

Java Programming Assignment

Topic: Conditional Statements & Loops

Section A: Conditional Statements

Instructions: Solve the following problems using Java conditional statements. Write the complete program along with sample inputs and outputs.

1. Write a Java program to find the maximum between two numbers.
 2. Write a Java program to find the maximum between three numbers.
 3. Write a Java program to check whether a number is negative, positive, or zero.
 4. Write a Java program to check whether a number is divisible by 5 and 11 or not.
 5. Write a Java program to check whether a number is even or odd.
 6. Write a Java program to check whether a year is a leap year or not.
 7. Write a Java program to input marks of five subjects: Physics, Chemistry, Biology, Mathematics, and Computer. Calculate the percentage and grade according to the following criteria:
 - Percentage $\geq 90\%$: Grade A
 - Percentage $\geq 80\%$: Grade B
 - Percentage $\geq 70\%$: Grade C
 - Percentage $\geq 60\%$: Grade D
 - Percentage $\geq 40\%$: Grade E
 - Percentage $< 40\%$: Grade F
 8. Write a Java program to input the basic salary of an employee and calculate its Gross salary according to the following:
 - Basic Salary ≤ 10000 : HRA = 20%, DA = 80%
 - Basic Salary ≤ 20000 : HRA = 25%, DA = 90%
 - Basic Salary > 20000 : HRA = 30%, DA = 95%
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Section B: Loop Practice Exercises

Instructions: Solve the following problems using loops. Write the complete program along with sample inputs and outputs.

1. Write a Java program to print the first 10 natural numbers using a while loop.
2. Write a Java program to calculate the sum of all numbers from 1 to a given number (n).
3. Write a Java program to print the multiplication table of a given number.
4. Write a Java program to count the total number of digits in a number.
5. Write a Java program to print the following number pattern:

1

22

333

4444

55555

6. Write a Java program to display numbers from -10 to -1 using both for loop and while loop.
7. Write a Java program to display all prime numbers within a given range.
8. Write a Java program to display the Fibonacci series up to 10 terms.
9. Write a Java program to find the factorial of a given number.
10. Write a Java program to reverse a given integer number.
11. Write a Java program to calculate the cube of all numbers from 1 to a given number.
12. Write a Java program to find the sum of the series up to n terms.