

UE20CS207 - DATA STRUCTURES AND ITS APPLICATIONS LABORATORY

WEEK - 3

13th September 2021 to 18th September 2021

TOPIC : ORDERED LIST & DOUBLY LINKED LIST

**1. Create an telephone directory containing the customers details as : Name, Phone no, Address, Area .
Create an ordered doubly list based on name.**

```
// struct definition for node
typedef struct Node {
    char *name;
    int phone_number;
    char *address;
    char *area;
    struct Node *next, *prev;
} Node;

// struct definition for customer details
typedef struct CustomerDetails {
    Node *head;
} CustomerDetails;
```

- 15 Marks

2. Create an Employee with the following fields - SSN, Name, Dept, Designations, Salary, Phone no, Age. Every employee should work in a department and department should have a name and number associated with it.

```
// struct definition for department
typedef struct Department{
    char *name;
    int number;
} Department;

// struct definition for doubly linked list node
typedef struct Node{
    char *ssn;
    char *name;
    Department *department;
    char *designations;
    int salary;
    int phone_number;
    int age;
    struct Node *next, *prev;
} Node;

// struct definition for employee
typedef struct Employees {
    Node *head;
} Employees;
```

1. Delete all the employees whose age is greater than 58. - 15 Marks

2. Display the details of all employees who work in particular department. - 10 Marks

Note : Program should work for all the boundry conditions.

