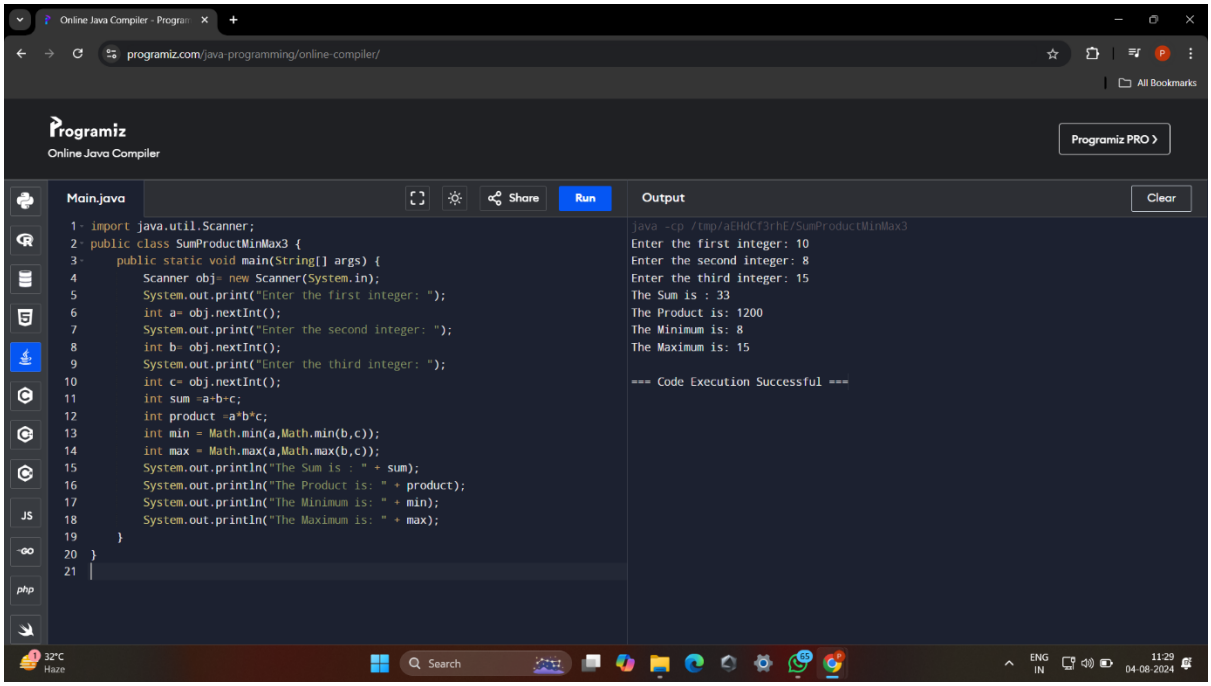
1. Write a program called SumProductMinMax3 that prompts user for three integers. The program shall read the inputs as int; compute the sum, product, minimum and maximum of the three integers; and print the results

```
import java.util.Scanner;
public class SumProductMinMax3 {
    public static void main(String[] args) {
        Scanner obj= new Scanner(System.in);
        System.out.print("Enter the first integer: ");
        int a= obj.nextInt();
        System.out.print("Enter the second integer: ");
        int b= obj.nextInt();
        System.out.print("Enter the third integer: ");
        int c= obj.nextInt();
        int sum =a+b+c;
        int product =a*b*c;
        int min = Math.min(a,Math.min(b,c));
        int max = Math.max(a,Math.max(b,c));
        System.out.println("The Sum is : " + sum);
        System.out.println("The Product is: " + product);
        System.out.println("The Minimum is: " + min);
        System.out.println("The Maximum is: " + max);
    }
}
```



2. Calculate BMI Using Java

The user enters his height (in inches) and weight (in pounds). The variables passed by the user are assigned to the float type. After calculating the BMI value, the value will be assigned to the appropriate range and the correct message will appear on the console. You can use the if-else-if ladder for printing the message on the console.

