

**Task:** Given an array of integers `nums` and an integer `target`, return indices of the two numbers such that they add up to `target`.

You may assume that each input would have exactly one solution, and you may not use the same element twice.

You can return the answer in any order.

**Approach:**

1. Create a hash map
2. Iterate through the list and find the “difference” which is the target minus the current element value
3. If the “difference” is in the hashmap then return the array list containing the current element index and the index in the hash map that is equivalent to the “difference”
4. Otherwise put the element value and the index into the hashmap
5. Finally return an empty array list if there is no corresponding elements that add up to the target

**Test cases:**

```
Solution solution = new Solution();  
int[] nums = {3, 6, 2, 7};  
int target = 9;  
int [] index = solution.twoSum(nums, target);  
System.out.println(Arrays.toString(index));
```