**Assignment 7**

**Question 1**

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

void insert(int item)

{

if((front == 0 && rear == MAX-1) || (front == rear+1))

{

printf("Queue Overflow n");

return;

}

if(front == -1)

{

front = 0;

rear = 0;

}

else

{

if(rear == MAX-1)

rear = 0;

else

rear = rear+1;

}

cqueue\_arr[rear] = item ;

}

void deletion()

{

if(front == -1)

{

printf("Queue Underflown");

return;

}

printf("Element deleted from queue is : %dn",cqueue\_arr[front]);

if(front == rear)

{

front = -1;

rear=-1;

}

else

{

if(front == MAX-1)

front = 0;

else

front = front+1;

}

}

void display()

{

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

if(front == -1)

{

printf("Queue is emptyn");

return;

}

printf("Queue elements :n");

if( front\_pos <= rear\_pos )

while(front\_pos <= rear\_pos)

{

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

front\_pos++;

}

else

{

while(front\_pos <= MAX-1)

{

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

front\_pos++;

}

front\_pos = 0;

while(front\_pos <= rear\_pos)

{

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

front\_pos++;

}

}

printf("n");

}