } else if (orderbuah.equals("Apple")) {
                                        fruitprice = 10;
                                        System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                        // System.out.print("\n");

                                } else {
                                        fruitprice = 15;
                                        System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                        System.out.println("preorder");
                                        // System.out.print("\n");
                                }

                                System.out.print("Total Kilogram for your second item (KG): ");
                                kilogram2 = input.nextInt();

                                // Detect the price and kilogram
                                totalorder = (totalorder + (fruitprice * kilogram2));
                                System.out.println("\nTotal fruit price : " + "RM" + totalorder);
                                break;

                        case 3:

                                System.out.print("What is your first order\t\t: ");
                                orderbuah = input.next();

                                if (orderbuah.equals("Anggur")) {
                                        fruitprice = 8;
                                        System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                        // System.out.print("\n");

                                } else if (orderbuah.equals("Apple")) {
                                        fruitprice = 10;
                                        System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                        // System.out.print("\n");

                                } else {
                                        fruitprice = 15;
                                        System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                        System.out.println("preorder");
                                        // System.out.print("\n");
```

```
                        }

                        System.out.print("Total Kilogram for your first item (KG): ");
                        kilogram1 = input.nextInt();
                        System.out.print("\n");
                        totalorder = fruitprice * kilogram1;

                        System.out.print("What is your second order\t\t: ");
                        orderbuah = input.next();

                        if (orderbuah.equals("Anggur")) {
                                fruitprice = 8;
                                System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                // System.out.print("\n");

                        } else if (orderbuah.equals("Apple")) {
                                fruitprice = 10;
                                System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                // System.out.print("\n");

                        } else {
                                fruitprice = 15;
                                System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                System.out.println("preorder");
                                // System.out.print("\n");
                        }

                        System.out.print("Total Kilogram for your second item (KG): ");
                        kilogram2 = input.nextInt();
                        System.out.print("\n");

                        totalorder = (totalorder + (fruitprice * kilogram2));

                        System.out.print("What is your third order\t\t: ");
                        orderbuah = input.next();

                        if (orderbuah.equals("Anggur")) {
                                fruitprice = 8;
                                System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                // System.out.print("\n");

                        } else if (orderbuah.equals("Apple")) {
                                fruitprice = 10;
```

```
                                        System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                        // System.out.print("\n");

                                } else {
                                        fruitprice = 15;
                                        System.out.printf("Fruit price per kilogram\t\t: " + "RM" +
fruitprice + "\n");
                                        System.out.println("preorder");
                                        // System.out.print("\n");
                                }

                                System.out.print("Total Kilogram for your third item (KG)\t: ");
                                kilogram3 = input.nextInt();

                                // Detect the price and kilogram
                                totalorder = (totalorder + (fruitprice * kilogram3));
                                System.out.println("\nTotal fruit price : " + "RM" + totalorder);
                                break;

                        }

                        // Stop system taking order

                        // discount from the spoiled fruit voucher

                        peratusdiskaun1 = 0;

                        System.out.print("Do you want to claim your voucher(Y/N): ");
                        claimVoucher = input.next().charAt(0);

                        switch (claimVoucher) {

                        case 'Y':

                                System.out.print("\nEnter your voucher code here: ");
                                peratusdiskaun1 = input.nextInt();

                                if (peratusdiskaun1 == 1111) {
                                        System.out.println("You've claimed your 5 percent
voucher");

                                        percentage = 0.95; // detect dri kod diskaun
                                        totalorder1 = (percentage * totalorder);
                                        System.out.printf("Your Total fruit price is: RM%.2f",
totalorder1);
                                        System.out.println("");
```

```
                                } else if (peratusdiskaun1 == 1101) {
                                        System.out.println("You've claimed your 8 percent
voucher");

                                        percentage = 0.92; // detect dri kod diskaun
                                        totalorder1 = (percentage * totalorder);
                                        System.out.printf("Your Total fruit price is: RM%.2f",
totalorder1);
                                        System.out.println("");
                                } else
                                        System.out.println("Discount voucher not valid");

                                break;
                        }
                        // Stop discount from the spoiled fruit voucher

                        // Proceed Delivery
                        System.out.print("\nPlease enter Y to proceed with the delivery: ");
                        deliveryProceed = input.next().charAt(0);

                        switch (deliveryProceed) {
                        case 'Y':

