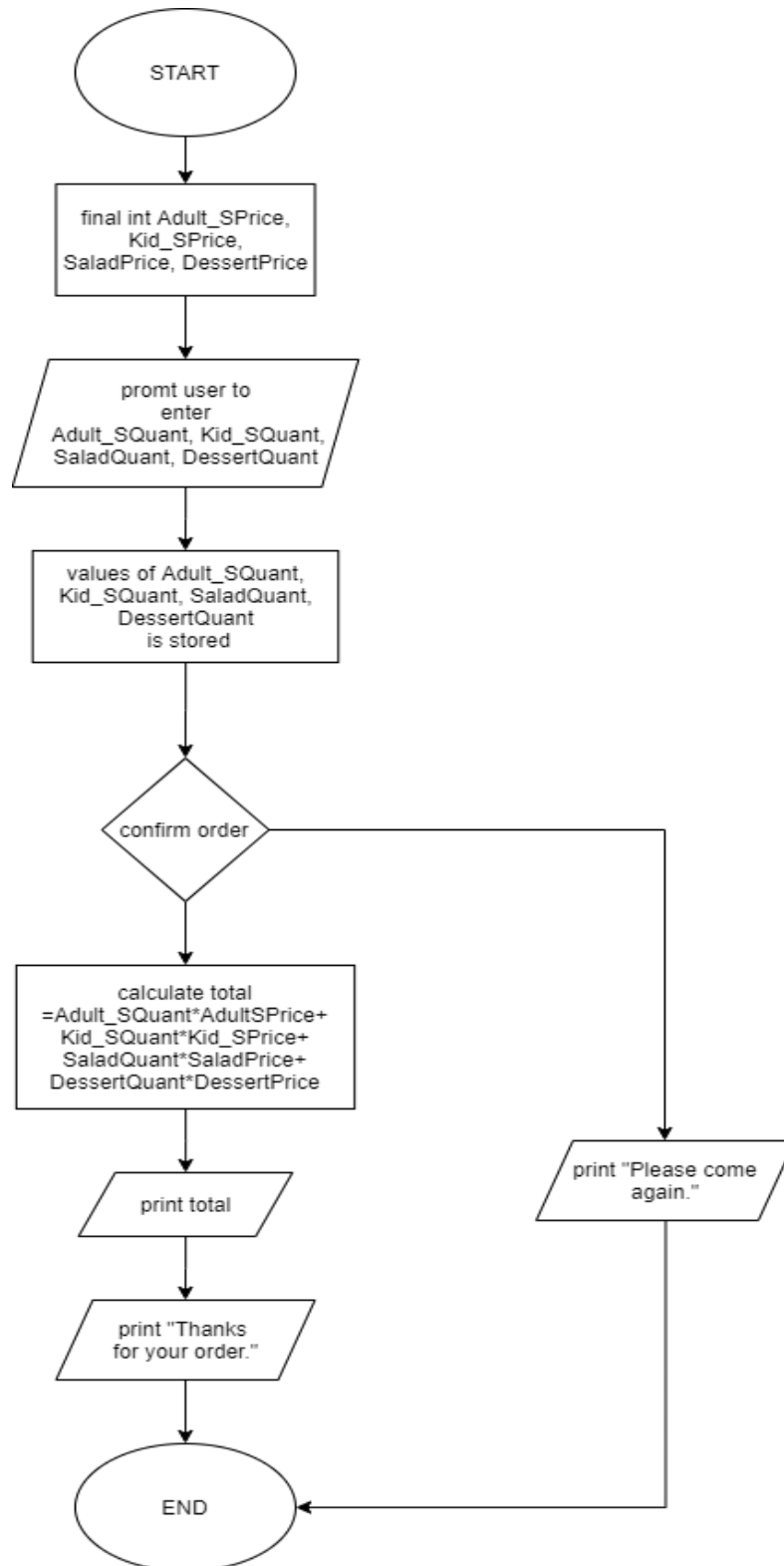


# REVIEW 1 - INDIVIDUAL ASSIGNMENT

## Question 1

### ➤ Flowchart



➤ Code

```
import javax.swing.*;
import java.net.*;

public class Question1 {
    public static void main(String[] args) throws Exception {

        final int Adult_SPrice=20, Kid_SPrice=12, SaladPrice=4, DessertPrice=5;

        JTextField Adult_SQuant = new JTextField();
        JTextField Kid_SQuant = new JTextField();
        JTextField SaladQuant = new JTextField();
        JTextField DessertQuant = new JTextField();

        Object[] message = {
            "Quantity of Adult Set(s): ",Adult_SQuant,
            "Quantity of Kids Set(s): ",Kid_SQuant,
            "Quantity of Salad(s): ",SaladQuant,
            "Quantity of Dessert(s): ",DessertQuant
        };

        final ImageIcon icon = new ImageIcon(new
        URL("https://en.gravatar.com/userimage/198166668/4604ee97c4748ee5712bc758535d884e.png"));
        int option = JOptionPane.showConfirmDialog(null, message, "Order confirmation",
        JOptionPane.OK_CANCEL_OPTION, JOptionPane.INFORMATION_MESSAGE, icon);

        if (option == JOptionPane.OK_OPTION) {
            Integer.parseInt(Adult_SQuant.getText());
            Integer.parseInt(Kid_SQuant.getText());
            Integer.parseInt(SaladQuant.getText());
            Integer.parseInt(DessertQuant.getText());

            JOptionPane.showMessageDialog(null,"The total is: $"
            +(Integer.parseInt(Adult_SQuant.getText())*Adult_SPrice

            +Integer.parseInt(Kid_SQuant.getText())*Kid_SPrice

            +Integer.parseInt(SaladQuant.getText())*SaladPrice

            +Integer.parseInt(DessertQuant.getText())*DessertPrice));

            JOptionPane.showMessageDialog(null,"Thanks for your order.");
        }

        else

            JOptionPane.showMessageDialog(null,"Please come again.");
    }
}
```

