Assignment

Python Programming Lab (MCAN-191)

1. a) Write a Program in python to convert the given temperature from Celsius to Fahrenheit.

   b) Write a Program in python to convert the given temperature from Fahrenheit to Celsius.

2. Write a Program in python to enter marks of a student in four subjects.

   Then calculate total, aggregate, and display the grade obtained by the student.

   Suppose a full mark of each subject is 100. The criteria of gradation are as follows:

   1st Div: 60% to 100%.

   2nd Div: 45% to 59.99%.

   3rd Div: 30% to 44.99%.

   Fail : $< 30\%$

3. Write a Program in python to check the given year is leap year or not.

4. Write a Program in Python to check whether a number entered by user is palindrome or not.

5. Write a Program in Python to calculate number of digits of a given number.

6. Write a Program in Python to check the given number is square number or not.

7. Write a Program in Python to calculate factorial of a given number.

8. Write a Program in Python to check whether a number entered by user is prime or not.

9. Write a program in Python to test the given number is Armstrong number or not.
   Armstrong No : $abc = a^n + b^n + c^n$ where n is no of digits in abc
   (Ex : $153 = 1^3 + 5^3 + 3^3$)

10. Write a program in Python to print 1st n numbers of a Fibonacci series.

    In Fibonacci series, next number is the sum of previous two numbers, and the first two numbers of Fibonacci series are 0 and 1.

    Example: First 9 numbers of the Fibonacci series are as follows:

    0, 1, 1, 2, 3, 5, 8, 13, 21

11. Write a program in Python, which will check a given number is perfect number or not.
(A number is called perfect when sum of all its factors, except itself, is equal to the number, i.e. 6 is a perfect number, 6=1+2+3, factors of 6=(1,2,3)).

12. Write a program in Python to test the given number is special number or not.
Special No : abc=a! + b! + c! (Ex : 145= 1! + 4! +5!)

14. Write a program in Python to calculate the value of e^x series upto n^{th} term.

The value of x and n should be given by the user.

15. Write a Program in Python to calculate GCD of two given numbers.

16. Write a Program in Python to calculate LCM of two given numbers.

17. Write a program in Python to calculate GCD of two given numbers. GCD should be calculated using a recursive function.

18. Write a program in Python to print 1st n numbers of a Fibonacci series.

Each and every term of the Fibonacci series should be calculated using a recursive function.

Example: First 9 numbers of the Fibonacci series are as follows:

0, 1, 1, 2, 3, 5, 8, 13, 21