

Object Oriented Programming Using Java

Assignment - 2

Class, Object, User Input, and Math

1. Write a Java program to display greetings message for a user. Take the username as input at run time. Define a method **public void greet (String name)** to perform the operation.
2. Write a Java program to take two numbers x and y as input and perform the following operation using the Math library.
 - a. Find the maximum between x and y
 - b. Find the minimum between x and y
 - c. Find x^y
 - d. Find \sqrt{x}
 - e. Generate a random number between 10 and 100
3. Write a Java program to perform the operation of a simple calculator (+, -, *, and /) using a switch case statement. Input two operands and the operator at the run time.
4. Write a Java program to display the prime numbers between x and y where both x and y is inclusive.
5. Write a Java program to find the sum of the following series. Take the value of x and n is user input.

$$1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^4}{4!} + \dots \dots \frac{x^n}{n!}$$

6. Write a Java program to check if a number is palindrome or not. Write a user-defined function **public boolean isPalindrome(int num)**, which will return true if the given number is palindrome and false otherwise. Take the number as input at runtime in the main method and pass it to the isPalindrome method.
7. Write a Java program to find the factorial of a given number using recursion.