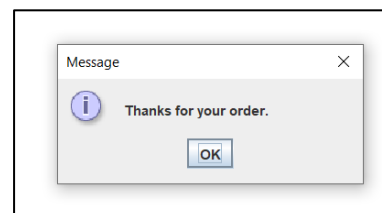
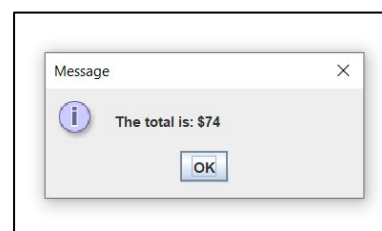
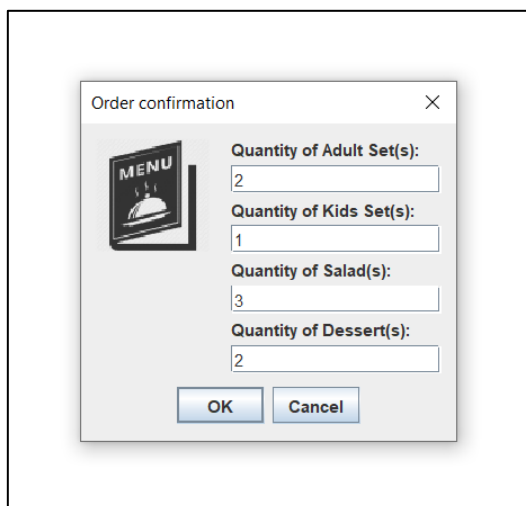
```

10 import javax.swing.*;
11
12 public class Question1 {
13     public static void main(String[] args) throws Exception {
14
15         final int Adult_SPrice=20, Kid_SPrice=12, SaladPrice=4, DessertPrice=5;
16
17         JTextField Adult_SQuant = new JTextField();
18         JTextField Kid_SQuant = new JTextField();
19         JTextField SaladQuant = new JTextField();
20         JTextField DessertQuant = new JTextField();
21
22         Object[] message = {
23             "Quantity of Adult Set(s): ", Adult_SQuant,
24             "Quantity of Kids Set(s): ", Kid_SQuant,
25             "Quantity of Salad(s): ", SaladQuant,
26             "Quantity of Dessert(s): ", DessertQuant
27         };
28
29         final ImageIcon icon = new ImageIcon(new URL("https://en.gravatar.com/userimage/198166668/4604ee97c4748ee5712bc758535d884e.png"));
30         int option = JOptionPane.showConfirmDialog(null, message, "Order confirmation", JOptionPane.OK_CANCEL_OPTION, JOptionPane.INFORMATION_MESSAGE, icon);
31
32         if (option == JOptionPane.OK_OPTION) {
33             Integer.parseInt(Adult_SQuant.getText());
34             Integer.parseInt(Kid_SQuant.getText());
35             Integer.parseInt(SaladQuant.getText());
36             Integer.parseInt(DessertQuant.getText());
37
38             JOptionPane.showMessageDialog(null, "The total is: $" + (Integer.parseInt(Adult_SQuant.getText())*Adult_SPrice
39                 + Integer.parseInt(Kid_SQuant.getText())*Kid_SPrice
40                 + Integer.parseInt(SaladQuant.getText())*SaladPrice
41                 + Integer.parseInt(DessertQuant.getText())*DessertPrice);
42
43             JOptionPane.showMessageDialog(null, "Thanks for your order.");
44         }
45         else
46             JOptionPane.showMessageDialog(null, "Please come again.");
47     }
48 }

```

## ➤ Output

### Example 1



Example 2

Order confirmation



Quantity of Adult Set(s):

Quantity of Kids Set(s):


Quantity of Salad(s):

Quantity of Dessert(s):

OK

Cancel


Message



The total is: \$97

OK

Message




Thanks for your order.

OK

Example 3

Order confirmation



Quantity of Adult Set(s):

Quantity of Kids Set(s):


Quantity of Salad(s):

Quantity of Dessert(s):

