Rajalakshmi Engineering College

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 2_MCQ

Attempt : 1
Total Mark : 15
Marks Obtained : 15

Section 1 : MCQ

1. What will be the output of the following code?

```java
class LoopTest {
    public static void main(String[] args) {
        int i = 1;
        do {
            System.out.print(i + " ");
            i *= 2;
        } while (i <= 8);
    }
}
```

Answer

1 2 4 8

Status : Correct   *Marks : 1/1*

2. What will be the output of the following code?

```java
public class Main {
    public static void main(String[] args) {
        int i = 10;
        do {
            System.out.print(i + " ");
            i -= 3;
        } while(i > 0);
    }
}
```

Answer

10 7 4 1

Status : Correct   *Marks : 1/1*

3. What will be the output of the following code?

```java
class Test {
    public static void main(String[] args) {
        int a = 4, b = 5;
        if ((a + b) % 2 == 0)
            System.out.print("Even");
        else
            System.out.print("Odd");
    }
}
```

Answer

Odd

Status : Correct   *Marks : 1/1*

4. What will be the output of the following code?

```java
public class Main {
    public static void main(String[] args) {
        int i = 1;
```

```
    while(i < 10) {
        i += 2;
    }
    System.out.println(i);
  }
}
```

Answer

11

Status : Correct   *Marks : 1/1*

5. What will be the output of the following Java code snippet?

```
public class Main {
    public static void main(String[] args) {
        int score = 75;
        if(score >= 90) {
            System.out.println("Grade: A");
        } else if(score >= 80) {
            System.out.println("Grade: B");
        } else if(score >= 70) {
            System.out.println("Grade: C");
        } else {
            System.out.println("Grade: D");
        }
    }
}
```

Answer

Grade: C

Status : Correct   *Marks : 1/1*

6. What will be the output of the following code?

```
class LoopTest {
    public static void main(String[] args) {
        int i = 1;
```

```
    while (i > 0) {
        System.out.print(i + " ");
        i++;
        if (i == 5) break;
    }
  }
}
```

Answer

1 2 3 4

Status : Correct   *Marks : 1/1*

7. What will be the output of the following code?

```
public class Main {
    public static void main(String[] args) {
        int sum = 0;
        for(int i = 1; i <= 5; i++) {
            sum += i;
        }
        System.out.println(sum);
    }
}
```

Answer

15

Status : Correct   *Marks : 1/1*

8. What will be the output of the following code?

```
class ConditionTest {
    public static void main(String[] args) {
        int x = 10;
        if (x > 5)
            System.out.print("High");
    }
}
```

Answer

High

Status : Correct   *Marks : 1/1*

9. What will be the output of the following code?

```
class Test {
   public static void main(String[] args) {
      int num = 15;
      if (num > 10)
         if (num % 3 == 0)
             System.out.print("Divisible");
         else
             System.out.print("Not Divisible");
   }
}
```

Answer

Divisible

Status : Correct   *Marks : 1/1*

10. What will be the output of the following code?

```
class ConditionTest {
   public static void main(String[] args) {
      int a = 7;
      if (a == 7)
         System.out.print("Match");
      else
         System.out.print("No Match");
   }
}
```

Answer

Match

Status : Correct   *Marks : 1/1*

11. What will be the output of the following Java code snippet?

```java
public class Main {
    public static void main(String[] args) {
        int day = 4;
        String result = "";
        switch(day) {
            case 1:
                result = "Monday";
                break;
            case 2:
                result = "Tuesday";
                break;
            case 3:
                result = "Wednesday";
                break;
            default:
                result = "Other Day";
        }
        System.out.println(result);
    }
}
```

Answer

Other Day

Status : Correct   *Marks : 1/1*

12. What will be the output of the following code?

```java
public class Main {
    public static void main(String[] args) {
        for(int i = 1; i <= 20; i = i * 2) {
            System.out.print(i + " ");
        }
    }
}
```