Intervals of BMI index:

16.00 or less = starvation

16.00-16.99 = emaciation

17.00-18.49 = underweight

18.50-22.99 = normal, low range

23.00-24.99 = normal high range

25.00-27.49 = overweight low range

27.50-29.99 = overweight high range

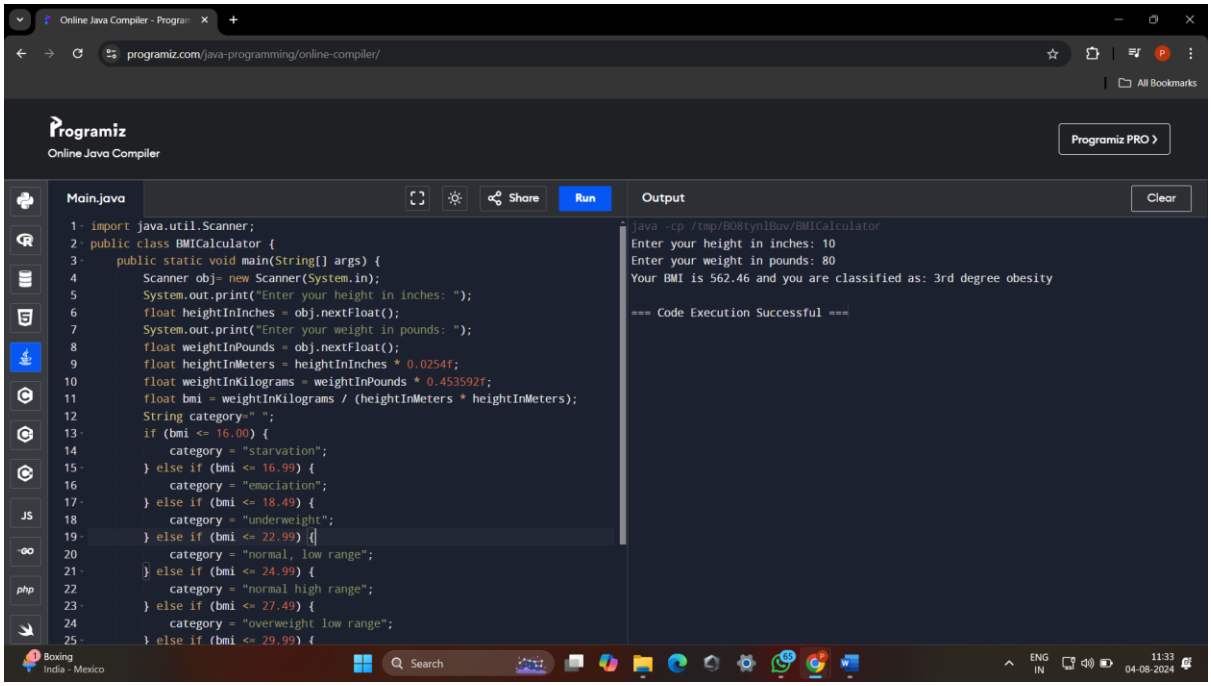
30.00-34.99 = 1st degree obesity

35.00-39.99 = 2nd degree obesity

40.00 or above = 3rd degree obesity

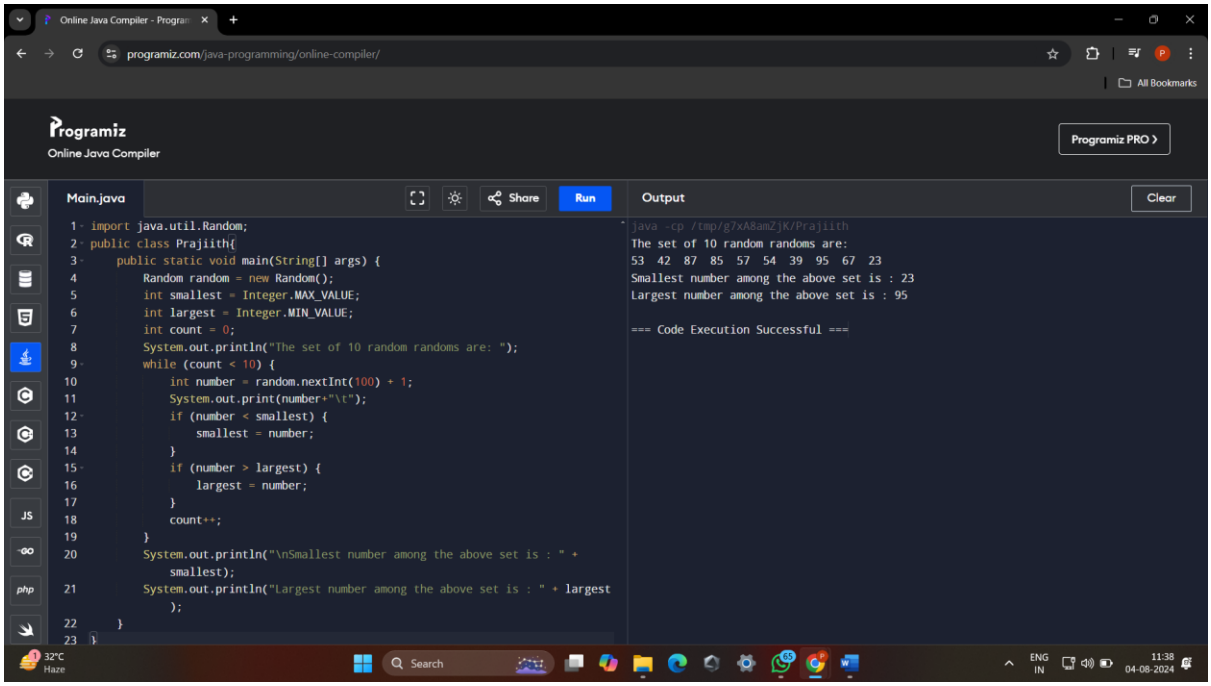
```
 import java.util.Scanner;
public class BMICalculator {
    public static void main(String[] args) {
        Scanner obj= new Scanner(System.in);
        System.out.print("Enter your height in inches: ");
        float heightInInches = obj.nextFloat();
        System.out.print("Enter your weight in pounds: ");
        float weightInPounds = obj.nextFloat();
        float heightInMeters = heightInInches * 0.0254f;
        float weightInKilograms = weightInPounds * 0.453592f;
        float bmi = weightInKilograms / (heightInMeters * heightInMeters);
        String category=" ";
        if (bmi <= 16.00) {
            category = "starvation";
        } else if (bmi <= 16.99) {
            category = "emaciation";
        } else if (bmi <= 18.49) {
            category = "underweight";
        } else if (bmi <= 22.99) {
            category = "normal, low range";
        } else if (bmi <= 24.99) {
            category = "normal high range";
        } else if (bmi <= 27.49) {
            category = "overweight low range";
        } else if (bmi <= 29.99) {
            category = "overweight high range";
        } else if (bmi <= 34.99) {
            category = "1st degree obesity";
        } else if (bmi <= 39.99) {
```

```
            category = "2nd degree obesity";
        } else {
            category = "3rd degree obesity";
        }
        System.out.printf("Your BMI is %.2f and you are classified as: %s%n", bmi, category);
    }
}
```