OK

Cancel

Message

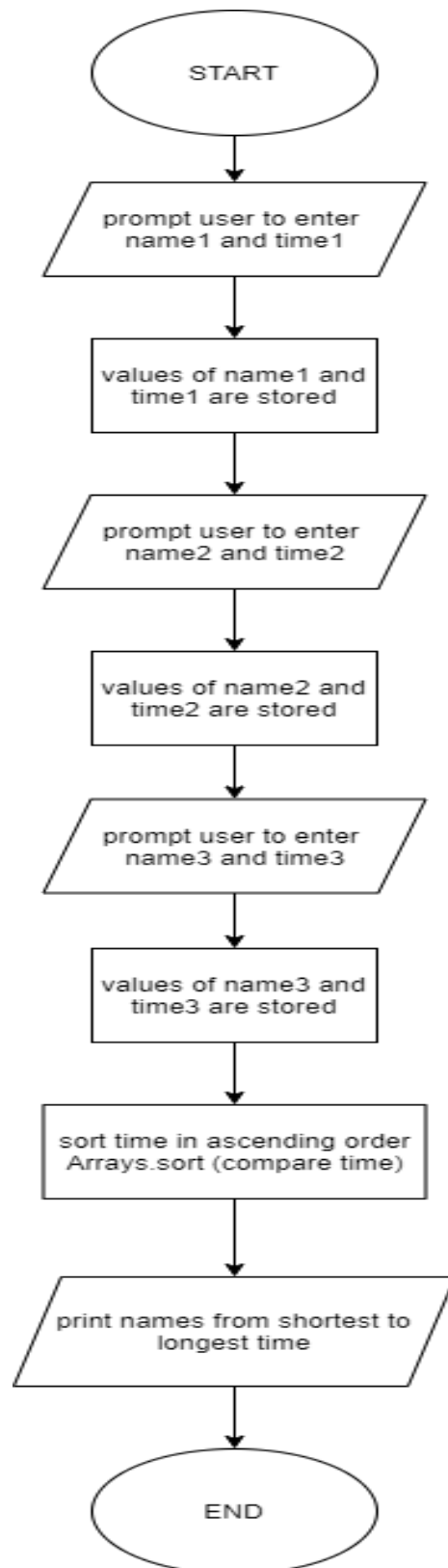


Please come again.

OK

## Question 2

➤ Flowchart



➤ Code

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

class Runners implements Comparable<Runners> {
    public String name;
    public double time;

    public Runners(String name, double time) {
        this.name = name;
        this.time = time;
    }

    public String toString() {
        return String.format(" %s: %.2f minute(s) ", name, time);
    }

    public int compareTo(Runners other) {
        return Double.compare(time, other.time);
    }
}

public class Question2 {
    public static void main(String[] args) {

        final int count = 3;

        Runners[] runnersData = new Runners[count];
        Scanner input = new Scanner(System.in);

        for (int i = 0; i < count; i++) {
            System.out.println("Enter runner's name and time taken in minutes: ");

            runnersData[i] = new Runners(input.next().strip(), input.nextDouble());
        }

