BSc.IT. 3rd Sem
Object Oriented Programming (304)
Practical Assignment-II

1. Develop a program to generate a class of string and perform various operations on it.
    a. Length of string.
    b. Upper case.
    c. Lower case.
    d. Comparison.
    e. Copy.
    f. Concatenation.
    g. Reverse.
    h. Palindrome.

2. Develop a program to generate a class of 1-dimensional array and include all its functionalities.
    a. Insert.
    b. Search.
    c. Bubble Sort.
    d. Sum of array elements.
    e. Average of array elements.
    f. Find Maximum value from array elements.
    g. Find Minimum value from array elements.
    h. Swap first and last element of an array.

3. Develop a program for class date and time and include all its functionalities.
    a. Date.
    b. Time.
    c. Format Date.
    d. Difference between 2 dates.
    e. Check Leap year.
    f. Retrieve Day.
    g. Retrieve Month.
    h. Retrieve Year.
    i. Retrieve Hour.
    j. Retrieve Minute.
    k. Retrieve Second.

4. Develop a program for class Employee with properties: code, name, designation , date of birth as DOB, date of joining as DOJ, basic salary, hra, da, dept.
   [Calculate da and hra accordingly: (1)If basic salary is less than 30000 then da=60%, hra=20% (2)If basic salary more than 30000 and less than 45000 then da=70%, hra=30% (3) If basic salary more than 45000 then da=85%, hra=40%]
   The behavior of Employee should include:
   a. Accept the input from the user.
   b. Display the data.
   c. To calculate Total salary.
   d. To search for the employees who work in ‘Sales’ Dept.
   e. Calculate the total experience of employees.
   f. Search the employees who have experience more than 5 years.

5. Develop a program for class student with properties: rollno, name, marks of 3 subjects, total, percentage and grade. The behavior of student should include:
   a. Accept the input from the user.
   b. Display the data.
   c. Calculate the total marks obtained, percentage and grade of each student.
   d. Display the student who secured 1st rank.

6. Write a program to format a float number using manipulators.

7. Develop a class Calendar with its attributes and functionalities.

8. Develop a class Book with its attributes and functionalities.