**DS Algorithm Essentials | December 2020**

**Assignment Day 7 | 31th December 2020**

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**Question 1**

**Write a program implementing insert, delete and display operation of Circular Queue.**

**Code :**

**#include<stdio.h>**

**#include<stdlib.h>**

**#include<queue.h>**

**void addq(int front,int rear,element item)**

**{**

**rear=(rear+1)%MAX\_QUEUE\_SIZE;**

**if(front==rear)**

**return;**

**queue[rear]=item;**

**}**

**void deleteq(int front,int rear,element item)**

**{**

**element item;**

**if(front==rear)**

**return queue\_emppty();**

**front=(front+1)%MAX\_QUEUE\_SIZE;**

**return queue[front];**

**}**

**void display()**

**{**

**int front\_pos=front,rear=rear;**

**if(front==-1)**

**{**

**printf("Queue is empty");**

**return;**

**}**

**printf("Queue elements :n");**

**if(front<=rear)**

**while(front<=rear)**

**{**

**printf("%d ",cqueue\_arr[front]);**

**front\_pos++;**

**}**

**else**

**{**

**while(front\_pos<=MAX-1)**

**{**

**printf("%d ",cqueue\_arr[front])**

**frontpos++;**

**}**

**front\_pos=0;**

**while(front\_pos<=rear)**

**{**

**printf("%d ",cqueue\_arr[front]);**

**front++;**

**}**

**}**

**}**