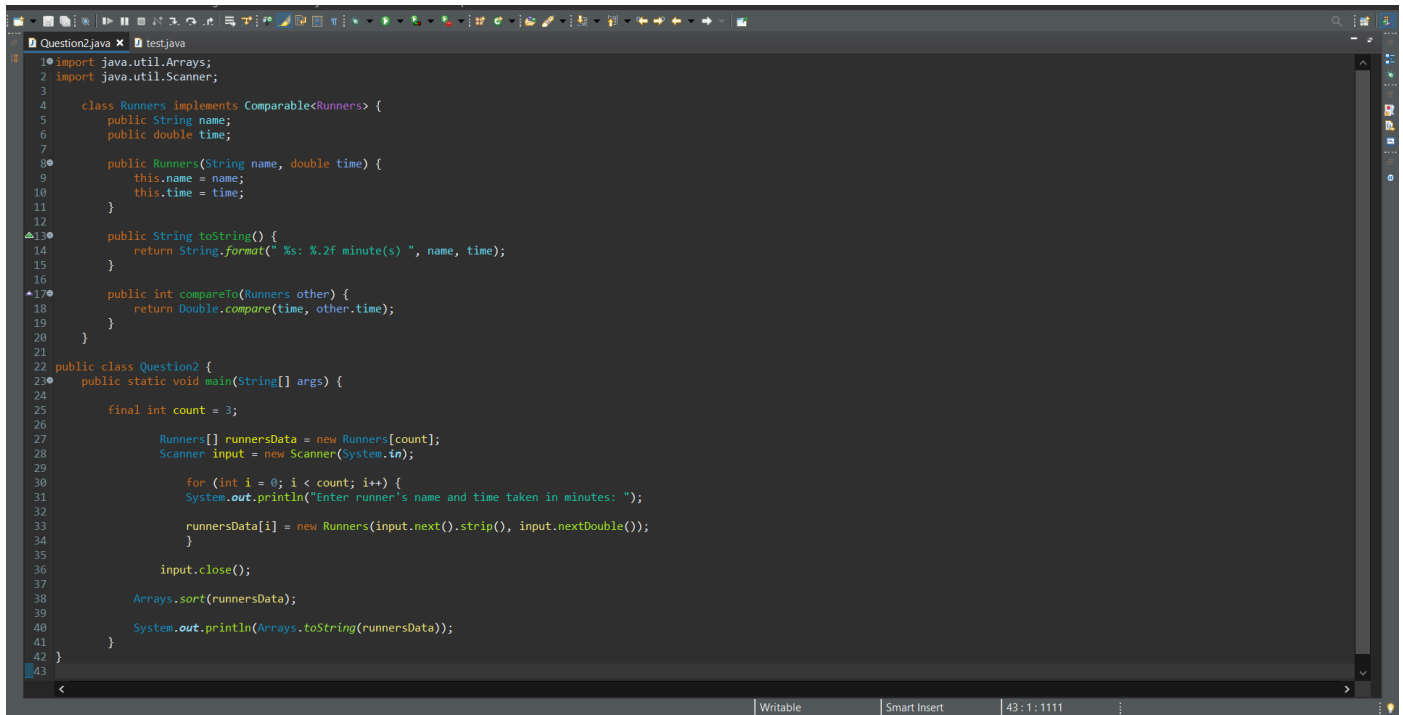
        input.close();
    }
}
```

```
Arrays.sort(runnersData);
```

```
System.out.println(Arrays.toString(runnersData));
```

```
}
```

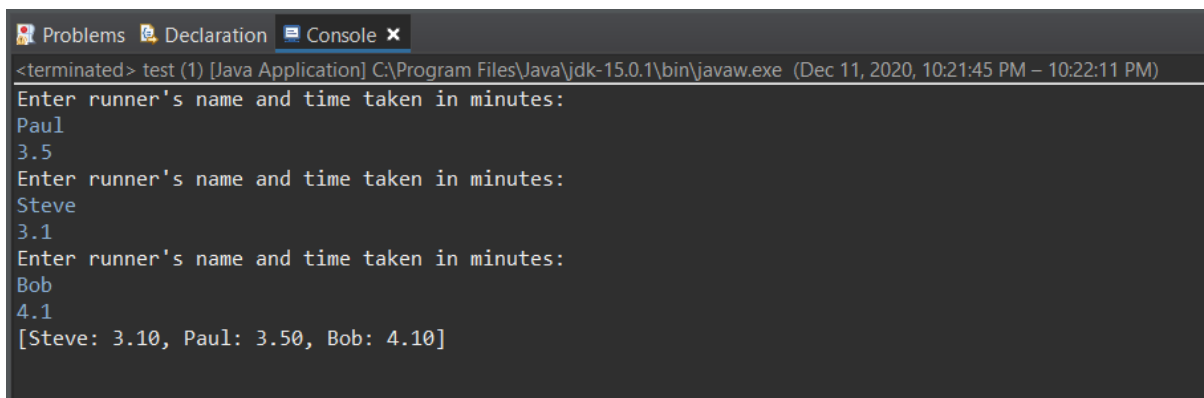
```
}
```



```
1 import java.util.Arrays;
2 import java.util.Scanner;
3
4 class Runners implements Comparable<Runners> {
5     public String name;
6     public double time;
7
8     public Runners(String name, double time) {
9         this.name = name;
10        this.time = time;
11    }
12
13    public String toString() {
14        return String.format(" %s: %.2f minute(s) ", name, time);
15    }
16
17    public int compareTo(Runners other) {
18        return Double.compare(time, other.time);
19    }
20 }
21
22 public class Question2 {
23     public static void main(String[] args) {
24
25         final int count = 3;
26
27         Runners[] runnersData = new Runners[count];
28         Scanner input = new Scanner(System.in);
29
30         for (int i = 0; i < count; i++) {
31             System.out.println("Enter runner's name and time taken in minutes: ");
32             runnersData[i] = new Runners(input.next().strip(), input.nextDouble());
33         }
34
35         input.close();
36
37         Arrays.sort(runnersData);
38
39         System.out.println(Arrays.toString(runnersData));
40     }
41 }
42
43
```

## ➤ Output

### Example 1



```
<terminated> test (1) [Java Application] C:\Program Files\Java\jdk-15.0.1\bin\javaw.exe (Dec 11, 2020, 10:21:45 PM – 10:22:11 PM)
Enter runner's name and time taken in minutes:
Paul
3.5
Enter runner's name and time taken in minutes:
Steve
3.1
Enter runner's name and time taken in minutes:
Bob
4.1
[Steve: 3.10, Paul: 3.50, Bob: 4.10]
```

## Example 2

```
Problems Declaration Console x
<terminated> test (1) [Java Application] C:\Program Files\Java\jdk-15.0.1\bin\javaw.exe (Dec 11, 2020, 10:27:17 PM – 10:27:49 PM)
Enter runner's name and time taken in minutes:
Ali
3.3
Enter runner's name and time taken in minutes:
Ahmad
3.5
Enter runner's name and time taken in minutes:
Raj
4
[Ali: 3.30, Ahmad: 3.50, Raj: 4.00]
```

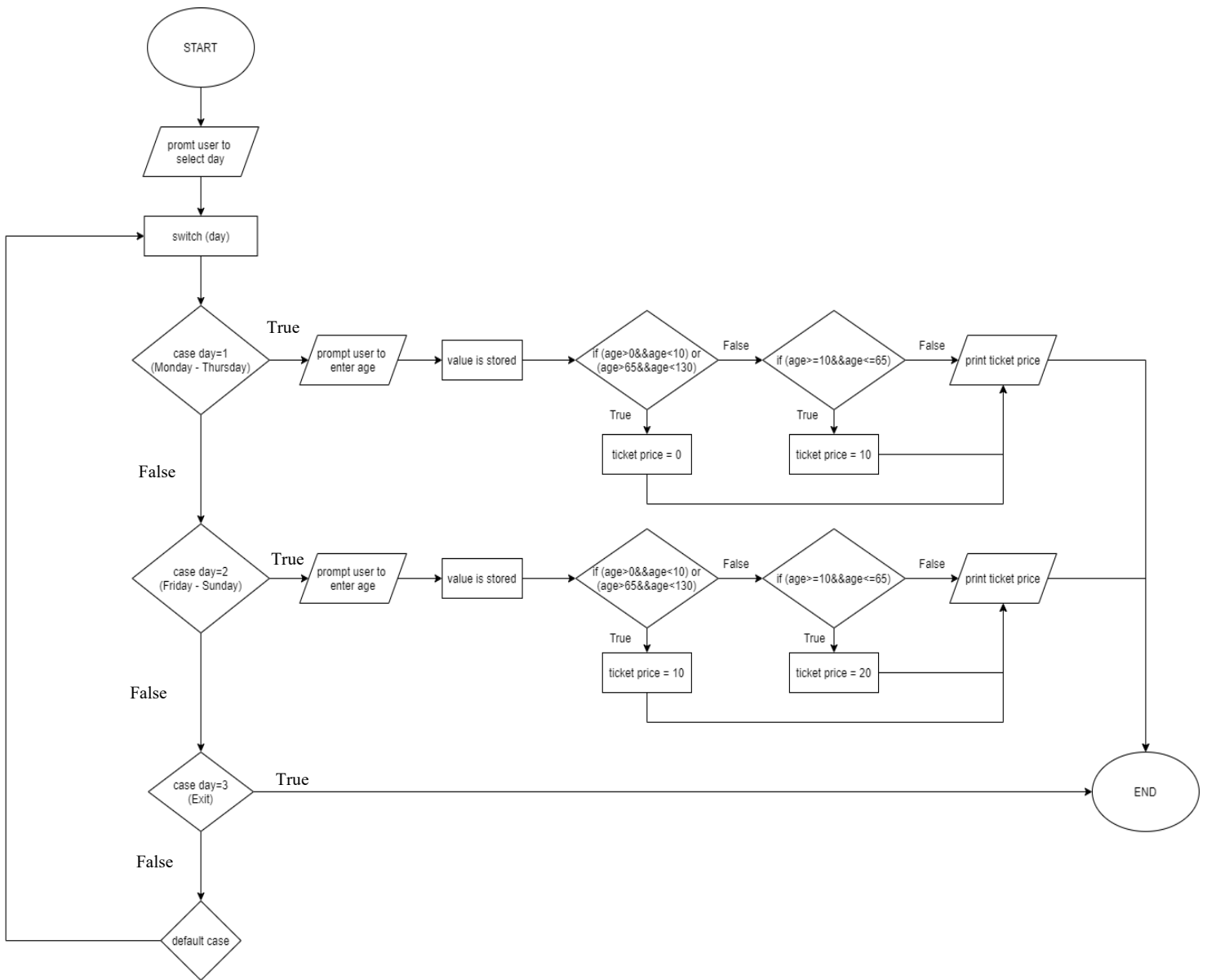
## Example 3

