

# Algorithms for Queue

## Variables (Data)

```
int queue[SIZE];  
int front, rear, cnt;
```

## Operations

### Make Empty() // initializes an empty queue

```
front = 0;  
rear = -1;  
cnt = 0;
```

### Enqueue() // add item to rear of queue

```
rear = ( rear + 1 ) % SIZE;  
queue[rear] = newitem;  
cnt++;
```

### Dequeue() // remove item from front of the queue

```
item = queue[front];;  
front = (front + 1) % SIZE;  
cnt--;
```

### IsEmpty() // checks to see if queue is empty

```
if ( cnt == 0 )  
{ // queue is empty  
    return( 1);  
} else  
{ // Queue is not empty  
    return( 0 );  
}
```

### Isfull() // checks to see if queue is full

```
if ( cnt == SIZE )  
{ // queue is Full  
    return( 1);  
} else  
{ // Queue is not Full  
    return( 0 );  
}
```