

### Lab Cycle 3

1. Write a program to find the factorial of a number.
2. Generate Fibonacci series of N terms.
3. Write a program to find the sum of all items in a list. [Using for loop]
4. Generate a list of four digit numbers in a given range with all their digits even and the number is a perfect square.
5. Write a program using a for loop to print the multiplication table of n, where n is entered by the user.
6. Write a program to display alternate prime numbers till N (obtain N from the user).
7. Write a program to compute and display the sum of all integers that are divisible by 6 but not by 4, and that lie below a user-given upper limit.
8. Calculate the sum of the digits of each number within a specified range (from 1 to a user-defined upper limit). Print the sum only if it is prime.
9. A number is input through the keyboard. Write a program to determine if it's palindromic.
10. Write a program to generate all factors of a number. [use while loop]
11. Write a program to find whether the given number is an Armstrong number or not. [use while loop]
12. Display the given pyramid with the step number accepted from the user. Eg: N=4

```
1
2 4
3 6 9
4 8 12 16
```

13. Construct following pattern using nested loop

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