```
Problems Declaration Console x
<terminated> test (1) [Java Application] C:\Program Files\Java\jdk-15.0.1\bin\javaw.exe (Dec 11, 2020, 10:28:09 PM – 10:29:08 PM)
Enter runner's name and time taken in minutes:
Bart
56.7
Enter runner's name and time taken in minutes:
Mel
60
Enter runner's name and time taken in minutes:
Quincy
49.3
[Quincy: 49.30, Bart: 56.70, Mel: 60.00]
```



### Question 3

#### ➤ Flowchart



➤ Code

```
import javax.swing.JOptionPane;
```

```
public class Question3 {
```

```
public static void main(String[] args) {
```

```
int day,age;
```

do

$$\{$$

```
String day1 = JOptionPane.showInputDialog("Please select the day"+"\\n\\n1.Monday - Thursday"+"\\n2.Friday - Sunday"+"\\n\\n3.EXIT"+"\\n");
```

```
day = Integer.parseInt(day1);
```

```
switch(day) {
```

case 1:

```
String age1 = JOptionPane.showInputDialog("Please enter the age");
```

```
age = Integer.parseInt(age1);
```

```
if ((age>0&&age<10)|| (age>65&&age<130)) {
```

```
JOptionPane.showMessageDialog(null,"The ticket is free.");
```

$$\}$$

```
else if (age>=10&&age<=65) {
```

```
JOptionPane.showMessageDialog(null,"The price of the ticket is RM10.");
```

$$\}$$

```
else {
```

```
JOptionPane.showMessageDialog(null,"Invalid age.");
```

$$\}$$

```
break;
```

case 2:

```
String age2 = JOptionPane.showInputDialog("Please enter the age");
```

```
age = Integer.parseInt(age2);
```

```
if ((age>0&&age<10)|| (age>65&&age<130)) {
```

```
JOptionPane.showMessageDialog(null,"The price of the ticket is RM10.");
```

}

```

        else if (age>=10&&age<=65) {
            JOptionPane.showMessageDialog(null,"The price of the ticket is RM20.");
        }

