Rajalakshmi Engineering College

Name: varsha s
Email: 241501237@rajalakshmi.edu.in
Roll no:
Phone: 9342191041
Branch: REC
Department: AI & ML - Section 1
Batch: 2028
Degree: B.E - AI & ML

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 2_Q3

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

John is a fitness trainer, and he wants to use the BMI calculator to assess the body mass index of his clients. He has a list of clients based on their height and weight.

John plans to write a program to quickly determine the BMI and provide a classification for each client.

If BMI is less than 18.5, the program will classify it as "Underweight"If BMI is between 18.6 and 24.9, the program will classify it as "Normal Weight"If BMI is between 25.0 and 29.9, the program will classify it as "Overweight"If BMI is 30.0 or higher, the program will classify it as "Obese"

Note: Formula to calculate BMI = weight/(height*height)

Input Format

The first line of input consists of a double value, representing the height of the person in meters.

The second line consists of a double value, representing the weight of the person in kilograms.

Output Format

The first line of output prints "BMI: " followed by a double (rounded to two decimal places) representing the calculated BMI.

The second line prints "Classification: " followed by a string indicating the BMI category (Underweight, Normal Weight, Overweight, or Obese).

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 1.2
45.2

Output: BMI: 31.39
Classification: Obese

Answer

```
import java.util.Scanner;
 class BMICalculator {
   public static void main(String[] args) {
      Scanner scanner = new Scanner(System.in);

      // Read height and weight
      double height = scanner.nextDouble();
      double weight = scanner.nextDouble();

      // Calculate BMI
      double bmi = weight / (height * height);

      // Determine classification
      String classification;
      if (bmi < 18.5) {
         classification = "Underweight";
```

```
        } else if (bmi >= 18.6 && bmi <= 24.9) {
            classification = "Normal Weight";
        } else if (bmi >= 25.0 && bmi <= 29.9) {
            classification = "Overweight";
        } else {
            classification = "Obese";
        }

        // Print output with 2 decimal places
        System.out.printf("BMI: %.2f Classification: %s%n", bmi, classification);

        scanner.close();
    }
}
```

Status : Correct ***Marks : 10/10***