**Session-2 Assignments**

1. **Find maximum of three numbers**
2. **Check whether a number is prime.**
3. **Check whether a number is Armstrong**
4. **Find all primes between a given range**
5. **Write a Python program that accepts a word from the user and reverse it.**
6. **Write a Python program to count the number of even and odd numbers from a series of numbers**
7. **Write a Python program that prints all the numbers from 0 to 6 except 3 and 6. Note : Use 'continue' statement.**
8. **Write a Python program to get the Fibonacci series between 0 to 50**
9. **Write a Python program which iterates the integers from 1 to 50. For multiples of three print "Fizz" instead of the number and for the multiples of five print "Buzz". For numbers which are multiples of both three and five print "FizzBuzz".**
10. **Write a Python program to check whether an alphabet is a vowel or consonant**
11. **Write a Python program to calculate the sum and average of n integer numbers (input from the user). Input 0 to finish.**
12. **Write a Python program to create the multiplication table (from 1 to 10) of a number.**
13. **Write a program to sum seven terms of given series.**

$$\frac{1}{1!} + \frac{2}{2!} + \frac{3}{3!} + \ldots\ldots$$

**[Hint: use Math.factorial(x) by import math]**

14. **When interest compounds q times per year at an annual rate of r % for n years, the principle p compounds to an amount a as per the following formula $a = p ( 1 + r / q )^{nq}$**

    **Write a program to read 10 sets of p, r, n & q and calculate the corresponding as.**

15. **The policy followed by a company to process customer orders is given by the following rules:**
    a. **(a) If a customer order is less than or equal to that in stock and has credit is OK, supply has requirement.**
    b. **(b) If has credit is not OK do not supply. Send him intimation.**
    c. **(c) If has credit is Ok but the item in stock is less than has order, supply what is in stock. Intimate to him data the balance will be shipped.**

    **Write a C program to implement the company policy.**

16. **A university has the following rules for a student to qualify for a degree with A as the main subject and B as the subsidiary subject:**
    a. **(a) He should get 55 percent or more in A and 45 percent or more in B.**
    b. **(b) If he gets than 55 percent in A he should get 55 percent or more in B. However, he should get at least 45 percent in A.**
    c. **(c) If he gets less than 45 percent in B and 65 percent or more in A he is allowed to reappear in an examination in B to qualify.**
    d. **(d) In all other cases he is declared to have failed.**

    **Write a program to receive marks in A and B and Output whether the student has passed, failed or is allowed to reappear in B.**

17. **An Insurance company follows following rules to calculate premium.**
    a. **(1) If a person's health is excellent and the person is between 25 and 35 years of age and lives in a city and is a male then the premium is Rs. 4 per thousand and his policy amount cannot exceed Rs. 2 lakhs.**
    b. **(2) If a person satisfies all the above conditions except that the sex is female then the premium is Rs. 3 per thousand and her policy amount cannot exceed Rs. 1 lakh.**
    c. **(3) If a person's health is poor and the person is between 25 and 35 years of age and lives in a village and is a male cannot exceed Rs. 10,000.**
    d. **(4) In all other cases the person is not insured.**

    **Write a program to output whether the person should be insured or not, his/her premium rate and maximum amount for which he/she can be insured.**