

```
/*
```

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This program compares two lists and outputs the longest amount of elements that the lists share.

For example, if list1 is { 2, 3, 4 } and list2 is { 1, 2, 3, 4 }, the output will be 3.

```
*/
```

```
#include <iostream>
```

```
#include <vector>
```

```
using namespace std;
```

```
int function(int* list1, int s1, int* list2, int s2) {
```

```
    int longest = 0; int length = 0; int i = 0; int j = 0; int i1 = 0; int j1 = 0;
```

```
    for (int i = 0; i < s1; i++) {
```

```
        for (int j = 0; j < s2; j++) {
```

```
            i1 = i; j1 = j;
```

```
            while ((list1[i1] == list2[j1]) && (i1 < s1) && (j1 < s2)) {
```

```
                length++;
```

```
                i1++;
```

```
                j1++;
```

```
            }
```

```
            if (length > longest) {
```

```
                longest = length;
```

```
            }
```

```
            length = 0;
```

```
        }
```

```
    } return longest;
```

```
}
```

```
int main()
```

```
{
```

```
    int longest = 0;
```

```
    int list1[] = { 2, 3, 4 };
```

```
    int list2[] = { 1, 2, 3, 4 };
```

```
    int s1 = (sizeof(list1) / sizeof(list1[0]));
```

```
    int s2 = (sizeof(list2) / sizeof(list2[0]));
```

```
    longest = function(list1, s1, list2, s2);
```

```
    cout << longest << endl;
```

```
    system("pause");
```

```
    return 0;
```

```
}
```