

## Lab 3

### Queues, Dequeues And Enqueues

IBM19CS200

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D2 batch

#### Pseudo code

```
int A[SIZE]
front  $\leftarrow$  -1
rear  $\leftarrow$  -1
```

#### Enqueue(x)

```
{
  if (IsFull())
    printf("Queue is Full")
  else if (IsEmpty())
    front  $\leftarrow$  rear  $\leftarrow$  0
  else
    rear  $\leftarrow$  rear + 1
    A[rear]  $\leftarrow$  x
}
```

#### Dequeue()

```
{
  if (IsEmpty())
    printf("Queue is Empty")
  else if (front == rear)
    front  $\leftarrow$  rear  $\leftarrow$  -1
  else
    front  $\leftarrow$  front + 1
}
```

IsFull()

```
{  
    if (rear == size(a) - 1) return True  
    else
```

```
        return False
```

```
}
```

IsEmpty()

```
{
```

```
    if (front == -1 && rear == -1)
```

```
        return true
```

```
    else
```

```
        return false
```

```
}
```