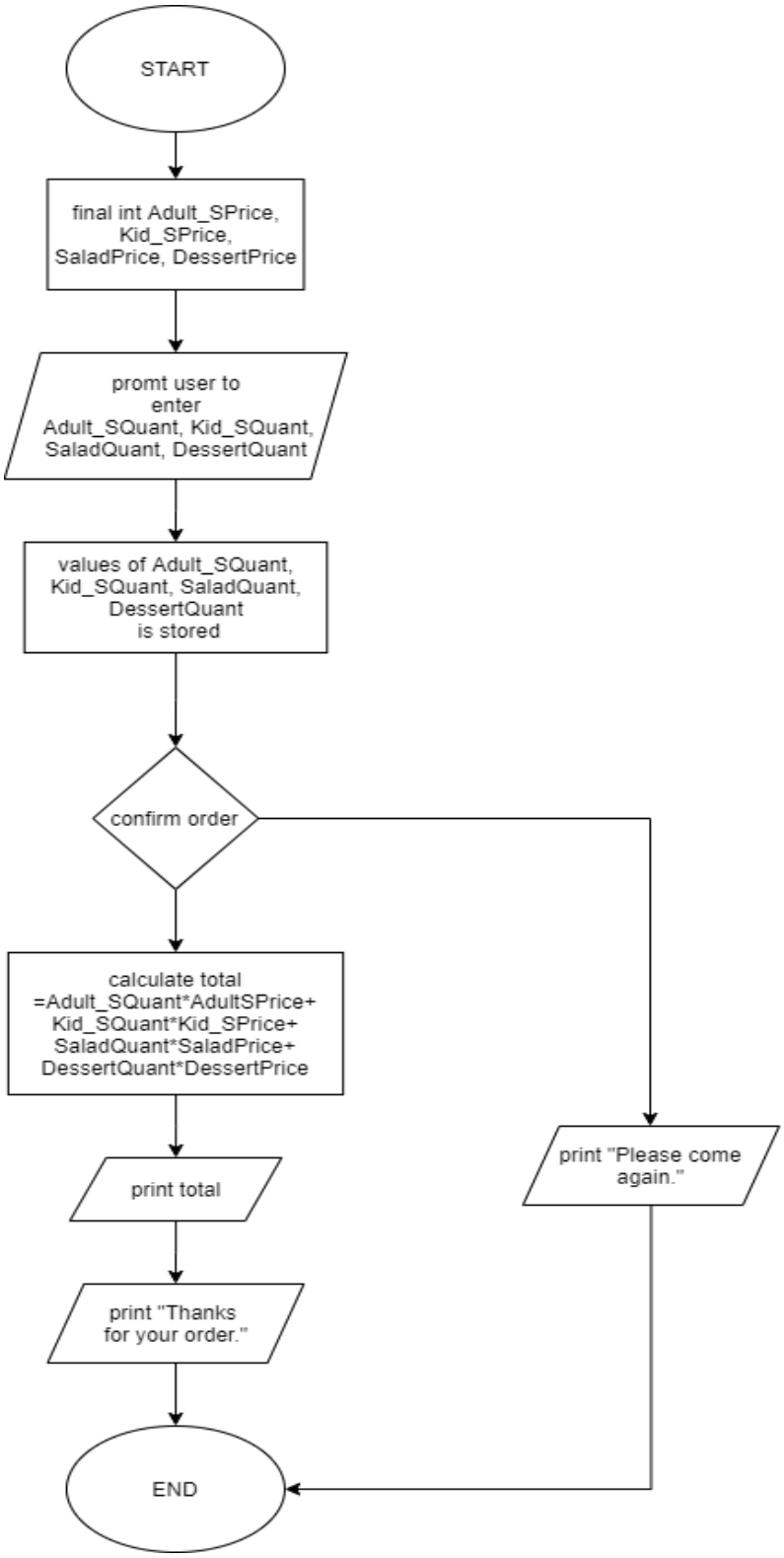
REVIEW 1 – INDIVIDUAL ASSIGNMENT

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.");

  }
}
```

```java
import javax.swing.*;

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();
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            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.");

    }
