

```
1 #include <stdio.h>
2 #include <string.h>
3
4 int isPalindrome(char *str) {
5     int len = strlen(str);
6     for (int i = 0; i < len / 2; i++) {
7         if (str[i] != str[len - i - 1]) {
8             return 0;
9         }
10    }
11    return 1;
12 }
13
14 char* findFirstPalindromicString(char **words, int size) {
15     for (int i = 0; i < size; i++) {
16         if (isPalindrome(words[i])) {
17             return words[i];
18         }
19     }
20     return "";
21 }
22
23 int main() {
24     char *words[] = {"hello", "level", "world"};
25     int size = sizeof(words) / sizeof(words[0]);
26
27     char *result = findFirstPalindromicString(words, size);
28     printf("First palindromic string: %s\n", result);
```

```
Terminal
First palindromic string: level
```

```
1 #include <stdio.h>
2
3 int* calculateIndices(int* nums1, int n, int* nums2, int m) {
4     int answer1 = 0, answer2 = 0;
5
6     for (int i = 0; i < n; i++) {
7         for (int j = 0; j < m; j++) {
8             if (nums1[i] == nums2[j]) {
9                 answer1++;
10                break;
11            }
12        }
13    }
14
15    for (int i = 0; i < m; i++) {
16        for (int j = 0; j < n; j++) {
17            if (nums2[i] == nums1[j]) {
18                answer2++;
19                break;
20            }
21        }
22    }
23
24    static int result[2];
25    result[0] = answer1;
26    result[1] = answer2;
27
28    return result;
29 }
```

```
/usr/bin/ld: /usr/lib/gcc/x86_64-linux-gnu/11/../../../../x86_64-linux-gnu/Scri1.o: in
      function '_start':
(.text+0x1b): undefined reference to `main'
collect2: error: ld returned 1 exit status
```

```
1 #include <stdio.h>
2
3 int distinctCount(int arr[], int start, int end) {
4     |
5 }
6
7 int sumOfSquares(int nums[], int size) {
8     int result = 0;
9     for (int i = 0; i < size; i++) {
10        for (int j = i; j < size; j++) {
11            result += distinctCount(nums, i, j) * distinctCount(nums, i, j);
12        }
13    }
14    return result;
15 }
16
17 int main() {
18     int nums[] = {1, 2, 3, 4, 5};
19     int size = sizeof(nums) / sizeof(nums[0]);
20     int sum = sumOfSquares(nums, size);
21     printf("Sum of squares of distinct counts: %d\n", sum);
22     return 0;
23 }
```

Sum of squares of distinct counts: 85425152

```
1 int countPairs(int* nums, int numsSize, int k) {  
2     int count = 0;  
3     int freq[numsSize];  
4     memset(freq, 0, sizeof(freq));  
5  
6     for (int i = 0; i < numsSize; i++) {  
7         freq[nums[i] % k]++;  
8     }  
9  
10    for (int i = 0; i < numsSize; i++) {  
11        count += freq[nums[i] % k] - 1;  
12        freq[nums[i] % k]--;  
13    }  
14  
15    return count;  
16 }  
17  
18  
19
```

```
/usr/bin/ld: /usr/lib/gcc/x86_64-linux-gnu/11/../../../../x86_64-linux-gnu/Scrt1.o: in  
      function `__start':  
(.text+0x1b): undefined reference to `main'  
collect2: error: ld returned 1 exit status
```

```
1 #include <stdio.h>
2
3 int findMax(int arr[], int size) {
4     int max = arr[0];
5     for (int i = 1; i < size; i++) {
6         if (arr[i] > max) {
7             max = arr[i];
8         }
9     }
10    return max;
11 }
12
13 int main() {
14     int arr1[] = {1, 2, 3, 4, 5};
15     int arr2[] = {7, 7, 7, 7, 7};
16     int arr3[] = {-10, 2, 3, -4, 5};
17
18     printf("Max in arr1: %d\n", findMax(arr1, 5));
19     printf("Max in arr2: %d\n", findMax(arr2, 5));
20     printf("Max in arr3: %d\n", findMax(arr3, 5));
21
22     return 0;
23 }
24
```

```
Max in arr1: 5
Max in arr2: 7
Max in arr3: 5
```

```
1 #include <stdio.h>
2
3 void swap(int* a, int* b) {
4     int temp = *a;
5     *a = *b;
6     *b = temp;
7 }
8
9 int partition(int arr[], int low, int high) {
10    int pivot = arr[high];
11    int i = low - 1;
12
13    for (int j = low; j < high; j++) {
14        if (arr[j] < pivot) {
15            i++;
16            swap(&arr[i], &arr[j]);
17        }
18    }
19    swap(&arr[i + 1], &arr[high]);
20    return i + 1;
21 }
22
23 void quickSort(int arr[], int low, int high) {
24    if (low < high) {
25        int pi = partition(arr, low, high);
26        quickSort(arr, low, pi - 1);
27        quickSort(arr, pi + 1, high);
28    }
29 }
```

Maximum element in the list: 64