int[] arr = [1, 2, 3, 4, 5, 6, 7]

target = 4

Binary Search

target = 6

S = 0;

e = arr.length - 1;

```
while(s<e){
    int mid = (s+e)/2;
    if(arr[mid] == target){
        return mid;
    }
}
```

```
loop
    int mid = (si+ei)/2;
    if( arr[mid] == target){
        return mid;
    } else if( arr[mid] > target){
        ei = mid-1;
    } else if( arr[mid] < target){
        si = mid+1;
    }
```

```
if (arr[mid] == target) {
    return mid;
}
else if(arr[mid] > target){
    e = mid - 1;
else if (arr[mid] < target){
    s = mid + 1;
}
```

Sorted