

Lab Assignment I

1. Write a program to display your name.
2. Write a program to add, subtract, multiply, and divide two numbers.
3. Write a program to convert a temperature given in Celsius to Fahrenheit and vice-versa.
4. Write a program to find area and perimeter of a square and rectangle.
5. WAP to calculate diameter, circumference, and area of circle using **constant**.
6. Write a program to express a length given in millimetres, centimetres to meters.
7. WAP that takes input of two numbers and an operator in (+, -, *, /) as input and pass those numbers and an operator to the function. The function should calculate the result of two numbers as indicated by operator and return the result. Display the result of computation in your program.
8. Write a program to read annual salary of an employee and decide tax withheld as follows:

<u>Salary</u>	<u>Tax</u>
Up to 300,000	0%
Up to 650,000	1%
Above 650,000	5%

9. Write a program to check whether a number is even or odd.
10. Write a program to check whether a given number is prime or not.
11. WAP that reverse the number. [3-digit number]
12. WAP will swap the value of two numbers.
13. WAP that displays all ASCII codes.
14. WAP to find largest number among three numbers using **if statement only**.
15. Given marks in five subjects. WAP
 - a. to display "PASS" or "FAIL" if assumed pass marks is 45 in each subject,
 - b. to find percentage of marks obtained, and
 - c. to find division for "PASS" students if 80% and above for "DISTINCTION", 70% and above for "FIRST DIVISION" otherwise "SECOND DIVISION".

16. WAP using switch statement to develop a simple calculator for +, -, *, /, and % operators.

17. WAP to print 1 to 5.

WAP to print your name for 5 times using all three looping statements.

18. Write a program to display the following options:

- a. To find area of circle
- b. To check the given number is odd or even.
- c. To find the sum of n numbers

19. Write a program to print the following outputs using for loops:

```
1
2   2
3   3   3
4   4   4   4
5   5   5   5   5
```

20. Write a program to print the following outputs using for loops:

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

21. WAP to calculate sum of first n natural numbers.

22. WAP to calculate sum of first n odd numbers.

23. WAP to calculate sum of first n even numbers.

24. WAP to display the sum of squares of first n numbers.

25. WAP to display the sum of cubes of first n numbers.

26. WAP to generate the multiplication table.

27. WAP to find factorial of a number. [Error for negative number]

28. WAP to display following Fibonacci series up to n terms.

```
0   1   1   2   3   5.....n terms
```

29. WAP to evaluate the sum of the harmonic series $(1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \dots + \frac{1}{n})$ for a given value of n.
30. WAP to find the sum of the series $1 + x^2 + 3x^2 + 4x^2 + \dots + nx^2$.
31. WAP to calculate the sequence $\frac{1}{1!} + \frac{2}{2!} + \frac{3}{3!} + \dots + \frac{n}{n!}$
32. WAP to display sum of the following series $x - x^2 + x^3 - x^4 + \dots$
33. WAP to find sum of the following series for the given value of a and n
 $a - \frac{a^2}{2} + \frac{a^3}{3} - \frac{a^4}{4} \dots$ up to n