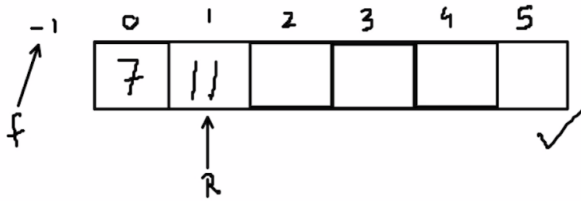


Queue Using Arrays



```
int main() {
    ✓ struct Queue q;
    ✓ q.size = 10;
    ✓ q.f = q.r = -1;
    ✓ q.arr = (int *) malloc(q.size * sizeof(int));
}
```

struct Queue {

int size;

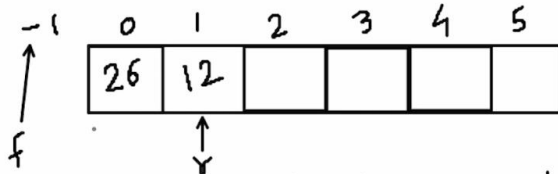
int f;

int r;

int *arr;

};

Queue Using Arrays - enqueue



```
void enqueue(struct Queue *q, int val) {
    if (isFull(q)) {
        printf("Queue Overflow");
    }
    else {
        q->r = q->r + 1;
        q->arr[q->r] = val;
    }
}
```

struct Queue {

int size;

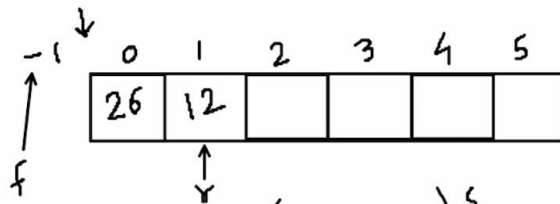
int f;

int r;

int *arr;

};

Queue Using Arrays - dequeue



```

int dequeue (Queue *q) {
    int a = -1;
    if (q->f == q->r)
        printf("No element to dequeue");
    else {
        q->f++;
        a = q->arr[q->f];
        return a;
    }
}
    
```

Struct Queue {

```

    int size;
    int f;
    int r;
    int *arr;
};
    
```

→ isEmpty()

```

if (q->r == q->size-1)
    return 1;
    
```

isFull();