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## Lab 4 = Queue Implementation

WAP to simulate the working of a queue of integers using an array. Provide the following operations:

- Insert
- Delete
- Display

The program should print appropriate messages for queue empty & queue overflow conditions.

```
int A[SIZE]
```

```
front ← -1
```

```
rear ← -1
```

```
Enqueue(n)
```

```
{
```

```
    if (IsFull())
```

```
        printf("Queue overflow")
```

```
    else if (IsEmpty())
```

```
    {
```

```
        front ← rear ← 0
```

```
    }
```

```
    else
```

```
    {
```

```
        rear ← rear + 1
```

```
    }
```

```
    A[rear] ← n
```

```
}
```

```
Dequeue()
```

```
{
```



```
if (IsEmpty())  
    printf("Queue is empty")  
else if (front == rear)  
{  
    front <- rear <- -1  
}  
else  
{  
    front <- front + 1  
}  
}
```

```
Is Full()  
{  
    if (rear == size(a) - 1)  
        return True  
    else  
        return False  
}
```

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