
TWO SUM

```
#include <stdio.h>
int* twoSum(int* nums, int numsSize, int target, int* returnSize) {
    for (int i = 0; i < numsSize - 1; i++) {
        for (int j = i + 1; j < numsSize; j++) {
            if (nums[i] + nums[j] == target) {
                int* result = malloc(2 * sizeof(int));
                result[0] = i;
                result[1] = j;
                *returnSize = 2;
                return result;
            }
        }
    }

    *returnSize = 0;
    return NULL;
}

int main() {
    int nums[] = {2, 7, 11, 15};
    int target = 9;
    int numsSize = sizeof(nums) / sizeof(nums[0]);
    int returnSize;

    int* result = twoSum(nums, numsSize, target, &returnSize);

    if (result != NULL) {
        printf("Output: [%d, %d]\n", result[0], result[1]);
        free(result); // Don't forget to free the allocated memory
    } else {
        printf("No solution found.\n");
    }

    return 0;
}
```

REMOVE DUPLICATES

```
#include <assert.h>
```

```

#include <stdio.h>

int main() {
    int nums[15], i, j, k, size;
    printf("Enter the size of the array: ");
    scanf("%d", &size);
    printf("Enter all %d elements of the array: \n", size);

    for (i = 0; i < size; i++) {
        scanf("%d", &nums[i]);
    }

    printf("The original array is: \n");

    for (i = 0; i < size; i++) {
        printf("%d ", nums[i]);
    }
    for (i = 0; i < size; i++) {
        for (j = i + 1; j < size; j++) {
            if (nums[i] == nums[j]) {
                for (k = j; k < size; k++) {
                    nums[k] = nums[k + 1];
                }
                j--;
                size--;
            }
        }
    }
    printf("\nNew array is: \n");
    for (i = 0; i < size; i++) {
        printf("%d ", nums[i]);
    }
    printf("\n");
    printf("k= %d", size);
    return 0;
}

```