**Course: Data Structure and Algorithm (CS-443)**

**Assignment Week 7**

Name **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Reg # **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Discipline **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Section **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Submission Date **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Note:***

1. *Assignment must be hand written.*
2. *Paste image of your hand written solution under question.*
3. *Assignment must be submitted on LMS.*
4. *While uploading your assignment your file name must be as your arid number followed by section and assignment week. For example****2020-arid-0001\_BSCSA\_WK20*** note that arid number and section will be according to your discipline.
5. *Late submission is not acceptable.*
6. *Each question carry 10 marks.*

***Question Number 1:*** Consider a scenario for a complaint system of Ufone. Complain contains a phone number of a complainer, issue of complainer and date of complaint. When a user complains his complain is stored in a linear linked list. When complain is processed it is moved to another list called processed list. Note that Complain received first is processed first. In processing list latest solved complain is showed on a top. You are supposed to make a complete system that solve this problem. Also demonstrate in main class using menu.

***Note: You are not allowed to use built in linked list.***

***Question Number 2:*** A mobile phone has limited storage of text messages. A mobile stores 200 text messages. When message memory gets full and a new message is received, this message is moved to cache, that has a capacity of storing 100 messages. From cache messages are moved to phone on availability of space. While moving messages from cache to phone messages are moved in a sequence in which they were moved in a cache. Implement a complete system. Demonstrate using main class.