

## **CS112: Computing Laboratory**

### **Assignment :- 9**

**Date: 15/04/2020**

**For proper indentation and commenting in the code: 5+5=10 marks**

**For below questions: 10+(4\*5)+10 =40 marks**

**Total marks: 40 + 10 = 50 marks**

- 1) Write a program to delete all the duplicate values from a singly link list.
- 2) Consider a circular singly link list to store student details (Name, Roll No, Grade, CPI) in the dictionary order of names. Write the following four functions in such a way that the order should not be violated:
  - (a) Take Name and ROLL No as input and delete the node which contains the details of the corresponding student.
  - (b) Take students details as input and insert a new node containing the student details in the appropriate position such that the dictionary order of names should be preserved.
  - (c) Compute the no. of students stored in the above circular singly link list.
  - (d) Reverse the order of students in the above circular singly link.
- 3) Write a C program that would sort a list of names in alphabetical order.  
Note: Use two dimensional array to store names.

### **Instructions to follow:**

1. Implement all the above programs and give the file names as follows:
  - a. Name of program file: question\_1.c
  - b. Name of output file: output\_1.out
  - c. Run with few sample inputs and mention the details: execution\_1.txt

\*\*\* Note that the format of details in execution\_1.txt would be:

Run1: Input: 4

Output: 567

Run 2: Input: 19

Output: 5678

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2) Create a zip file which includes all the above files naming it **<Student\_EmailID>.zip** and upload the zip file through google form:

3) **Deadline of submission :- 6 PM 16/04/2020 (sharp)**

4) Feel free to contact your respective TA for any query.