}
```
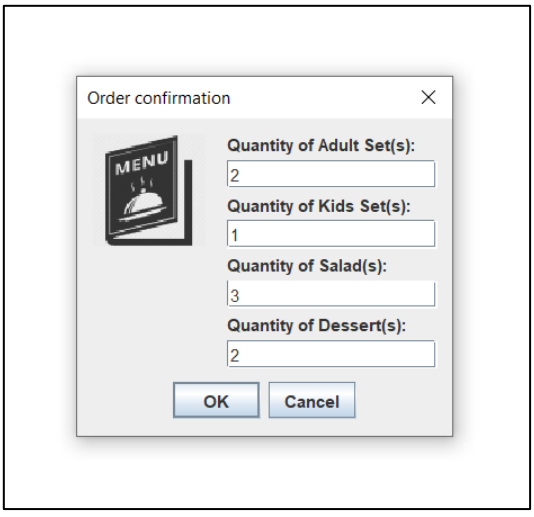
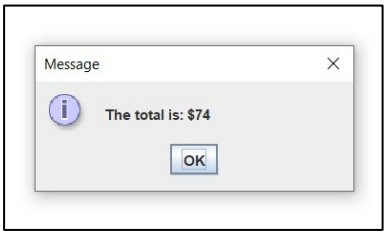
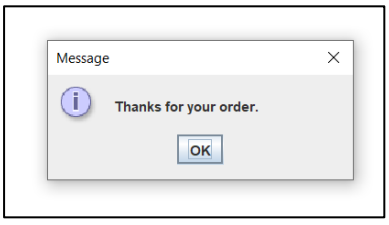

- Output

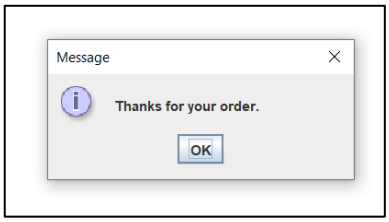
Example 1



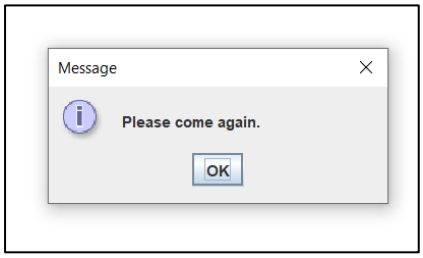




Example 2

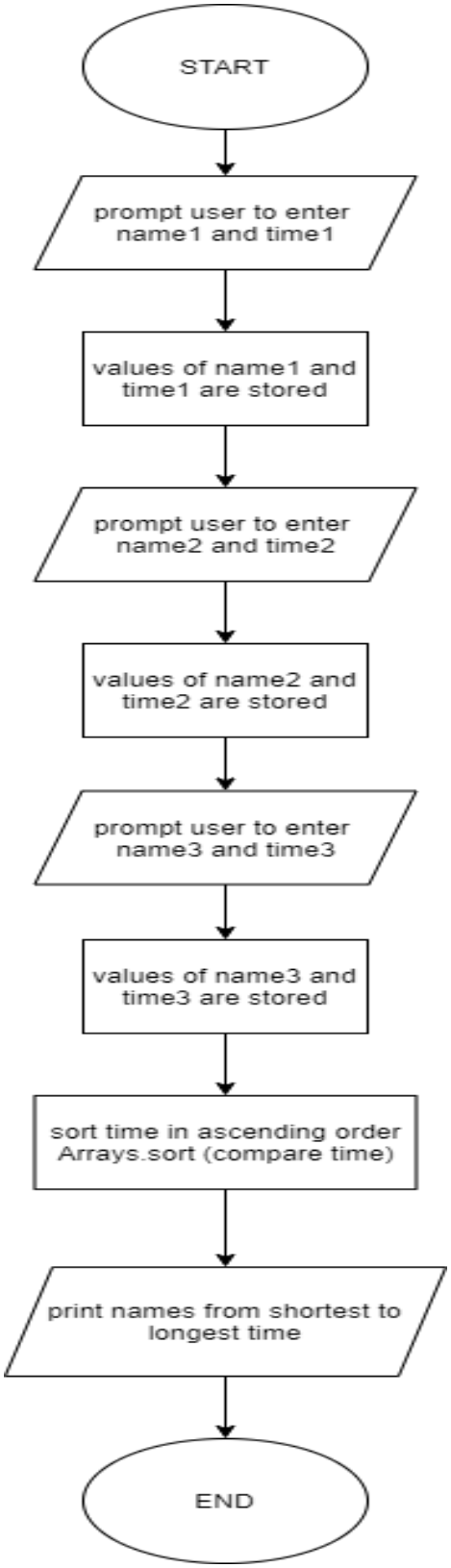


Example 3



Question 2

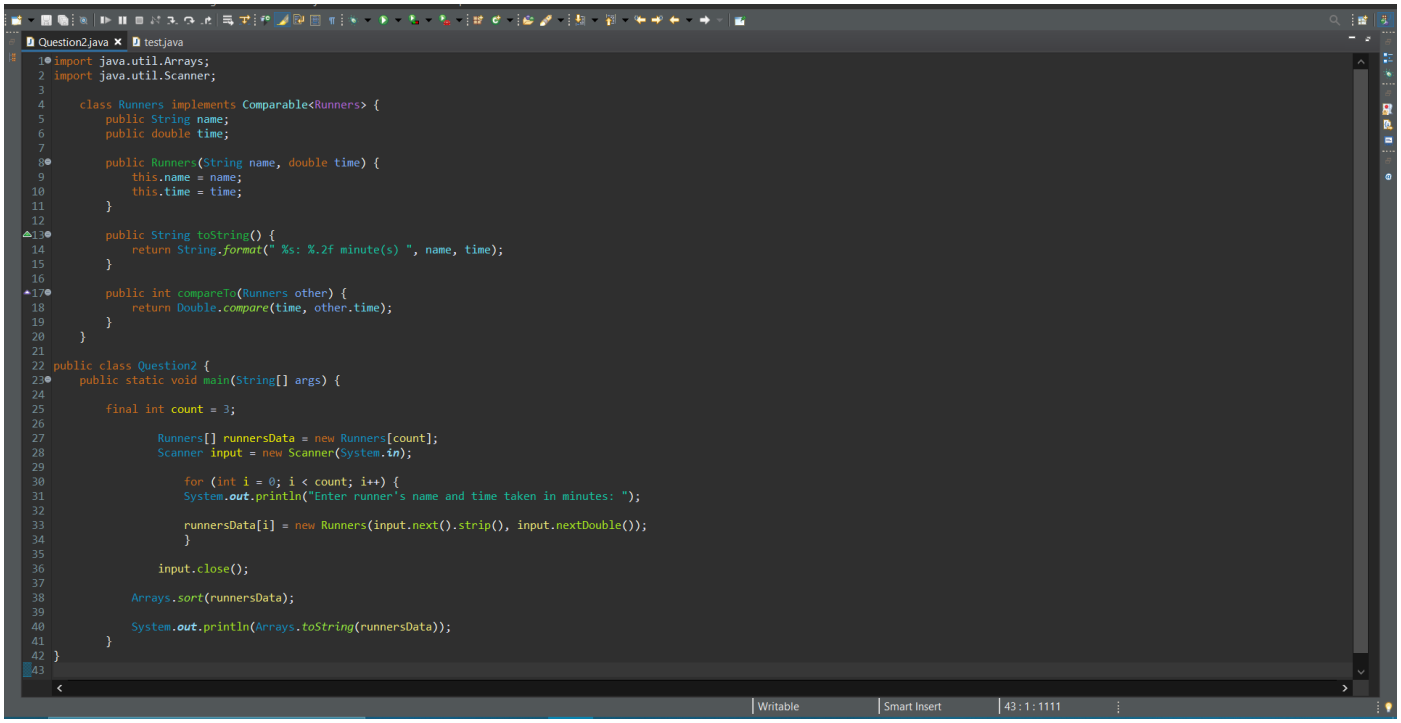
