OBJECT ORIENTED PROGRAMMING USING JAVA LAB

LAB ASSIGNMENTS

Week 1

Objective: To understand the basic concepts of Object Oriented Programming System and to get familiar with object and class.

Assignments:

1. Write a Java program to print your name.
2. Write a Java program to add two numbers.
3. Write a Java program to change temperature from Celsius to Fahrenheit.
4. Write a Java program to change temperature from Fahrenheit to Celsius.
5. Write a Java program to find area and perimeter of a rectangle.
6. Write a Java program to find area and perimeter of a circle.
7. Write a Java Program to display whether a number is odd or even.
8. Write a Java Program to check if a number is Positive or Negative.
9. Write a Java program to find maximum of three numbers.
10. Write a Java program to swap two numbers.
11. Write a Java program to convert miles to kilometers.
12. Write a Java program to check whether a year is leap year or not.
13. Write a Java program for following grading system.

    Note: Percentage>=90% : Grade A
    Percentage>=80% : Grade B
    Percentage>=70% : Grade C
    Percentage>=60% : Grade D
    Percentage>=40% : Grade E
    Percentage<40% : Grade F
14. Write a Java program to check whether a number is divisible by 5 or not.

Week 2

Objective: To understand the basic concepts of variable, decision and loop control statements.

Assignments:

1. Write a Java program to check whether a number is Buzz or not.
2. Write a Java program to calculate factorial of 12.
3. Write a Java program for Fibonacci series.
4. Write a Java program to reverse a number.
5. Admission to a professional course is subject to the following conditions:
   (a) marks in Mathematics >= 60 (b) marks in Physics >=50
   (c) marks in Chemistry >=40 (d) Total in all 3 subjects >=200
   (Or)
   Total in Maths & Physics>=150
   Given the marks in the 3 subjects of n (user input) students, write a program to process the applications to list the eligible candidates.
6. Write a Java program to find all roots of a quadratic equation.
7. Write a Java program to calculate the sum of natural numbers up to a certain range.
8. Write a Java program to print all multiple of 10 between a given interval.
9. Write a Java program to generate multiplication table.
10. Write a Java program to find HCF of two Numbers.
11. Write a Java program to find LCM of two Numbers.
12. Write a Java program to count the number of digits of an integer.
13. Write a Java program to calculate the exponential of a number.
14. Write a Java program to check whether a number is palindrome or not.
15. Write a Java program to check whether a number is prime or not.
16. Write a Java program to convert a Binary Number to Decimal and Decimal to Binary.
17. Write a Java program to find median of a set of numbers.
18. Write a program to compute the value of Euler's number that is used as the base of natural logarithms. Use the following formula.
    e= 1+ 1/1! +1 /2! + 1/3+..... 1/n!
19. Write a Java program to generate all combination of 1, 2, or 3 using loop.
20. Write a Java program to read two integer values m and n and to decide and print whether m is multiple of n.
21. Write a Java program to display prime numbers between a given interval.
22. Write a Java program to check whether a given number is Armstrong Number or not.

Write Java programs for the patterns given bellow: **(23-25)**

23.
```
1
2 3 4
5 6 7 8 9
```

24.
```
      1
    2 1 2
  3 2 1 2 3
4 3 2 1 2 3 4
```

25.
```
1       1
  2   2
    3 3
      4
```