                                System.out.print("Enter the delivery location\t: ");
                                location = input.nextLine();
                                location = input.nextLine();
                                // Jarak perjalanan dan delivery fee

                                // Proceed location
                                if (location.equals("Kg Bubul")) {
                                        jaraklokasi = 8;
                                        cajpenghantaran = 8;
                                        System.out.println("Location distance\t\t: " + jaraklokasi +
"KM");
                                        System.out.println("Delivery fee to " + location + "\t: RM"
+ cajpenghantaran);

                                        total = totalorder1 + cajpenghantaran;

                                } else if (location.equals("Sepagaya")) {
                                        jaraklokasi = 5;
                                        cajpenghantaran = 5;
                                        System.out.println("Location distance\t\t: " + jaraklokasi +
"KM");
                                        System.out.println("Delivery fee to " + location + "\t: RM"
+ cajpenghantaran);
```

```
                                        total = totalorder1 + cajpenghantaran;

                                } else {

                                        System.out.println("Sorry your address is not in our
delivery range");

                                        total = totalorder1 + cajpenghantaran;
                                }
                                // Stop proceed location
                                break;

                        }
                        // Stop proceed Delivery

                        // system check the total cost
                        System.out.printf("\n:- Total payment cost will be RM%.2f", total);
                        System.out.println("\n\t\t\tThank you for purchasing with us.\n");

                        break;
                // Stop OTW Order

                case 'N':
                        System.out.println("\n\t\tWe're sorry to see you go. Thank You\n");
                }// to not proceed order

                // Stop user proceed order

        }

        public static void resistancecondition() {
                // call method return_array that returns array
                String[] str_Array = return_Array();
                System.out.println("Fruit resistant in:\n" + Arrays.toString(str_Array) + "
condition\n");

        }

        // passing array to method
        public static String[] return_Array() {
                // define string array
                String[] ret_Array = { "\"RTP\"", "\"Refrigerator", "Freezer\"",
"\"RTP/Refrigerator\"", "\"RTP/Freezer\"",
                                "\"Refrigerator/Freezer\"", "\"RTP/Refrigerator/Freezer\"" };
                // return string array
                return ret_Array;
        }
```

```
	public static void resistance() {

		// Fruit Resistance
		System.out.print("Do you want to check the resistance of the fruits
received(Y/N)?: ");
		checkFruitResistance = input.next().charAt(0);

		while (checkFruitResistance != 'N') {

			// System check the fruit details
			System.out.println("System to check the resistance of the fruits
received\n");

			System.out.print("Enter the fruit name or code: ");
			buah1 = input.next();

			// System.out.print("Enter the fruit code: ");
			// code=input.nextInt();//(6 number) Code buah terletak pada setiap
buah merujuk
			// kepada tarikh iya dipetik/ketahann dlm pelbagai keadaan

			switch (buah1) {

			case "00000011":
			case "Apple":

				// Check details

				// suhu bilik

				System.out.print("Enter the fruit storage
method(RTP/Refrigerator/Freezer): ");

				suhubilik = input.next();

				switch (suhubilik) {

				case "RTP":
					System.out.println("Fruit resistance at room temperature
(day): " + k_buah_bilik);
					System.out.println("Fruit durability to date: " +
"10.12.2021");
					// ketahanan buah dalam peti ais dan tarikh sehingga
ianya tahan
					break;
```

```
                                case "Refrigerator":
                                        System.out.println("Fruit resistance in Refrigerator (day):
" + k_buah_peti);
                                        System.out.println("Fruit durability to date: " +
"20.12.2021");
                                        break;

                                case "Freezer":
                                        System.out.println("Fruit resistance at Freezer (day): " +
k_buah_sejuk);
                                        System.out.println("Fruit durability to date: " +
"30.12.2021");
                                        break;

                                case "RTP/Refrigerator":
                                        System.out.println("Fruit resistance at room temperature
(day): " + k_buah_bilik);
                                        System.out.println("Fruit durability to date: " +
"10.12.2021");
                                        // ketahanan buah dalam peti ais dan tarikh sehingga
ianya tahan

                                        System.out.println("Fruit resistance in Refrigerator (day):
" + k_buah_peti);
                                        System.out.println("Fruit durability to date: " +
"20.12.2021");
                                        break;