- Flowchart



- 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));
    }
}
```



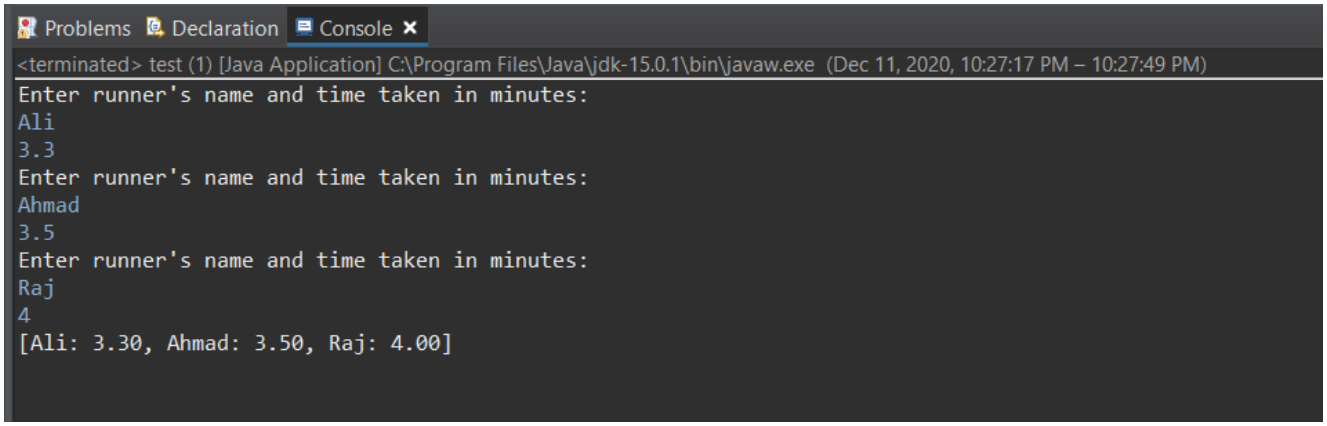
```java
import java.util.Arrays;
import java.util.Scanner;

    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));
        }
}
```

- Output

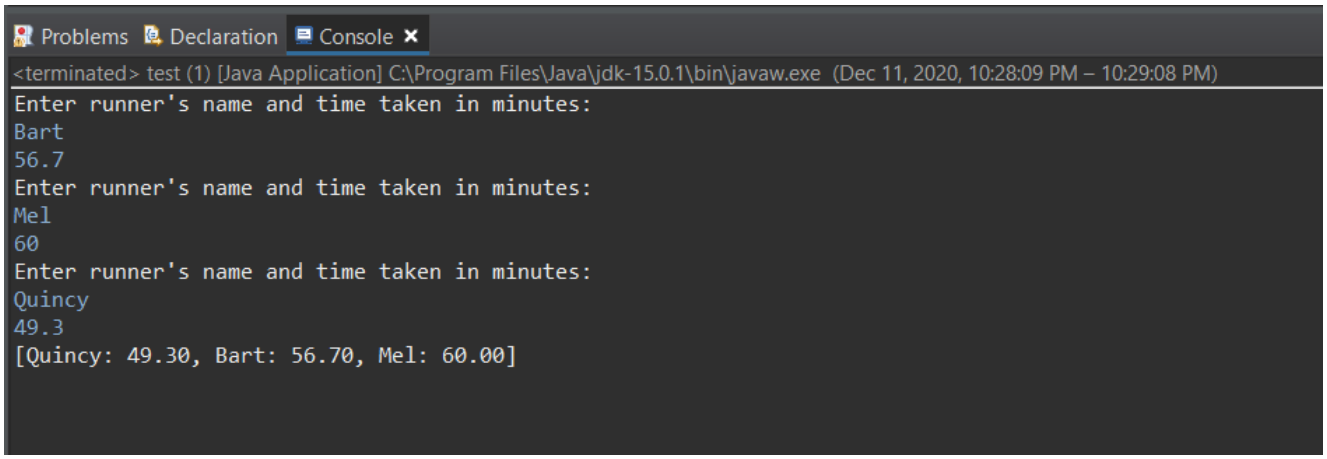
Example 1

```
Problems  Declaration  Console ×
