ASSIGNMENT - 9

FULL MARKS : 30

1. Write a program to create a structure named company which has name, address, phone and noOfEmployee as member variables. Read the name of the company, its address, phone and noOfEmployee. Finally display these members' values. **[3 marks]**

2. Write a program to read RollNo, Name, Address, Age & average-marks of 6 students in the class and display the details from the function. **[3 marks]**

3. Write a function to compare two Date structures (with members for day, month, and year) and return 1 if the first date is later, -1 if it's earlier, and 0 if they are the same. **[4 marks]**

4. Define a structure 'Address' containing members for street, city, and zip code. Create another structure 'Person' with members for name and address (using the 'Address' structure). Write a program to create a 'Person' variable and print their details. **[4 marks]**

5. Define a structure CourseRecord which has following data:
    a. Student's first and last name
    b. Student roll number
    c. Department
    d. Course code
    e. Array of three test marks

    Define a function that returns average test marks for the CourseRecord. Define another function that returns true if a student passes the test and false if failed. (Consider pass marks as 35) **[6 marks]**

6. Imagine we are making a database for student records.
    The student record has
    i) Name: String
    ii) Roll number: Integer
    iii) Percentage: Float

    Write the following functions to operate on the following database.

    insert() : function to insert a record to the database. The database is stored in a sorted order according to the roll number.

sortName() : This function sorts the database according to the name.

findOne("xyz"): this function returns one name from the database which starts with xyz.

specs(): this function returns an array containing 5 elements

- Count of number of records in the database
- Highest percentage
- Lowest percentage
- Mean
- Standard deviation

delete(x): this function deletes the record having roll number x.

You will have to use array of structure to create the DB.
The maximum number of records you can consider is 100. **[10 marks]**