Answer

1 2 4 8 16

Status : Correct   *Marks : 1/1*

13. What will be the output of the following code?

```java
class Loop {
  public static void main(String[] args) {
    for (int i = 1; i <= 3; i++) {
      for (int j = 1; j <= 2; j++) {
        System.out.print(i + "" + j + " ");
      }
    }
  }
}
```

Answer

11 12 21 22 31 32

Status : Correct   *Marks : 1/1*

14. What will be the output of the following code?

```java
class Test {
  public static void main(String[] args) {
    int x = 5, y = 2;
    if (x + y == 10)
      System.out.print("Ten");
    else if (x - y == 3)
      System.out.print("Three");
    else
      System.out.print("None");
  }
}
```

Answer

Three

Status : Correct   *Marks : 1/1*

15. What will be the output of the following code?

```java
class Main {
    public static void main(String[] args) {
        for (int i = 5; i > 0; i--) {
            System.out.print(i + " ");
        }
    }
}
```

Answer

5 4 3 2 1

Status : Correct   *Marks : 1/1*

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 2_Q1

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

Arun is working on a project to automate the process of determining whether a student has passed or failed based on their subject marks.

He aims to create a simple program that takes positive integers as marks for five subjects from the user. If the average of the marks is greater than or equal to 50, the student has passed the exam. Otherwise, the student has failed.

Help Arun to implement the project.

Input Format

The input consists of five space-separated integers, representing the marks in five subjects.

Output Format

The first line of output prints "Average score: " followed by an integer representing the average score.

The second line prints one of the following:

1. If the condition is satisfied, print "The student has passed".
2. Otherwise, the output prints "The student has failed".

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 50 60 70 80 90

Output: Average score: 70
The student has passed

Answer

```java
// You are using Java
import java.util.*;

public class Main{
    public static void main(String args[]){
        int s1,s2,s3,s4,s5;
        Scanner scanner = new Scanner (System.in);
        s1 = scanner.nextInt();
        s2 = scanner.nextInt();
        s3 = scanner.nextInt();
        s4 = scanner.nextInt();
        s5 = scanner.nextInt();
        double avg = (s1+s2+s3+s4+s5) / 5;
        System.out.println("Average score: " + (int)avg);
        if (avg >= 50){
            System.out.println("The student has passed");
        }
        else{
            System.out.println("The student has failed");
        }
    }
}
```

}

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 2_Q2

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

Samantha is a diligent math student who is exploring the world of programming. She is learning Java and has recently studied conditional statements. One day, her teacher gives her an interesting problem to solve, which takes a number as input and checks whether it is a multiple of 5 or 7.

Help her complete the task.

Input Format

The input consists of a single integer N, representing the number to be checked.

Output Format

If the number is a multiple of 5 but not 7, the output prints "N is a multiple of 5".

If the number is a multiple of 7, the output prints "N is a multiple of 7".

Otherwise the output prints "N is neither multiple of 5 nor 7" where N is an entered integer.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 10
Output: 10 is a multiple of 5

Answer

```java
// You are using Java
import java.util.*;

public class Main{
    public static void main(String args[]){
        Scanner scanner = new Scanner(System.in);
        int N = scanner.nextInt();
        if ((N%5==0) && (N%7!=0)){
            System.out.println(N+" is a multiple of 5");
        }
        else if ((N%5!=0) && (N%7==0)){
            System.out.println(N+" is a multiple of 7");
        }
        else if ((N%5!=0) && (N%7!=0)){
            System.out.println(N+" is neither multiple of 5 nor 7");
        }
    }
}
```

