```javascript
var search = function(nums, target) {
            } else {
                left = mid + 1;
            }
        } else { // Right half is sorted
            // Check if the target is within the sorted right half
            if (nums[mid] < target && target <= nums[right]) {
                left = mid + 1;
            } else {
                right = mid - 1;
            }
        }
    }

    return -1; // Target not found
};

// Example usage:
const nums1 = [4,5,6,7,0,1,2];
const target1 = 0;
console.log(search(nums1, target1)); // Output: 4

const nums2 = [4,5,6,7,0,1,2];
```

```
PS C:\Users\atulr\OneDrive\Desktop\geekster\javascript\Assigment\Day-6> node "c:\Users\atulr\OneDrive\Desktop\geekster\javascript\As
4
-1
-1
PS C:\Users\atulr\OneDrive\Desktop\geekster\javascript\Assigment\Day-6>
```

```javascript
var maxArea = function(height) {
    let maxArea = 0;
    let left = 0;
    let right = height.length - 1;

    while (left < right) {
        const h = Math.min(height[left], height[right]);
        const w = right - left;
        const area = h * w;

        maxArea = Math.max(maxArea, area);

        if (height[left] < height[right]) {
            left++;
        } else {
            right--;
        }
    }

    return maxArea;
};

// Example usage:
const height1 = [1,8,6,2,5,4,8,3,7];
console.log(maxArea(height1)); // Output: 49
```

Files:
- hw-day6
  - gasStation.js
  - rotate_Sorted.js
  - water.js
- 3sum.js
- Day-6.pdf
- IsPalindrom.js
- Maximum-Subarray.js
- two_sum.js

```
PS C:\Users\atulr\OneDrive\Desktop\geekster\javascript\Assigment\Day-6> node "c:\Users\atulr\OneDrive\Desktop\geekster\javascript\Ass
49
1
PS C:\Users\atulr\OneDrive\Desktop\geekster\javascript\Assigment\Day-6>
```

```
const nums = [-1, 0, 1, 2, -1, -4];
const target = 0;

const threeSum = function(nums) {
    nums.sort((a, b) => a - b); // Sort the array


    const result = [];


    for (let i = 0; i < nums.length - 2; i++) {
        // Avoid duplicates
        if (i === 0 || (i > 0 && nums[i] !== nums[i - 1])) {
            let left = i + 1;
            let right = nums.length - 1;
            const target = -nums[i];
            while (left < right) {
                const sum = nums[left] + nums[right];
                if (sum === target) {
                    result.push([nums[i], nums[left], nums[right]]);
                    while (left < right && nums[left] === nums[left + 1]) left++;
                    while (left < right && nums[right] === nums[right - 1]) right--;

                    left++;
                    right--;
                } else if (sum < target) {
```

```
PS C:\Users\atulr\OneDrive\Desktop\geekster\javascript\Assigment\Day-6> node "c:\Users\atulr\OneDrive\Desktop\geekster\javascript\Ass
[ [ -1, -1, 2 ], [ -1, 0, 1 ] ]
PS C:\Users\atulr\OneDrive\Desktop\geekster\javascript\Assigment\Day-6>
```