

## Two Sum

**Background:** Two Sum is a concept-based phrase, whereby the sum of two integers is equal to another integer.

**Challenge:** [LeetCode](#)

**Resources:** [freeCodeCamp](#)

**Notes:** The code below is intended to be informational and is not meant to be the only way to write a function that determines the indices of two integers whose sum is a given integer. In addition to the function below, I employed other functions and methods to set conditions and facilitate user interaction.

```
function twoSum(arr, target) {  
  // create an object/hash map to store key-value pairs  
  let numsObj = {};  
  
  // use a loop to check if the two numbers are present  
  for (let i = 0; i < arr.length; i++) {  
    // assign someNum to the first number found in the array  
    let someNum = arr[i];  
  
    // find the second value and assign it to numDifference  
    let numDifference = target - someNum;  
  
    // in the object, if the value of the first integer is in the object,  
    // get the indices of the first & second integers  
    if (numsObj[someNum] !== undefined) {  
      return [numsObj[someNum], i]  
    } else {  
      // they were not found  
      numsObj[numDifference] = i  
    }  
  }  
  return "Target not found!";  
}
```

// TESTING THE FUNCTION

```
console.log(twoSum([2,7,11,15], 9)); // [0, 1]  
console.log(twoSum([3,2,4], 6)); // [1, 2]  
console.log(twoSum([1,2,3], 6)); // [0, 1]  
console.log(twoSum([1,3,10,11,14], 10)); // Target not found!  
console.log(twoSum([75,45,20,100,18], 145)); // [1, 3]
```