3. Write a program that will use the while loop to find the largest and smallest number from the set of 10 randomly drawn integers from 1 to 100. In this task, do not use arrays or other collections.

```
import java.util.Random;

public class Prajiith{

   public static void main(String[] args) {

      Random random = new Random();

      int smallest = Integer.MAX_VALUE;

      int largest = Integer.MIN_VALUE;

      int count = 0;

      System.out.println("The set of 10 random randoms are: ");

      while (count < 10) {

         int number = random.nextInt(100) + 1;

         System.out.print(number+"\t");

         if (number < smallest) {

            smallest = number;

         }

         if (number > largest) {

            largest = number;

         }

         count++;

      }

      System.out.println("\nSmallest number among the above set is : " + smallest);

      System.out.println("Largest number among the above set is : " + largest);

   }

}
```


Online Java Compiler - Progra
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Main.java
Share
Run
Output
Clear
1 import java.util.Random;
2 public class Prajiith{
3 public static void main(String[] args) {
4 Random random = new Random();
5 int smallest = Integer.MAX_VALUE;
6 int largest = Integer.MIN_VALUE;
7 int count = 0;
8 System.out.println("The set of 10 random randoms are: ");
9 while (count < 10) {
10 int number = random.nextInt(100) + 1;
11 System.out.print(number+"\t");
12 if (number < smallest) {
13 smallest = number;
14 }
15 if (number > largest) {
16 largest = number;
17 }
18 count++;
19 }
20 System.out.println("\nSmallest number among the above set is : " +
smallest);
21 System.out.println("Largest number among the above set is : " + largest
);
22 }
23 }
java -cp /tmp/g7xA8amZjK/Prajiith
The set of 10 random randoms are:
53 42 87 85 57 54 39 95 67 23
Smallest number among the above set is : 23
Largest number among the above set is : 95
=== Code Execution Successful ===
32°C
Haze
Search
ENG
IN
11:38
04-08-2024