POP (Lab Exercise)

1. WAP to print a message "Hello World".
2. WAP to print a message your name and address in two different lines.
3. WAP to assign two variables and print the sum of both numbers.
4. WAP to read two numbers from command line using args[ ] and print the sum of both numbers.
5. WAP to do arithmetic operation (+, -, *, /) after reading two numbers as in Q4.
6. WAP to calculate/print area and perimeter of a rectangle.
7. WAP to calculate/print area and circumference of a circle.
8. WAP to calculate the simple interest where P, R, T are given by user at command line.

Using If/Switch statement (Selection)

9. WAP to print the big number out of two numbers.
10. WAP to print the big number out of three numbers.
11. Any integer is input through the keyboard. Write a program to find out whether it is an odd number or even number.
12. WAP to check whether a triangle is valid or not, when the three angles of the triangle are entered through the keyboard.
13. If cost price and selling price of an item is input through the keyboard, write a program to determine whether the seller has made profit or incurred loss. Also determine how much profit he made or loss he incurred.
14. A company insures its drivers in the following cases:
    - If the driver is married.
    - If the driver is unmarried, male & above 30 years of age.
    - If the driver is unmarried, female & above 25 years of age.

    In all other cases the driver is not insured. If the marital status, sex and age of the driver are the inputs, write a program to determine whether the driver is to be insured or not.

15. WAP to swap the values of two numbers with the third variable.
16. WAP to swap the values of two numbers without third variable.
17. WAP to input day no at command line and print day name using if statement.

18. WAP to input day no at command line and print day name using switch statement.
19. WAP to input month no at command line and print month name using if statement.
20. WAP to input month no at command line and print month name using switch statement.

21. WAP to Enter income of person. Calculate tax as per Nepal Government, Salary Tax is levied at a rate of 1%, 15%, 25% and 35% (i.e Extra 40% of Tax amount) on yearly accessible salary upto 350,000, 350,001–450,000, 450,001–2,500,000 and 25,000,001 and above respectively.

22. Write a menu driven program using switch statement which has following options and perform the task as per user choice input.
    1. To print the Factorial of a number.
    2. To check no is Prime or not
    3. To check no is Odd or even
    4. To check no is Palindrome or not.
    5. To check no is Armstrong or not.
    6. To check no is Magic or not.
    7. Exit

Using Iterative Statement (For, While, Do While)

23. Write Programs to print following series

A.	1	2	3	4	5	6	7	8	... 100/N
B.	2	4	6	8	10	12	14	16	... 100/N
C.	1	3	5	7	9	11	13	15	... 100/N
D.	1	4	9	16	25	36	49	64	... 100/N
E.	0	3	8	15	24	35	48	63	... 100/N
F.	2	5	10	17	26	37	50	65	... 100/N
G.	0	1	1	2	3	5	8	13	… N terms

24. WAP to print the following patterns using For, While, Do While Loop

A

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
1 2 3 4 5 6
```

B

```
1
1 1
1 1 1
1 1 1 1
1 1 1 1 1
1 1 1 1 1 1
```

C

```
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
6 6 6 6 6 6
```

D

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

E

```
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
16 17 18 19 20 21
```

F

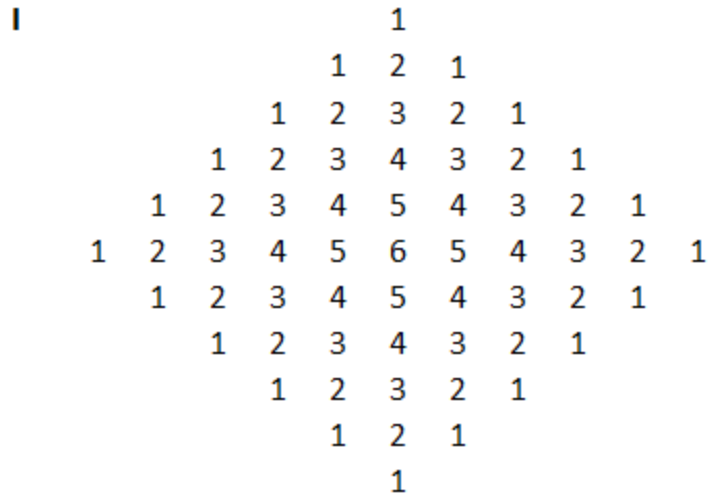
```
                1
              1 2
            1 2 3
          1 2 3 4
        1 2 3 4 5
      1 2 3 4 5 6
```

G

```
            1
          1 2 1
        1 2 3 2 1
      1 2 3 4 3 2 1
    1 2 3 4 5 4 3 2 1
  1 2 3 4 5 6 5 4 3 2 1
```

H

```
A
A B
A B C
A B C D
A B C D E
A B C D E F
```



25. WAP to print table of any input number from keyboard.
26. WAP to find the factorial value of any number entered through the keyboard.
27. WAP to read a no using scanner class object and print the sum of its digit.
28. WAP to read a no using scanner class object and print the reverse digit of this number
29. WAP to read a no using scanner class object and check if it is Palindrome no or not.
30. WAP to read a no using scanner class object and check if it is Armstrong no or not.
31. WAP to read a no using scanner class object and check if it is Magic no or not.
32. WAP to print all Armstrong no between 100 and 1000.
33. WAP to print all Palindromes no between 100 and 1000.
34. WAP to print all Magic no between 100 and 1000.
35. WAP to print all tables from 2 to 10.
36. WAP to enter the numbers till the user wants and at the end it should display the count of positive, negative and zeros entered.
37. WAP to print all prime numbers between 3 to 300. (Hint: Use nested loops, break and continue)

Array based Programs

38. WAP to declare an array of size N and print it's all elements in forward and backward direction.
39. WAP to declare an array of size N and print the sum of all elements and average.
40. WAP to read an array of size 10 and print it's all elements in Ascending/Descending order.
41. WAP to read an array of size 10 and print Smallest, Largest, Second largest no.

42. WAP to read two array of size 5 each and sum the elements of theses into third array.
43. WAP to read two array of size 5 each and concatenate both arrays into third array of size 10.
44. WAP to find the binary equivalent of the entered number.
45. WAP to declare a 2D array of size 5X5 and print it in matrix form.
46. WAP to declare a 2D array of size 5X5 and print its transpose.
47. WAP to declare two 2D array of size 5X5 each and print the sum of these two.
48. WAP to declare a 2D array of size 5X5 and print it's both diagonal (Left/Right) elements.
49. WAP to declare a 2D array of size 5X5 and print its Lower/Upper half triangular matrix.
50. WAP to declare a 2D array of size 5X5 and print its multiplication.