Status : Correct   *Marks : 10/10*

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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

```java
// You are using Java
import java.util.*;

public class Main{
    public static void main(String args[]){
        double height,weight;
        Scanner scanner = new Scanner (System.in);
        height = scanner.nextFloat();
        weight = scanner.nextFloat();
        double bmi = (double) (weight)/(height*height);
        System.out.printf("BMI: %.2f\n" , bmi);
        if (bmi<18.5){
            System.out.println("Classification: Underweight");
        }
        else if (bmi>18.6 && bmi<24.9){
            System.out.println("Classification: Normal Weight");
        }
```

```java
        else if (bmi>25.0 && bmi<29.9){
            System.out.println("Classification: Overweight");
        }
        else{
            System.out.println("Classification: Obese");
        }
    }
}
```

Status : Correct   *Marks : 10/10*

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 2_Q4

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1.   Problem Statement

Amit wants to evaluate the depreciation of his car over time to understand its current value and categorize it based on that value.

Write a program that helps him determine the current value of his car after a certain number of years of depreciation and classify it into one of three categories:

High: If the current value is greater than 10,000.Medium: If the current value is between 5,000 and 10,000, both inclusive.Low: If the current value is less than 5,000.

The depreciation rate of the car is 15% per year. The program should calculate the current value of the car after applying this depreciation over the given number of years and print the current value along with the category.

Input Format

The first line of input consists of an integer, representing the initial cost of the car.

The second line consists of an integer, representing the number of years the car has been depreciating.

Output Format

The first line of output prints a double value, representing the current value of the car, rounded off to two decimal places "Current Value: <value>".

The second line prints its category "Category: <categories>".

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 20000
5
Output: Current Value: 8874.11
Category: Medium

Answer

```java
// You are using Java
import java.util.*;

public class Main{
    public static void main(String args[]){
        Scanner scanner = new Scanner (System.in);
        int inicost = scanner.nextInt();
        int year = scanner.nextInt();
        double cur = inicost;
        while(year>0){
            cur-=0.15*cur;
            year--;
        }
        System.out.printf("Current Value: %.2f\n",cur);
        if (cur>10000){
            System.out.println("Category: High");
```

```
        }
        else if (cur>=5000 && cur<=10000){
            System.out.println("Category: Medium");
        }
        else if(cur<5000){
            System.out.println("Category: Low");
        }
    }
}
```

Status : Correct   *Marks : 10/10*

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 2_Q5

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1.   Problem Statement

Ted, the computer science enthusiast, has accepted the challenge of writing a program that checks if the number of digits in an integer matches the sum of its digits.

Guide Ted in designing and writing the code to solve this problem using a 'do-while' loop.

Input Format

The input consists of an integer N, representing the number to be checked.

Output Format

If the sum is equal to the number of digits, print "The number of digits in N matches the sum of its digits."

Else, print "The number of digits in N does not match the sum of its digits."

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 20
Output: The number of digits in 20 matches the sum of its digits.

Answer

```java
// You are using Java
import java.util.*;

public class Main{
    public static void main(String args[]){
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        int k = n;
        int sum=0, num_of_digits=0, digit=0,temp=n;

        do{
            digit=temp%10;
            sum+=digit;
            num_of_digits++;
            temp/=10;

        }while(temp!=0);

        if (sum==num_of_digits){
            System.out.println("The number of digits in "+k+" matches the sum of its
digits.");
        }
        else{
            System.out.println("The number of digits in "+k+" does not match the sum
of its digits.");
        }
    }
}
```

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 2_Q6

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

Maya, a student in an arts and crafts class, wants to create a pattern using stars (*) in a specific format. She plans to use a program to help her construct the pattern.

Write a program that takes an integer as input and constructs the following pattern using nested for loops.

