**C Programming Lab Assignment-2**

**(Structures and Linear Data Structures)**

**Instructions:**

* *Write C code for following problems in Lab record. Input and output will be in Left side page, right side page will be question and program only.*
* *Do not forget to write name, roll number and section on first page of Lab record.*
* ***Last date to submit the assignment is 5th March 2019.***

**Section 1: Structures:**

1. Write a program to store and print the rollno., name , age and marks of a student using structures.
2. Write a program to store and print the rollno., name, age and marks of 5 students using structure.
3. Enter the marks of 5 students in Chemistry, Mathematics and Physics (each out of 100) using a structure named Marks having elements roll no., name, chem\_marks, maths\_marks and phy\_marks and then display the percentage of each student.
4. Write a structure to store the roll no., name, age (between 11 to 14) and address of students (more than 5). Store the information of the students.  
   1 - Write a function to print the names of all the students having age 14.  
   2 - Write another function to print the names of all the students having even roll no.  
   3 - Write another function to display the details of the student whose roll no is given (i.e. roll no. entered by the user).
5. Enter the details of 10 employees in the company using a structure having elements of employ number, name, age and monthly salary.
   * 1. Display the details of each employee.
     2. Display employee’s number and name who has age more than 30.
     3. Display employee’s number and name who has monthly salary more than 40,000.

**Section 2: Arrays:**

1. Write a C program inserting an element into an Array (element and position taken from the user).
2. Write a C program deleting an element into an Array (location is taken from user).
3. Write a C program to search an element in array (searching element is taken from user).

**Section 3: Stack and Queue:**

1. Write a C program to implement **Stack** by using array with by using push, pop, peek and display functions.
2. Write a C program to implement **Queue** by using array with enqueue, dequeue, and display functions.
3. Write a C program to implement **Circular queue** by using array with enqueue, dequeue, and display functions.

**Section 4: Linked Lists:**

1. Write a C program to create a linked list with five nodes (five integers are taken from user input).
2. Write a C program to display a linked list.
3. Write a C program to search an element a linked list.
4. Write a C program to insert a node of a linked list.
5. Write a C program to delete a node of a linked list.