<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

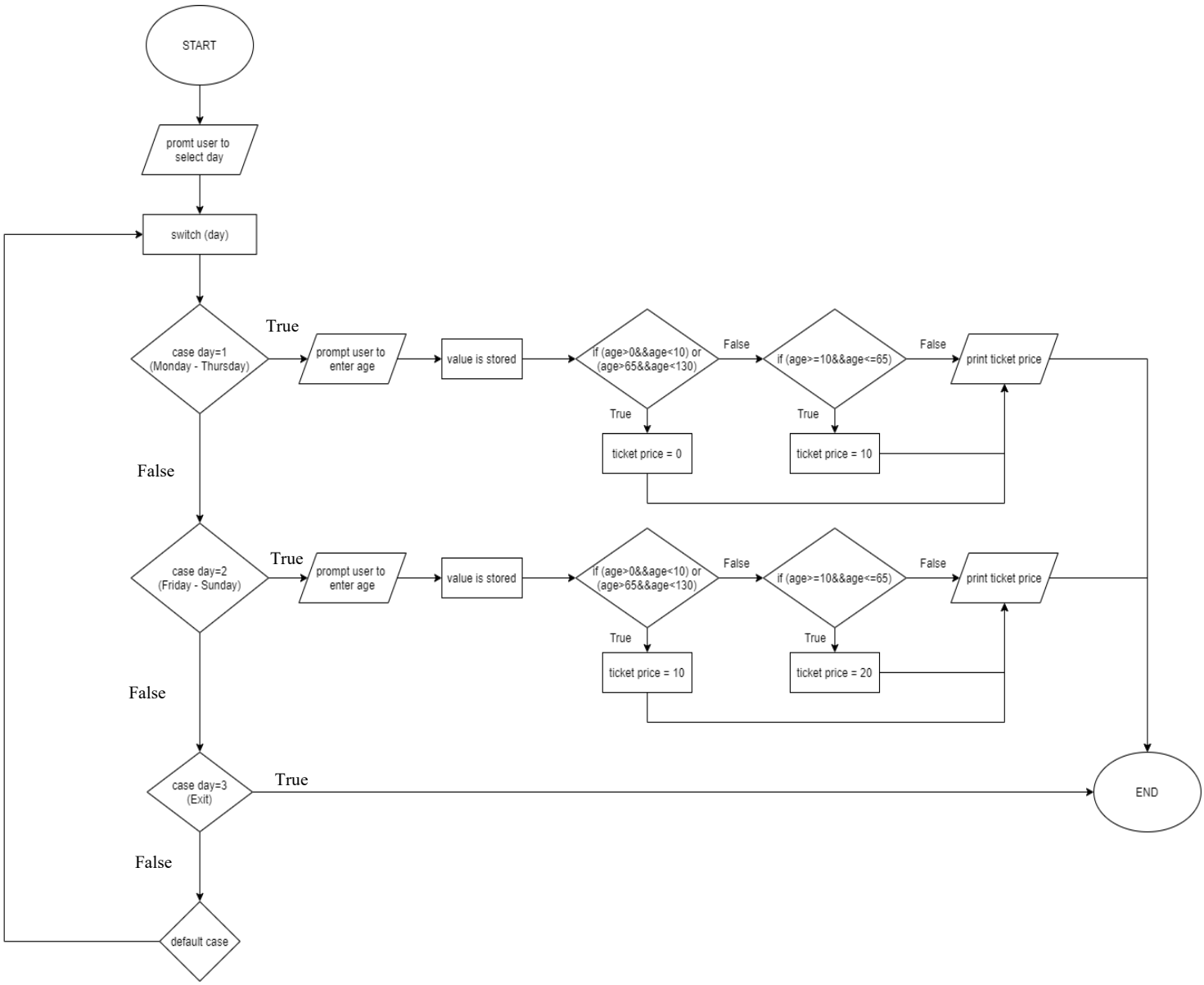


Example 3



Question 3

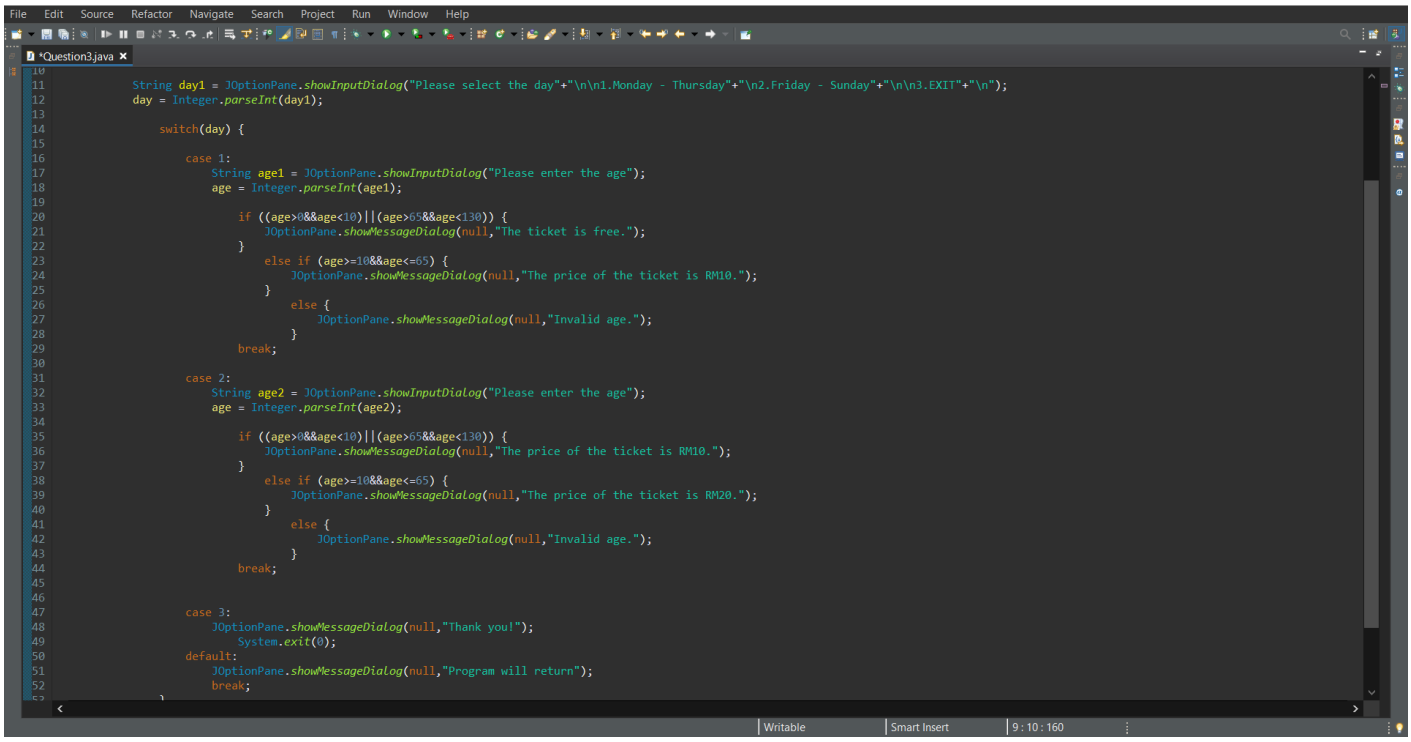
- Flowchart



- Code

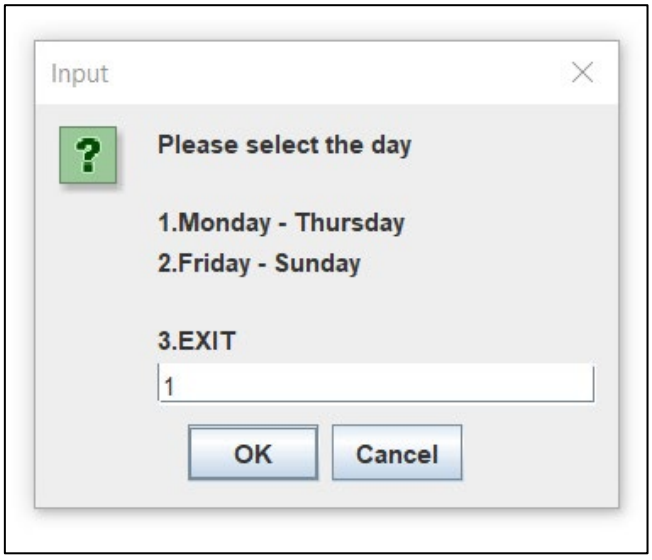
```
import javax.swing.JOptionPane;

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.");
                }
```