Input: 5

Output:

*

**

```
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

Input Format

The input consists of a number (integer) representing the number of rows.

Output Format

The output displays the required pattern.

Refer to the sample output for the formatting specifications.

Sample Test Case

```
Input: 5
Output: *
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

Answer

```java
// You are using Java
import java.util.*;

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

```java
Scanner sc= new Scanner(System.in);
int n = sc.nextInt();
for (int i =0;i<n;i++){
    for(int j=0;j<=i;j++){
        System.out.print("* ");
    }
    System.out.println();
}
for (int i =n-1;i>0;i--){
    for(int j=i;j>0;j--){
        System.out.print("* ");
    }
    System.out.println();
}
sc.close();

    }
}
```

Status : Correct   *Marks : 10/10*

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 2_PAH

Attempt : 1
Total Mark : 40
Marks Obtained : 40

Section 1 : Coding

1. Problem Statement

Sampad is a high school teacher who wants to convert numeric grades into letter grades.

Write a program that accepts a numeric grade as input. The program should then convert this numeric grade into a letter grade based on specific conditions. The letter grades are A, B, C, D and F.

The conversion is determined by the following conditions:

If the numeric grade is 90 or higher, it's an "A"If the numeric grade is between 80 and 89 (inclusive), it's a "B"If the numeric grade is between 70 and 79 (inclusive), it's a "C"If the numeric grade is between 60 and 69 (inclusive), it's a "D"If the numeric grade is below 60, it's an "F"

Input Format

The input consists of an integer representing the numeric grade of the student.

Output Format

The output prints the letter grade corresponding to the input numeric grade as "Letter Grade: <grade>".

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: 85
Output: Letter Grade: B

Answer

```java
// You are using Java
import java.util.*;

public class Main{
    public static void main(String args[]){
        Scanner scanner = new Scanner(System.in);
        int marks=scanner.nextInt();
        if(marks>=90){
            System.out.println("Letter Grade: A");
        }
        else if(marks>=80 && marks<=89){
            System.out.println("Letter Grade: B");
        }
        else if(marks>=70 && marks<=79){
            System.out.println("Letter Grade: C");
        }
        else if(marks>=60 && marks<=69){
            System.out.println("Letter Grade: D");
        }
        else if(marks<60){
            System.out.println("Letter Grade: F");
        }
    }
}
```

Status : Correct   *Marks : 10/10*

2. Problem Statement

Ravi wants to estimate the total utility bill for a household based on the consumption of electricity, water, and gas.

Write a program to calculate the total bill using the following criteria:

The cost per unit for electricity is 0.12, for water is 0.05, and for gas is 0.08.A discount is applied to the total cost based on the following conditions:If the total cost is 100 or more, a 10% discount is applied.If the total cost is between 50 and 99.99, a 5% discount is applied.No discount is applied if the total cost is less than 50.

The program should output the total bill after applying the discount with two decimal places.

Input Format

The input consists of three double values, representing the number of units consumed for electricity, water, and gas respectively.

Output Format

The output prints a double value, representing the total bill after applying the discount, formatted to two decimal places.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 1000.0
200.0
100.0
Output: 124.20

Answer

```java
// You are using Java
import java.util.*;

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

```java
Scanner scanner = new Scanner(System.in);
double electricity=0.12,water=0.05,gas=0.08,total_cost,discount,e,w,g;
e=scanner.nextFloat();
w=scanner.nextFloat();
g=scanner.nextFloat();
total_cost=(electricity*e)+(water*w)+(gas*g);
if(total_cost>=100){
    discount=total_cost-(total_cost*0.1);
}
else if(total_cost>=50 && total_cost<99.99){
    discount=total_cost-(total_cost*0.05);
}
else{
    discount=total_cost;
}
    System.out.printf("%.2f",discount);
  }
}
```

Status : Correct   *Marks : 10/10*

3. Problem Statement

Rohit is tasked with designing a program to analyze the digits of a given integer.

Write a program to help Rohit that takes an integer as input and identifies the minimum odd digit and the maximum even digit present in the number. If no odd or even digits are present, display appropriate messages.

Implement the solution using a 'while' loop to iterate through the digits of the given number.

Input Format

The input consists of an integer n.

Output Format

The first line of output prints the message "Minimum odd digit: " followed by an integer representing the smallest odd digit found in the input number.

