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IBM19CS165
D-1
3D

Pseudocode for circular queue

A[SIZE]

FRONT = -1

REAR = -1

Is Full()

```
{  
  if (front == (rear + 1) % N)  
    return True  
  else  
    return False  
}
```

Is Empty()

```
{  
  if (front == -1 & & rear == -1)  
    return True  
  else  
    return False  
}
```

Enqueue (X)

```
{  
  if (Is Full())  
    Print ("Q is Full")  
  else if (Is Empty())  
    front  $\leftarrow$  rear  $\leftarrow$  0  
  else  
    rear  $\leftarrow$  (rear + 1) % N  
  
  A[rear] = X  
}
```

Dequeue()

```
{  
  if (Is Empty())  
    printf ("Q is Empty")  
  else if (front == rear)  
    X  $\leftarrow$  A[front]  
    front  $\leftarrow$  rear  $\leftarrow$  -1  
  else  
    { X  $\leftarrow$  A[front]  
      front  $\leftarrow$  (front + 1) % N  
    }  
  
  return X  
}
```