        else {
            JOptionPane.showMessageDialog(null,"Invalid age.");
        }

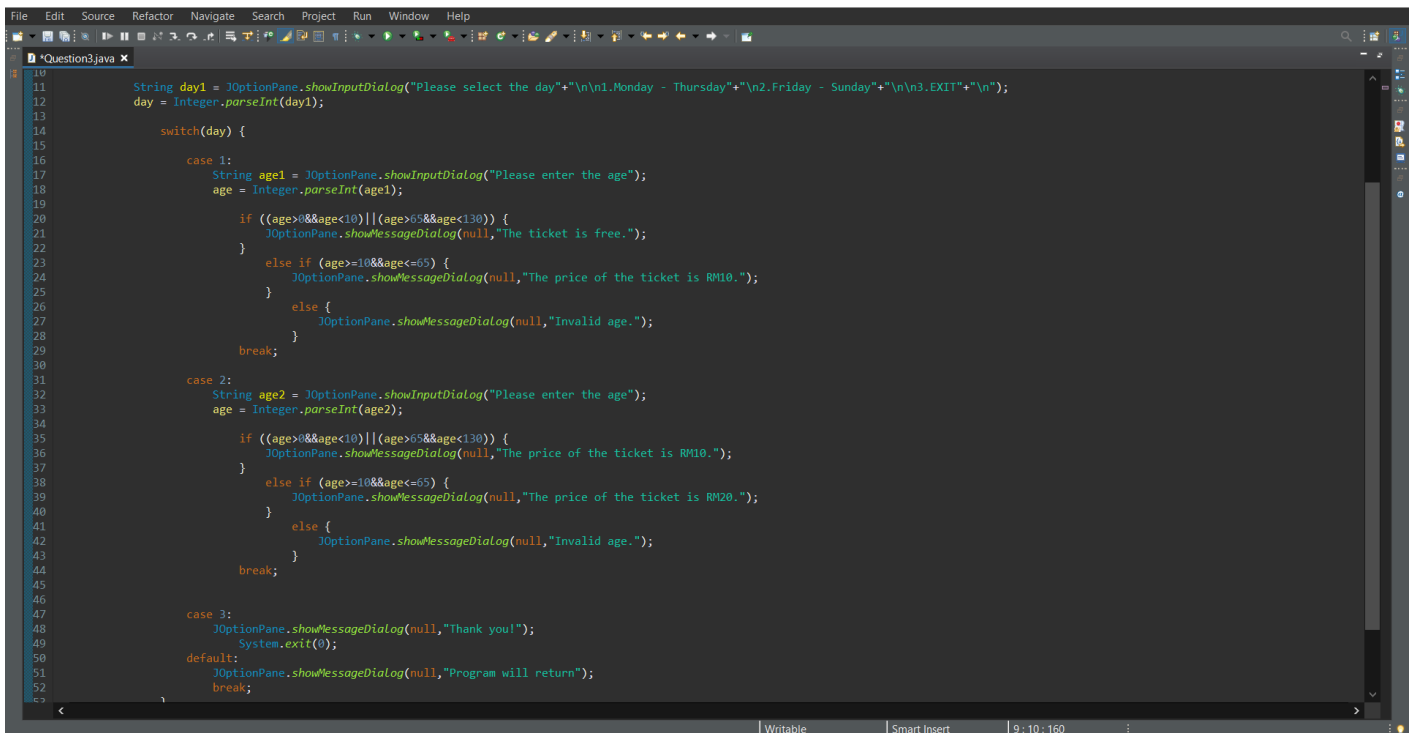
        break;

    case 3:
        JOptionPane.showMessageDialog(null,"Thank you!");
        System.exit(0);
    default:
        JOptionPane.showMessageDialog(null,"Program will return");
        break;
    }