If no odd digit exists, it prints "There are no odd digits in the number."

The second line of output prints the message "Maximum even digit: " followed by an integer representing the largest even digit found in the input number.

If no even digit exists, it prints "There are no even digits in the number."

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 3465
Output: Minimum odd digit: 3
Maximum even digit: 6

Answer

```java
// You are using Java
import java.util.*;

public class Main{
    public static void main(String args[]){
        Scanner scanner = new Scanner(System.in);
        int n=scanner.nextInt();
        int temp = n,digit;
        int max=-1, min = 1000000;
        boolean foundOdd=false,foundEven=false;
        while(temp>0){
            digit=temp%10;
            if (digit%2==0){
                if(digit>max){
                    max=digit;
                }
                foundEven = true;
            }
            else{
                if(digit<min){
                    min=digit;
                }
                foundOdd = true;
            }
```

```
        temp=temp/10;
    }
    if(foundOdd){

        System.out.println("Minimum odd digit: " + min);
    }
    else{
        System.out.println("There are no odd digits in the number.");
    }
    if(foundEven)
        System.out.println("Maximum even digit: "+max);
    else{
        System.out.println("There are no even digits in the number.");
    }
  }
}
```

Status : Correct   *Marks : 10/10*

4. Problem Statement

You are given a number of distribution centers (rows) and are tasked with generating a zigzag shipment route pattern. Each shipment route should alternate between left-to-right and right-to-left, as described below.

The program should print the zigzag pattern with a tab (\t) separating the columns. For each row, the shipment numbers should follow a diagonal pattern where numbers are placed in a zigzag, left to right on odd rows and right to left on even rows.

Input Format

The input consists of an integer N, which represents the number of distribution centers (rows) for the zigzag pattern.

Output Format

The output prints the zigzag pattern with N rows, formatted with a tab space (\t) separating the columns.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 5

Output: 1
    2   6
   3   7   10
  4   8   11   13
5   9   12   14   15

Answer

```java
// You are using Java
import java.util.*;

public class Main{
    public static void main(String args[]){
        Scanner sc = new Scanner(System.in);
        int n= sc.nextInt();
        int s=n,nn=1,ii=n-1;
        for (int i=1;i<=n;i++){
            for(int j=1;j<s;j++){
                System.out.print("\t");
            }
            for(int k=1;k<=i;k++){
                System.out.print(nn);
                System.out.print("\t\t");
                nn+=ii;
                ii--;
            }
            nn=i+1;
            ii=n-1;
            System.out.println();
            s--;
        }
    }
}
```

Status : Correct   *Marks : 10/10*

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 2_CY

Attempt : 1
Total Mark : 40
Marks Obtained : 40

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

```java
// You are using Java
import java.util.*;

public class Main{
    public static void main(String args[]){
        Scanner scanner = new Scanner(System.in);
        double height=scanner.nextFloat();
        double weight=scanner.nextFloat();
        double bmi = weight/(height*height);
        System.out.printf("BMI: %.2f\n",bmi);
        if(bmi<18.5){
            System.out.println("Classification: Underweight");
        }
        else if(bmi>18.6 && bmi<24.9){
            System.out.println("Classification: Normal Weight");
        }
        else if(bmi>25.0 && bmi<29.9){
```

```java
        System.out.println("Classification: Overweight");
      }
      else if(bmi>30.0){
        System.out.println("Classification: Obese");
      }
    }
}
```

Status : Correct   *Marks : 10/10*

2. Problem Statement

Ram wants to evaluate the time required to break even on an investment based on initial costs, monthly profits, and monthly expenses. Write a program to calculate the break-even point in months and categorize the return on investment.

Compute the break-even point by using the formula: initial cost / (monthly profit - monthly expenses)Based on the break-even point, classify the return on investment into one of the following categories:Quick Return: If the break-even point is 3 months or fewer.Average Return: If the break-even point is between 4 and 12 months, inclusive.Long-term Return: If the break-even point exceeds 12 months.

