Simple Queue Algorithm

Note: The function returns the inserted element if the operation is successful, or 0 if the queue overflows or underflows. Alternatively, instead of using return statements, you can simply print the messages in both cases — the algorithm will still work correctly.

```
Enqueue(ELEMENT)
    IF REAR == MAX-1 THEN
        PRINT "Queue Overflow"
        // Optional --
        RETURN 0;
    ELSE
        IF FRONT == -1 THEN
            FRONT = 0
        ENDIF
        REAR = REAR + 1
        QUEUE[REAR] = ELEMENT
        PRINT "Element Inserted"+ ELEMENT
        // Optional --
        RETURN ELEMENT
    ENDIF
```

```
Dequeue()
    IF FRONT == -1 OR FRONT > REAR THEN
        PRINT "Queue Underflow"
        // Optional --
        RETURN 0
    ELSE
        ITEM = QUEUE[FRONT]
```

```
        FRONT = FRONT + 1
        // Optional --
        RETURN ITEM
    ENDIF
```

```
Peek()
    IF FRONT == -1 OR FRONT > REAR THEN
        PRINT "Queue Empty"
    ELSE
        PRINT QUEUE[FRONT]
        // Optional
        RETURN QUEUE[FRONT]
    ENDIF
```



```
isEmpty()
    IF FRONT == -1 OR FRONT > REAR THEN
        RETURN TRUE
    ELSE
        RETURN FALSE
    ENDIF
```

```
isFull()
    IF REAR == MAX-1 THEN
        RETURN TRUE
    ELSE
        RETURN FALSE
    ENDIF
```