                                case "RTP/Freezer":
                                        System.out.println("Fruit resistance at room temperature
(day): " + k_buah_bilik);
                                        System.out.println("Fruit durability to date: " +
"10.12.2021");
                                        // ketahanan buah dalam peti ais dan tarikh sehingga
ianya tahan

                                        System.out.println("Fruit resistance at Freezer (day): " +
k_buah_sejuk);
                                        System.out.println("Fruit durability to date: " +
"30.12.2021");
                                        break;

                                case "Refrigerator/Freezer":
                                        System.out.println("Fruit resistance in Refrigerator (day):
" + k_buah_peti);
                                        System.out.println("Fruit durability to date: " +
"20.12.2021");
```

```
                                        System.out.println("Fruit resistance at Freezer (day): " +
k_buah_sejuk);
                                        System.out.println("Fruit durability to date: " +
"30.12.2021");
                                        break;

                                case "RTP/Refrigerator/Freezer":
                                        System.out.println("Fruit resistance at room temperature
(day): " + k_buah_bilik);
                                        System.out.println("Fruit durability to date: " +
"10.12.2021");
                                        // ketahanan buah dalam peti ais dan tarikh sehingga
ianya tahan

                                        System.out.println("Fruit resistance in Refrigerator (day):
" + k_buah_peti);
                                        System.out.println("Fruit durability to date: " +
"20.12.2021");

                                        System.out.println("Fruit resistance at Freezer (day): " +
k_buah_sejuk);
                                        System.out.println("Fruit durability to date: " +
"30.12.2021");
                                        break;

                                }
                                break;

                        case "Anggur":
                        case "11111100":

                                // Check details

                                // suhu bilik

                                System.out.print("Enter the fruit storage
method(RTP/Refrigerator/Freezer): ");

                                suhubilik = input.next();

                                switch (suhubilik) {

                                case "RTP":
                                        System.out.println("Fruit resistance at room temperature
(day): " + k_buah_bilik);
                                        System.out.println("Fruit durability to date: " +
```

```
"10.12.2021");
                                        // ketahanan buah dalam peti ais dan tarikh sehingga
ianya tahan
                                        break;

                                case "Refrigerator":
                                        System.out.println("Fruit resistance in Refrigerator (day):
" + k_buah_peti);
                                        System.out.println("Fruit durability to date: " +
"20.12.2021");
                                        break;

                                case "Freezer":
                                        System.out.println("Fruit resistance at Freezer (day): " +
k_buah_sejuk);
                                        System.out.println("Fruit durability to date: " +
"30.12.2021");
                                        break;

                                case "RTP/Refrigerator":
                                        System.out.println("Fruit resistance at room temperature
(day): " + k_buah_bilik);
                                        System.out.println("Fruit durability to date: " +
"10.12.2021");
                                        // ketahanan buah dalam peti ais dan tarikh sehingga
ianya tahan

                                        System.out.println("Fruit resistance in Refrigerator (day):
" + k_buah_peti);
                                        System.out.println("Fruit durability to date: " +
"20.12.2021");
                                        break;

                                case "RTP/Freezer":
                                        System.out.println("Fruit resistance at room temperature
(day): " + k_buah_bilik);
                                        System.out.println("Fruit durability to date: " +
"10.12.2021");
                                        // ketahanan buah dalam peti ais dan tarikh sehingga
ianya tahan

                                        System.out.println("Fruit resistance at Freezer (day): " +
k_buah_sejuk);
                                        System.out.println("Fruit durability to date: " +
"30.12.2021");
                                        break;
```

```
                                case "Refrigerator/Freezer":
                                        System.out.println("Fruit resistance in Refrigerator (day):
" + k_buah_peti);
                                        System.out.println("Fruit durability to date: " +
"20.12.2021");

                                        System.out.println("Fruit resistance at Freezer (day): " +
k_buah_sejuk);
                                        System.out.println("Fruit durability to date: " +
"30.12.2021");
                                        break;

                                case "RTP/Refrigerator/Freezer":
                                        System.out.println("Fruit resistance at room temperature
(day): " + k_buah_bilik);
                                        System.out.println("Fruit durability to date: " +
"10.12.2021");
                                        // ketahanan buah dalam peti ais dan tarikh sehingga
ianya tahan

                                        System.out.println("Fruit resistance in Refrigerator (day):
" + k_buah_peti);
                                        System.out.println("Fruit durability to date: " +
"20.12.2021");

