LAB-5

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WAP to simulate the working of a circular queue of int using an array. Provide the following operations : a) Insert b) Delete c) Display.

```
#define N 10
int front, rear, Q[N];
int front = -1, rear = -1;

IsFull ()
{
    if (front == (rear+1) % N)
        return True;
    else
        return False;
}
IsEmpty ()
{
    if (front == -1 && rear == -1)
        return True;
    else
        return False;
}
Enqueue (x)
{
    if (IsFull ())
     Printf ("Queue is Full");
    else if (IsEmpty ())
    { front = 0;
        rear = 0;
    }
    else
    {
        rear = (rear+1) % N;
    }
    A[rear] = x;
}
```

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Dequeue ()
{
    if (IsEmpty ())
      printf (" Queue is empty");
    else if ( front == rear)
    {
        x = A[front];
        front = -1;
        rear = -1;
    }
    else
    {
        x = A[front];
        front = (front+1) %. N;
    }
    return x;
}
Display ()
{   int i;
    if (IsEmpty ())
      printf (" Queue is Empty");
    else
    {
        for (i=front; i != rear ; i=(i+1) %. N)
            printf ("%d", Q[i]);

        printf ("%d", Q[i]); // to print the element
                               in rear position
    }
}
```