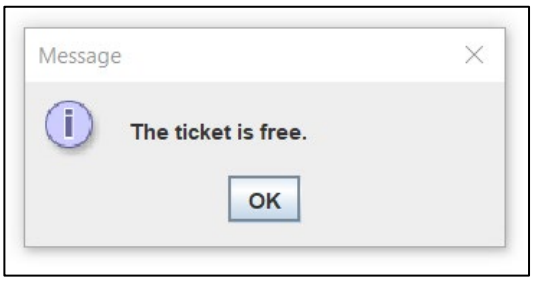
```
                else if (age>=10&&age<=65) {
                        JOptionPane.showMessageDialog(null,"The price of the ticket is RM20.");
                }
                        else {
                                JOptionPane.showMessageDialog(null,"Invalid age.");
                      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


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

    }
    while (day !=3);
  }
}
```



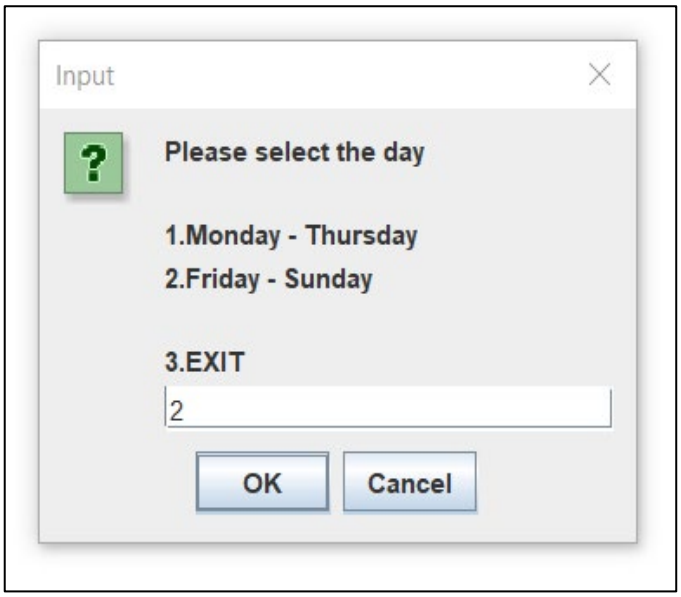
- Output

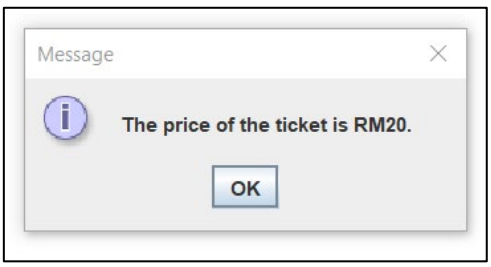
Example 1



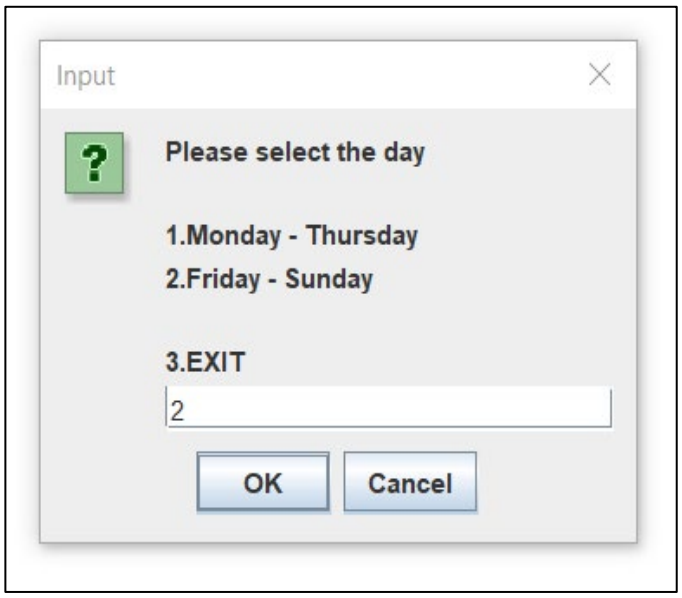


Example 2





Example 3

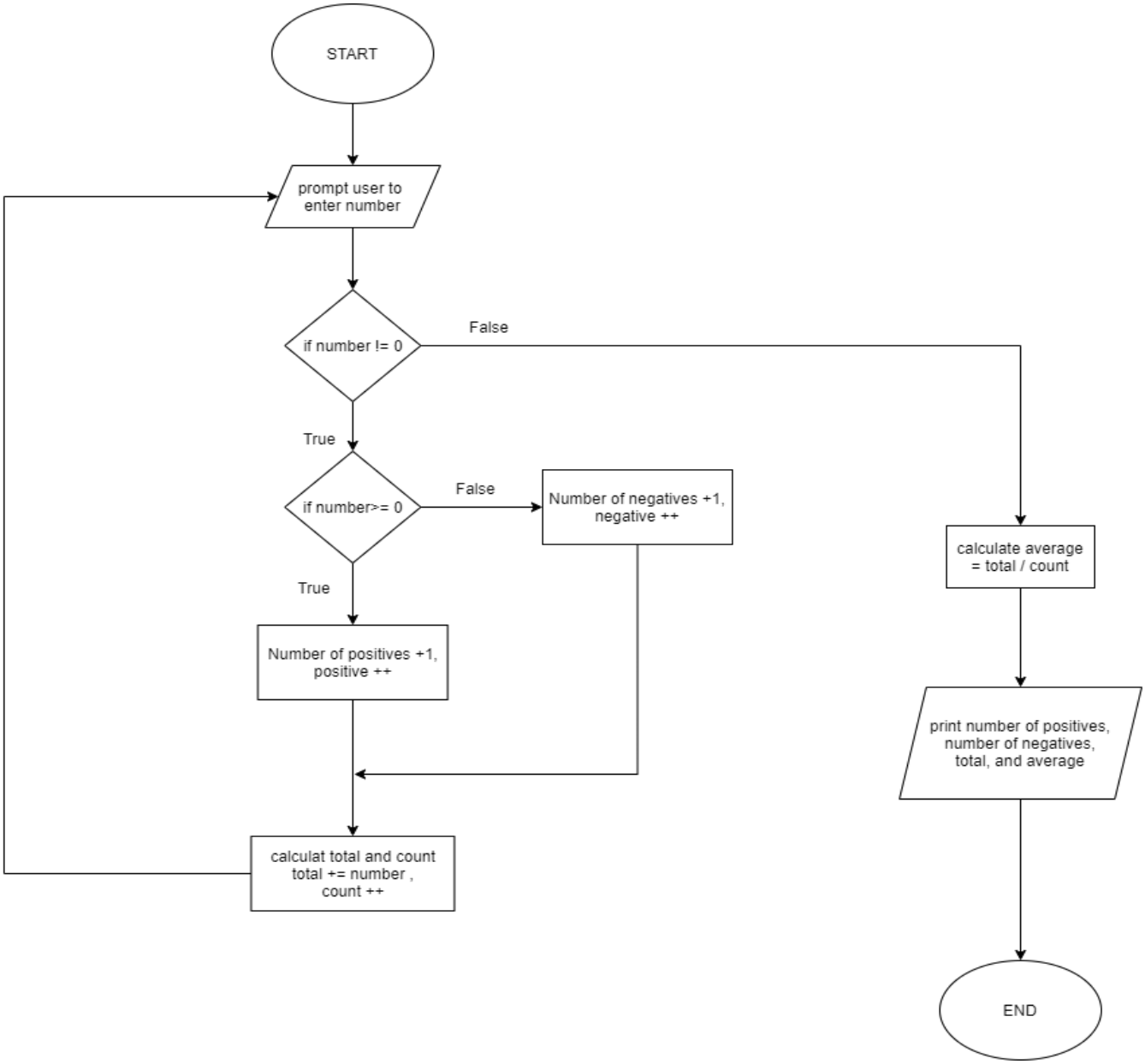

Input
Please select the day