}

while (day !=3);
}
}

```



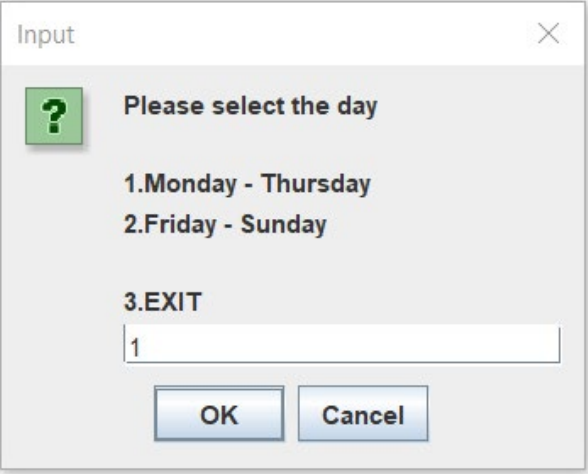
```

10
11 String day1 = JOptionPane.showInputDialog("Please select the day*\n\n1.Monday - Thursday*\n\n2.Friday - Sunday*\n\n3.EXIT*\n\n");
12 day = Integer.parseInt(day1);
13
14 switch(day) {
15
16     case 1:
17         String age1 = JOptionPane.showInputDialog("Please enter the age");
18         age = Integer.parseInt(age1);
19
20         if ((age>0&&age<10)|| (age>65&&age<130)) {
21             JOptionPane.showMessageDialog(null,"The ticket is free.");
22         }
23         else if (age>=10&&age<=65) {
24             JOptionPane.showMessageDialog(null,"The price of the ticket is RM10.");
25         }
26         else {
27             JOptionPane.showMessageDialog(null,"Invalid age.");
28         }
29         break;
30
31     case 2:
32         String age2 = JOptionPane.showInputDialog("Please enter the age");
33         age = Integer.parseInt(age2);
34
35         if ((age>0&&age<10)|| (age>65&&age<130)) {
36             JOptionPane.showMessageDialog(null,"The price of the ticket is RM10.");
37         }
38         else if (age>=10&&age<=65) {
39             JOptionPane.showMessageDialog(null,"The price of the ticket is RM20.");
40         }
41         else {
42             JOptionPane.showMessageDialog(null,"Invalid age.");
43         }
44         break;
45
46     case 3:
47         JOptionPane.showMessageDialog(null,"Thank you!");
48         System.exit(0);
49     default:
50         JOptionPane.showMessageDialog(null,"Program will return");
51         break;
52 }
53
54
55


```

➤ Output

Example 1



Input

 Please select the day

1.Monday - Thursday  
2.Friday - Sunday  
3.EXIT

1

OK Cancel

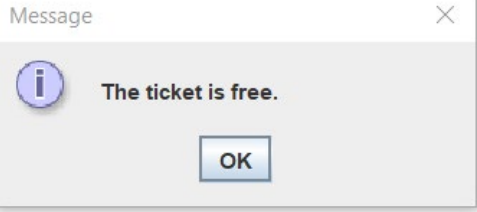


Input


 Please enter the age

6

OK Cancel

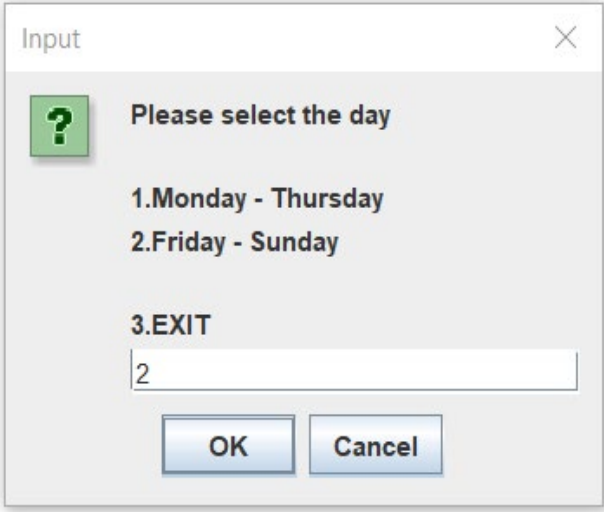


Message


 The ticket is free.

OK

Example 2



Input

 Please select the day

1.Monday - Thursday  
2.Friday - Sunday  
3.EXIT

2

OK Cancel

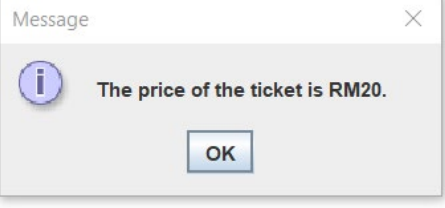


Input


 Please enter the age

21

OK Cancel

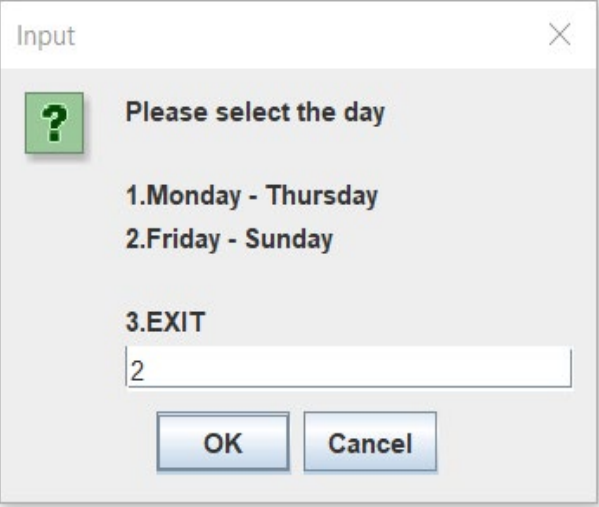


Message


 The price of the ticket is RM20.

OK

### Example 3



Input

 Please select the day

1.Monday - Thursday  
2.Friday - Sunday  
3.EXIT

2

OK Cancel

This is an 'Input' dialog box with a title bar containing the word 'Input' and a close button. The main content area has a light gray background. It starts with a green square icon containing a white question mark, followed by the text 'Please select the day'. Below this, there is a list of three options: '1.Monday - Thursday', '2.Friday - Sunday', and '3.EXIT'. A text input field below the list contains the number '2'. At the bottom, there are two buttons: 'OK' and 'Cancel'.



Input

 Please enter the age

500

OK Cancel

This is an 'Input' dialog box with a title bar containing the word 'Input' and a close button. The main content area has a light gray background. It starts with a green square icon containing a white question mark, followed by the text 'Please enter the age'. Below this, there is a text input field containing the number '500'. At the bottom, there are two buttons: 'OK' and 'Cancel'.



Message

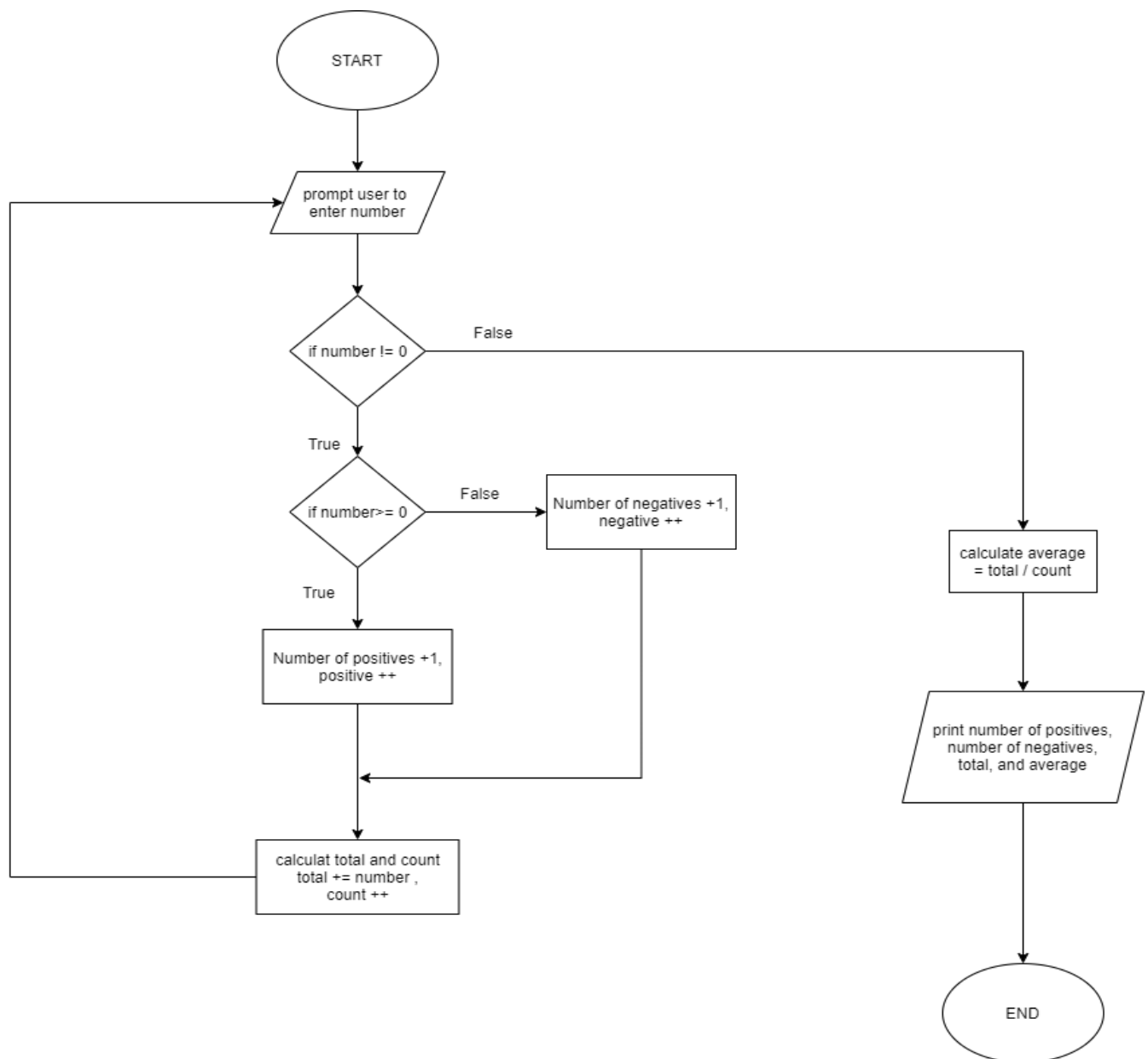
 Invalid age.

OK

This is a 'Message' dialog box with a title bar containing the word 'Message' and a close button. The main content area has a light gray background. It starts with a blue circular icon containing a white lowercase 'i', followed by the text 'Invalid age.'. At the bottom, there is a single button: 'OK'.

## Question 4

### ➤ Flowchart



➤ Code

