King Abdulaziz University Faculty of Engineering Electrical and Computer Engineering EE-202-Object-Oriented Computer Programming Lab-1



Name: Hayan Al-Machnouk

ID#: 1945954

Q-1 Write a Java program that prints a table with a list of at least 5 students together with their grades earned (lab points, bonus points, and the total) in the format below.

Name	Lab	Bonus	Total
Ali	43	7	50
Samer	50	8	58

The requirements for the program are as follows:

- 1. Print the border on the top as illustrated (using the slash and backslash characters).
- 2. Use tab characters to get your columns aligned and you must use the + operator both for addition and string concatenation.
- 3. Make up your own student names and points—the ones shown are just for illustration purposes. You need 5 names.

```
- QTJava
 1 package lab.assignment;
3 public class Q1 {
50
      public static void main(String[] args) {
         11
                + "Name\t\t\t Lab\t Bonus\t Total\n"
12
                + "----\t\t\t
13
                + "Hayan\t\t\t
                              50\t 10\t 60\n"
                              48\t 8\t 56\n"
                + "Samer\t\t\t
15
                               44\t 8\t 52\n"
                + "Jasim\t\t\t
                               50\t 6\t 56\n"
17
                + "Tariq\t\t\t
                               40\t 8\t 48\n");
      }
21
```

	Console ×	₽roblems	🛚 Debu	ıg Shell			
<t< th=""><th colspan="7"><terminated> Q1 [Java Application] C:\Users\Hayan\.p2\p</terminated></th></t<>	<terminated> Q1 [Java Application] C:\Users\Hayan\.p2\p</terminated>						
///	///////////////////////////////////////	/////////\	///////	11111111			
==	== Student Points ==						
///	///////////////////////////////////////						
Nar	ie .		Lab	Bonus	Total		
Hay	⁄an		50	10	60		
Sar	ier		48	8	56		
Mal	ier		44	8	52		
Jas	im		50	6	56		
Tai	`iq		40	8	48		

Q-2 Khalid and Turkey are siblings. In two years, Khalid will be four years younger than three time's Turkey's current age. Fill in the blanks of the following code to find Khalid's current age based on Turkey's current age.

```
🛺 *Q2.java 🗙
  1 package lab.assignment;
  2 import java.util.Scanner;
  4 public class Q2 {
        public static void main(String[] args) {
            int khalidAge = 0;
            int turkeyAge = 0;
<u>a</u> 8
            Scanner scan = new Scanner(System.in);
            System.out.print("What is Turkey's current age? ");
            turkeyAge = scan.nextInt();
 11
            khalidAge = (turkeyAge*3)-6;
            System.out.println("If Turkey is " + turkeyAge + " then Khalid must be " +
 12
 13
            khalidAge + ".");
        }
 15 }
```

```
Console ➤ Problems □ Debug Shell
<terminated > Q2 [Java Application] C:\Users\Haya
What is Turkey's current age? 10
If Turkey is 10 then Khalid must be 24.
```

Q-3 The following program reads three integers and prints the average. Fill in the blanks so that it will work correctly.

Sample Output

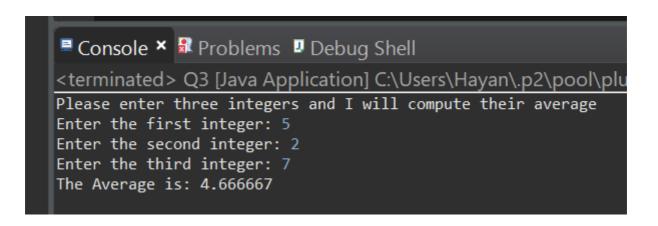
```
Please enter three integers and I will compute their average.
Enter the first value: 5
Enter the second value: 2
Enter the third value: 7
The average is 4.666666666666667.
```

```
package lab.assignment;
import java.util.Scanner;

public class Q3

function to a public static void main(String[] args)

function to a public static v
```



Q_4 Write an application that asks the user to enter two integers, obtains them from the user and displays the larger number followed by the words "is larger". If the numbers are equal, print the message "These numbers are equal."

Sample Output

```
Enter first integer: 23
Enter second integer: 89
Enter second integer: 89
Enter second integer: 43
Enter second integer: 43
Enter second integer: 43
Enter first integer: 89
Enter second integer: 23
89 is larger

Enter first integer: 89
Enter second integer: 23
89 is larger
```

```
■ Q4.java × □ Q5.java □ Q6.java □ Q7.java
🛂 inputs.java 🔛 Q2.java
  1 package lab.assignment;
  2 import java.util.Scanner;
  4 public class Q4 {
  60
        public static void main(String[] args) {
            int val1, val2;
<u>8</u>
            Scanner sc = new Scanner(System.in);
            System.out.print("Enter first integer: "); val1 = sc.nextInt();
            System.out.print("Enter second integer: "); val2 = sc.nextInt();
 10
 11
            if (val1 > val2) { int larger = val1;
 12
 13
                    System.out.printf("%d is larger", larger); }
 14
 15
            else if (val2 > val1) { int larger = val2;
                System.out.printf("%d is larger", larger); }
 17
            else {System.out.printf("These numbers are equal");}
 20 }
 21
```

Q_5 Write an app that reads an integer, then determines and displays whether it's odd or even. [*Hint:* Use the remainder operator. An even number is a multiple of 2. Any multiple of 2 leaves a remainder of 0 when divided by 2]

Sample Output

```
Enter an integer: 4
Number 4 is even

Enter an integer: 7
Number 7 is odd
```

```
🛂 Q2.java 👊 Q4.java 👊 Q5.java 🔨 🛂 Q6.java
🛂 inputs.java
                                                                  Q/.java
  1 package lab.assignment;
    import java.util.Scanner;
    public class Q5 {
  70
        public static void main(String[] args) {
            Scanner sc = new Scanner(System.in);
8
            System.out.print("Enter an integer: "); int val = sc.nextInt();
 10
            if (val % 2 == 0) {System.out.printf("Number %d is even", val); }
 11
 12
            else {System.out.printf("Number %d is odd", val); }
 13
 14
```

Q 6 What is output by the following program?

```
public class Compares
2
    {
       public static void main( String args[] )
3
4
       {
5
          int x = 3;
6
          int y = 9;
7
          int z = 77;
8
9
          if (z == 77)
10
             System.out.print( "H" );
П
          if (z == 99)
12
13
             System.out.print( "M" );
14
15
          if (z < x)
             System.out.print( "J" );
16
17
          System.out.print( "E" );
18
19
          if (y == (x * x))
20
21
             System.out.print( "LL" );
22
23
          System.out.print( "0" );
24
25
          if (x == y)
             System.out.print( "W" );
26
27
       }
28 }
```

Answer:

HELLO

```
Q-7 Assuming that x=2 and y=3, what does each of the following statements display?
```

- a) System.out.printf(" $x = %d\n$ ", x);
- b) System.out.printf("Value of %d + %d is %d\n", x, x, (x + x));
- c) System.out.printf(" $x = \n$ ");
- d) System.out.printf("%d = %d\n", (x + y), (y + x))

```
a) x=2
b) Value of 2 + 2
c) x=
d) 5=5
```