1.Monday - Thursday
2.Friday - Sunday
3.EXIT
2
OK
Cancel


Input
Please enter the age
500
OK
Cancel


Message
Invalid age.
OK

Question 4

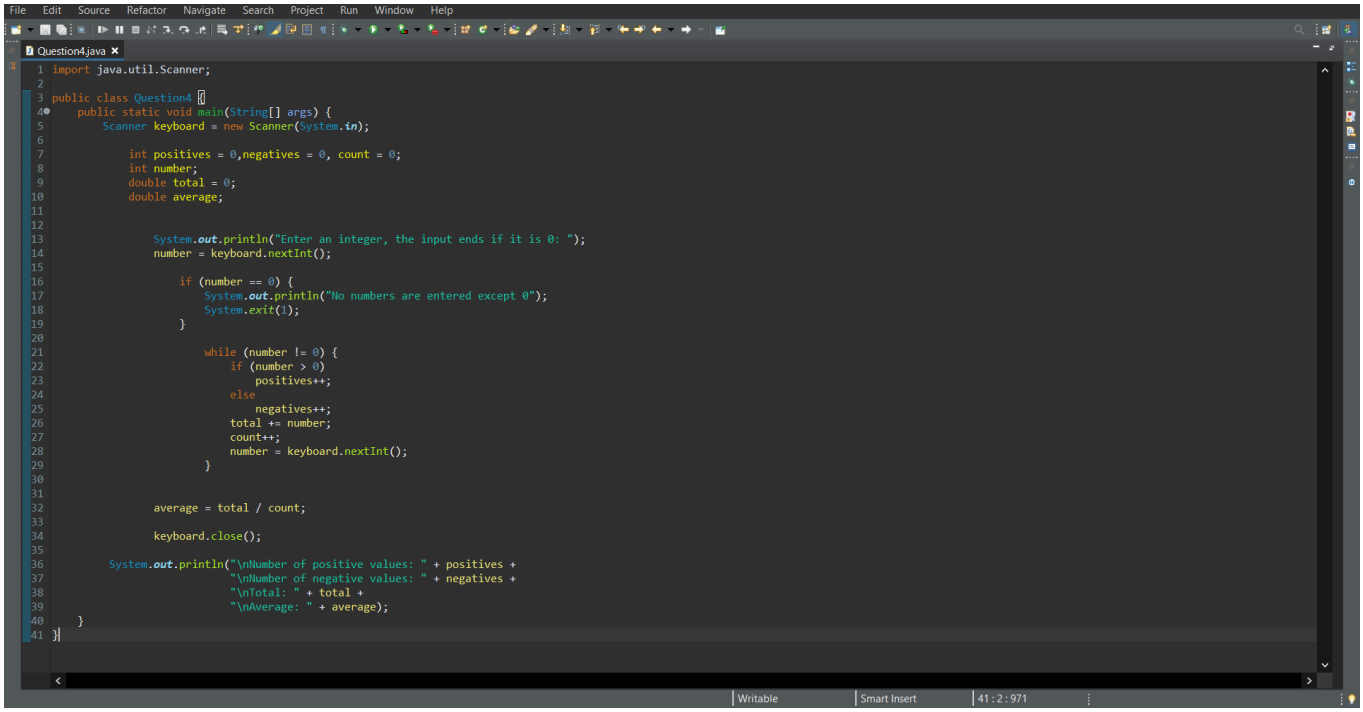
- Flowchart



- 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 +
```

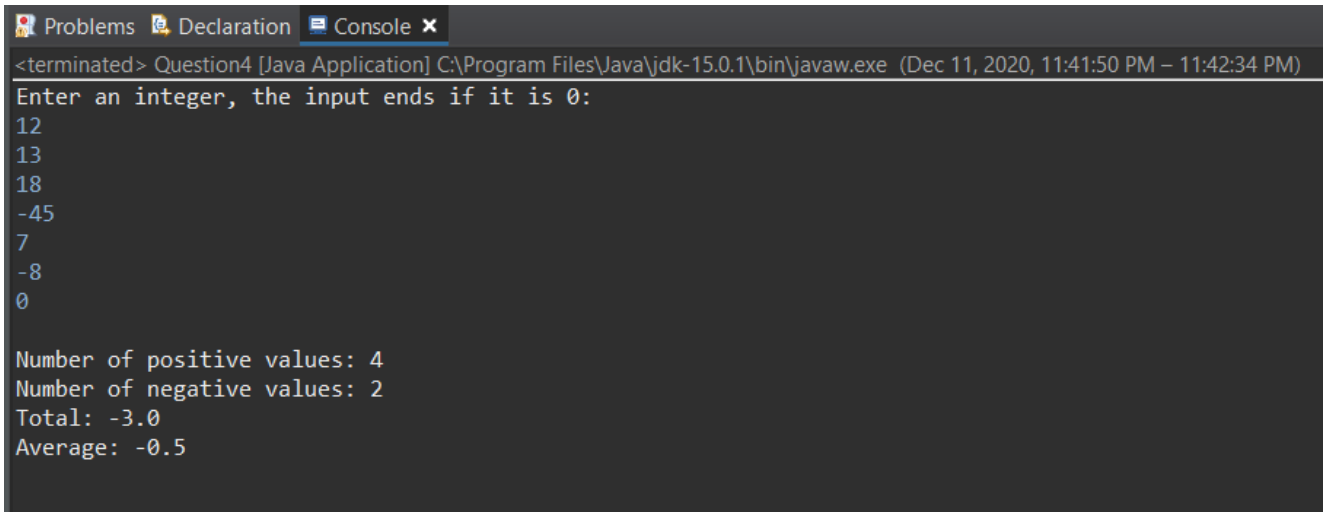
```
                                                    "\nTotal: " + total +