```
import java.util.Scanner;

public class Question4 {
    public static void main(String[] args) {
        Scanner keyboard = new Scanner(System.in);

        int positives = 0, negatives = 0, count = 0;
        int number;
        double total = 0;
        double average;

        System.out.println("Enter an integer, the input ends if it is 0: ");
        number = keyboard.nextInt();

        if (number == 0) {
            System.out.println("No numbers are entered except 0");
            System.exit(1);
        }

        while (number != 0) {
            if (number > 0)
                positives++;
            else
                negatives++;
            total += number;
            count++;
            number = keyboard.nextInt();
        }

        average = total / count;

        keyboard.close();

        System.out.println("\nNumber of positive values: " + positives +
            "\nNumber of negative values: " + negatives +
```

```

        "\nTotal: " + total +
        "\nAverage: " + average);
    }
}

```

```

1 import java.util.Scanner;
2
3 public class Question4 {
4     public static void main(String[] args) {
5         Scanner keyboard = new Scanner(System.in);
6
7         int positives = 0, negatives = 0, count = 0;
8         int number;
9         double total = 0;
10        double average;
11
12        System.out.println("Enter an integer, the input ends if it is 0:");
13        number = keyboard.nextInt();
14
15        if (number == 0) {
16            System.out.println("No numbers are entered except 0");
17            System.exit(1);
18        }
19
20        while (number != 0) {
21            if (number > 0)
22                positives++;
23            else
24                negatives++;
25            total += number;
26            count++;
27            number = keyboard.nextInt();
28        }
29
30        average = total / count;
31
32        keyboard.close();
33
34        System.out.println("\nNumber of positive values: " + positives +
35                            "\nNumber of negative values: " + negatives +
36                            "\nTotal: " + total +
37                            "\nAverage: " + average);
38    }
39 }
40
41 }

```

## ➤ Output

### Example 1

```

<terminated> Question4 [Java Application] C:\Program Files\Java\jdk-15.0.1\bin\javaw.exe (Dec 11, 2020, 11:41:50 PM – 11:42:34 PM)
Enter an integer, the input ends if it is 0:
12
13
18
-45
7
-8
0

Number of positive values: 4
Number of negative values: 2
Total: -3.0
Average: -0.5

```



## Example 2

```
Problems Declaration Console x
<terminated> Question4 [Java Application] C:\Program Files\Java\jdk-15.0.1\bin\javaw.exe (Dec 11, 2020, 11:42:55 PM – 11:43:25 PM)
Enter an integer, the input ends if it is 0:
-1
4
5
5
7
-1
8
7
8
-10
0

Number of positive values: 7
Number of negative values: 3
Total: 32.0
Average: 3.2
```

## Example 3

```
Problems Declaration Console x
<terminated> Question4 [Java Application] C:\Program Files\Java\jdk-15.0.1\bin\javaw.exe (Dec 11, 2020, 11:43:54 PM – 11:43:57 PM)
Enter an integer, the input ends if it is 0:
0
No numbers are entered except 0
```