

### Finding Zero Sum Subarray (Kadane's Algorithm Variant):

```
function subArrayZeroKadane(nums) {
  //TC: O(n)
  let sum = 0;
  let startIndex = 0;
  let endIndex = 0;
  for (let i = 0; i < nums.length; i++) {
    endIndex++;
    sum += nums[i];
    if (sum === 0) {
      break;
    }
    if (sum < 0) {
      sum = nums[i];
      startIndex = i;
    }
  }
  return {
    zeroSubArray: nums.slice(startIndex, endIndex),
  };
}
console.log(subArrayZeroKadane([2, 1, -4, 4, -1, 2, 1, -5, 4]));
```

### Binary Search in Sorted Array:

```
const arr = [2, 4, 5, 7, 9, 12]

function findMe(target, start, end){
  if(start>end){
    return "Not Found"
  }

  const middle = Math.floor((start+end)/2)

  if(arr[middle]==target){
    return `Found it at index ${middle}`
  }

  if(arr[middle]>target){
    return findMe(target, start, middle-1)
  }

  if(arr[middle]<target){
    return findMe(target, middle+1, end)
  }
}

console.log(findMe(7, 0, 5))
```