Ram is new to programming, so he seeks your assistance in creating the program.

Note: monthly profit is always greater than monthly expenses.

Input Format

The first line of input consists of a double value representing the initial cost.

The second line consists of a double value representing the monthly profit.

The third line consists of a double value representing the monthly expenses.

Output Format

The first line prints "Break-even Point:", followed by the break-even point as a decimal number (of double datatype), formatted to two decimal places.

The second line prints "Category: ",followed by the investment return as a String, which can be one of:

- "Quick Return" if break-even point ≤ 3
- "Average Return" if break-even point ≤ 12
- "Long-term Return" if break-even point > 12

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 10000.50
5000.75
1000.10
Output: Break-even Point: 2.50
Category: Quick Return

Answer

```java
// You are using Java
import java.util.*;

public class Main{
    public static void main(String args[]){
        Scanner scanner=new Scanner(System.in);
        double ini=scanner.nextFloat();
        double profit = scanner.nextFloat();
        double monthexp=scanner.nextFloat();
        double bken=ini/(profit-monthexp);
        System.out.printf("Break-even Point: %.2f\n",bken);
        if(bken<=3){
            System.out.println("Category: Quick Return");
        }
        if(bken<=12 && bken>3){
            System.out.println("Category: Average Return");
        }
        if(bken>12){
            System.out.println("Category: Long-term Return");
        }

    }
```

}

3. Problem Statement

Samantha is a diligent math student who is exploring the world of programming. She is learning Java and has recently studied conditional statements. One day, her teacher gives her an interesting problem to solve, which takes a number as input and checks whether it is a multiple of 5 or 7.

Help her complete the task.

Input Format

The input consists of a single integer N, representing the number to be checked.

Output Format

If the number is a multiple of 5 but not 7, the output prints "N is a multiple of 5".

If the number is a multiple of 7, the output prints "N is a multiple of 7".

Otherwise the output prints "N is neither multiple of 5 nor 7" where N is an entered integer.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 10
Output: 10 is a multiple of 5

Answer

```java
// You are using Java
import java.util.*;

public class Main{
```

```
    public static void main(String args[]){
        Scanner scanner = new Scanner(System.in);
        int n = scanner.nextInt();

        if (n%5==0 && n%7!=0){
            System.out.println(n+" is a multiple of 5");
        }

        if (n%5!=0 && n%7==0){
            System.out.println(n+" is a multiple of 7");
        }

        if (n%5!=0 && n%7!=0){
            System.out.println(n+" is neither multiple of 5 nor 7");
        }
    }
}
```

Status : Correct   *Marks : 10/10*

4. Problem Statement

Ted, the computer science enthusiast, has accepted the challenge of
writing a program that checks if the number of digits in an integer matches
the sum of its digits.

Guide Ted in designing and writing the code to solve this problem using a
'do-while' loop.

Input Format

The input consists of an integer N, representing the number to be checked.

Output Format

If the sum is equal to the number of digits, print "The number of digits in N
matches the sum of its digits."

Else, print "The number of digits in N does not match the sum of its digits."

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 20
Output: The number of digits in 20 matches the sum of its digits.

Answer

```java
// You are using Java
import java.util.*;

public class Main{
    public static void main(String args[]){
        Scanner scanner = new Scanner(System.in);
        int n = scanner.nextInt();
        int sum_of_digits=0,temp,k=n,num_of_digits=0;
        do{
            temp=n%10;
            num_of_digits++;
            sum_of_digits+=temp;
            n=n/10;

        }while(n!=0);
        if (num_of_digits==sum_of_digits)
        System.out.println("The number of digits in " + k + " matches the sum of its digits.");
        else
        System.out.println("The number of digits in " + k + " does not match the sum of its digits.");
    }
}
```

Status : Correct   *Marks : 10/10*