                                        System.out.println("Fruit resistance at Freezer (day): " +
k_buah_sejuk);
                                        System.out.println("Fruit durability to date: " +
"30.12.2021");
                                        break;

                                }
                                break;
                        // no more case anggur apple

                        default:
                                System.out.println("Please reach our staff");
                                break;
                        }
                        // Stop System check the fruit details

                        System.out.println("");
                        System.out.print("Do you want to check the resistance of the fruits
received again(Y/N)?: ");
                        checkFruitResistance = input.next().charAt(0);
                        // Stop system check fruit resistance
```

```
		}}

	public static void discount() {
		// claim coupon discount
		System.out.print("Enter Y to claim your voucher here: ");
		GetVoucher = input.next().charAt(0);

		switch (GetVoucher) {

		case 'Y':

			System.out.println(
					"Send your spoiled fruits to our marchandise and get up
to 5 percent off from SDN for every purchase you made with us.");

			System.out.print("Please enter the total weight of your spoiled
fruit(gram): ");
			gram = input.nextInt();
			System.out.println("");

			if (gram <= 499) {
				System.out.println("\n\n\nYou are not valid to claim voucher
yet");
				gramneeded = 500 - gram;
				System.out.println("You need another " + gramneeded +
"gram");
			} else if (gram >= 500 && gram <= 999) {
				System.out.println("You just got a 5% voucher code");
				System.out.println("Use the code below for your next purchase
with us");
				System.out.println("1111");
			} else {
				System.out.println("You just got a 8% voucher code");
				System.out.println("Use the code below for your next purchase
with us");
				System.out.println("1101");

			}

			System.out.println("\n\n\nThank you for your contribution");
			break;

		default :
			System.out.println("\n\n\nThank You for using our service");

		}
		// Stop claim coupon discount
```

```
                System.out.println("Have a nice day");
                input.close();
        }
}
```

11. Output

```
Please enter the date of month below
Date    : 2
Month   : 2
Year    : 2
Date today: 2.2.2

                    😄Fruits available now😄
1. Apple🍎
2. Anggur🍇
3. Lain"

🤑This system will check the price of fruit by entering the name of the fruit💰

Enter N to stop checking fruit details : Y

Please enter the fruit name    : Apple
Fruit price per kilogram       : RM10
Fruit code is                  : 000000

Enter N to stop checking the price of fruit      : N

                    😄Ready to take order😄

Proceed if you want to order(Y/N)      : Y

Enter the number of item(s) purchased (Only below 3): 3
What is your first order               : Apple
Fruit price per kilogram               : RM10
Total Kilogram for your first item (KG): 5

What is your second order              : Ciku
Fruit price per kilogram               : RM15
preorder
Total Kilogram for your second item (KG): 3

What is your third order               : Anggur
Fruit price per kilogram               : RM8
Total Kilogram for your third item (KG)          : 3

Total fruit price : RM119.0
Do you want to claim your voucher(Y/N): Y

Enter your voucher code here: 1101
```

You've claimed your 8 percent voucher
Your Total fruit price is: RM109.48

Please enter Y to proceed with the delivery: Y
Enter the delivery location : Kg Bubul
Location distance : 8KM
Delivery fee to Kg Bubul : RM8

:- Total payment cost will be RM117.48
Thank you for purchasing with us.

Fruit resistant in:
["RTP", "Refrigerator, Freezer", "RTP/Refrigerator", "RTP/Freezer", "Refrigerator/Freezer", "RTP/Refrigerator/Freezer"] condition

Do you want to check the resistance of the fruits received(Y/N)?: Y
System to check the resistance of the fruits received

Enter the fruit name or code: Apple
Enter the fruit storage method(RTP/Refrigerator/Freezer): RTP/Freezer
Fruit resistance at room temperature (day): 5
Fruit durability to date: 10.12.2021
Fruit resistance at Freezer (day): 25
Fruit durability to date: 30.12.2021

Do you want to check the resistance of the fruits received again(Y/N)?: N
Enter Y to claim your voucher here: Y
Send your spoiled fruits to our marchandise and get up to 5 percent off from SDN for every purchase you made with us.
Please enter the total weight of your spoiled fruit(gram): 850

You just got a 5% voucher code
Use the code below for your next purchase with us
1111

Thank you for your contribution
Have a nice day