                                                    "\nAverage: " + average);
        }
}
```



```
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);
    }
}
```

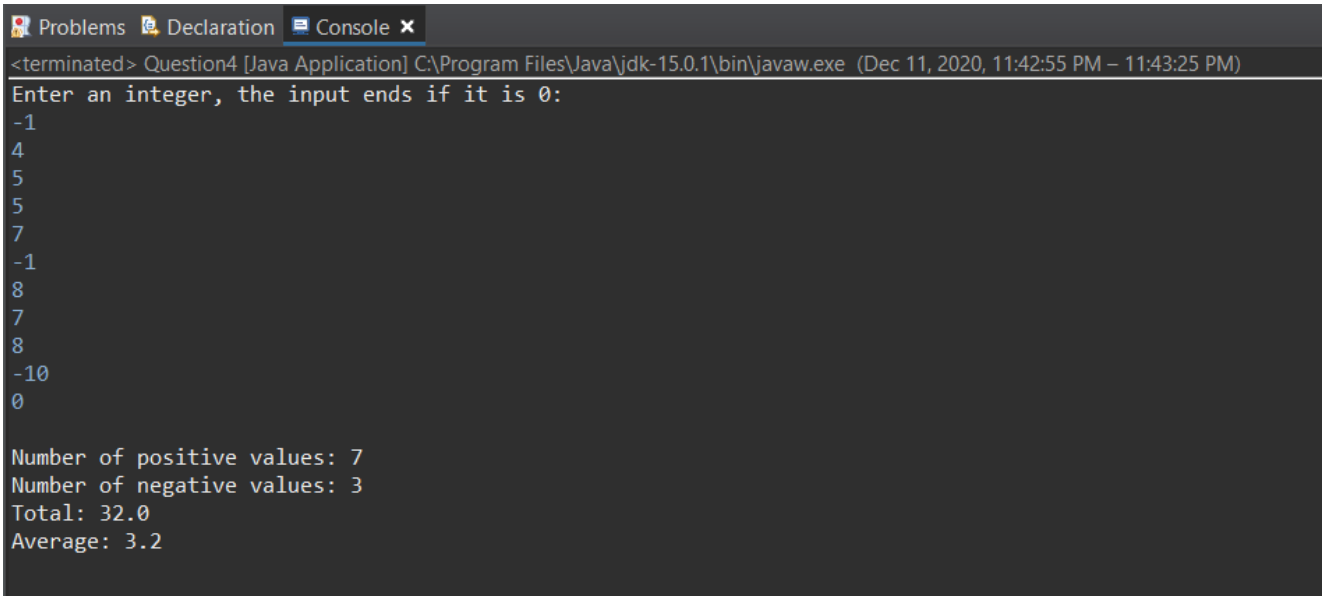
- Output

  Example 1



```
Problems  Declaration  Console
<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



Example 3