CP Lab-05 Tasks

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Lab 05

Tasks: 01

Write a C program to convert an array into ascending order.

Code:

```cpp
#include <iOStream>
using namespace std;

int main() {

int arr[5];
int i;
for (i = 0; i < 5; i++) {
cout << "Enter the value of index no: " << i << endl;
cin >> arr[i];
}
cout << "Elements of original array = ";
for (int j = 0; j < 5; j++) {
cout << arr[j] << " , ";
}

int temp;
for (int l = 0; l < 5; l++) {
for (int k = 0; k < 5-1; k++) {
if (arr[k] > arr[k + 1]) {
temp = arr[k];
arr[k] = arr[k + 1];
arr[k + 1] = temp;
}

}
}
cout << endl;
cout << "Elements of Array in ascending order = ";
for (int m = 0; m < 5; m++) {
cout << arr[m] << " , ";
}

return 0;
}
```

Output:

Tasks: 02

Write a C program to search an element entered by user from array and display the searched element and its location.

Code:

```cpp
#include <iostream>
using namespace std;

int main() {
int arr[100], n, search_element, location = -1;

cout << "Enter the number of elements in array: ";
cin >> n;


cout << "Enter " << n << " integers:" << endl;
for (int i = 0; i < n; i++) {
cin >> arr[i];
}

cout << "Enter the element to be searched: ";
cin >> search_element;


for (int i = 0; i < n; i++) {
if (arr[i] == search_element) {
location = i;
```
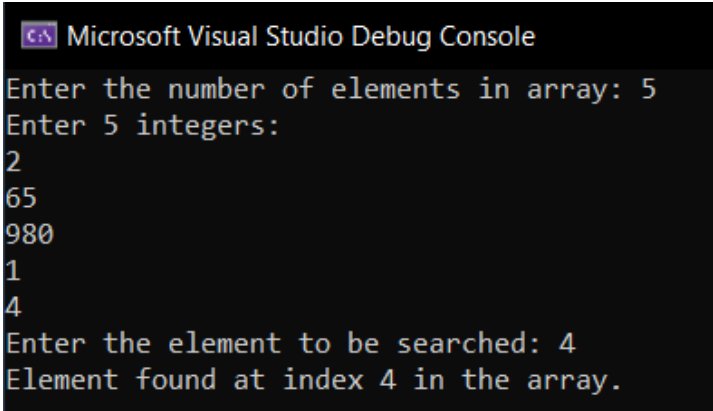
```cpp
break;
}
}

if (location == -1) {
cout << "Element not found in the array." << endl;
}
else {
cout << "Element found at index " << location << " in the array." <<
endl;
}

return 0;
}
```
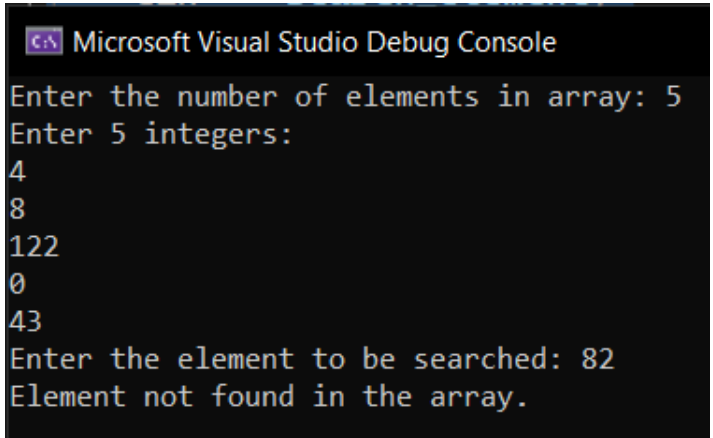
Output 1:

Output 2:

Tasks: 03

Write a C++ program to find total number of elements in an array and print number of elements repeated in an array also print all unique elements in an array.

Code:

```cpp
#include <iostream>
using namespace std;
int main()
{
int n;
cout << "Enter the size of the array: ";
cin >> n;

int arr[100];

for (int i = 0; i < n; i++)
{
cout << "Enter the elements of the array: ";
cin >> arr[i];
}

int repeat = 0;
int unique[10];
int uCount = 0;
bool isUnique;
for (int i = 0; i < n; i++)
{
isUnique = true;
for (int j = i + 1; j < n; j++)
{
if (arr[i] == arr[j])
{
repeat++;
isUnique = false;
break;
}
}
if (isUnique)
{
unique[uCount] = arr[i];
uCount++;
}
}

cout << "Total number of elements in the array: " << n << endl;
cout << "Number of repeated elements in the array: " << repeat << endl;
cout << "Unique elements in the array: ";
```
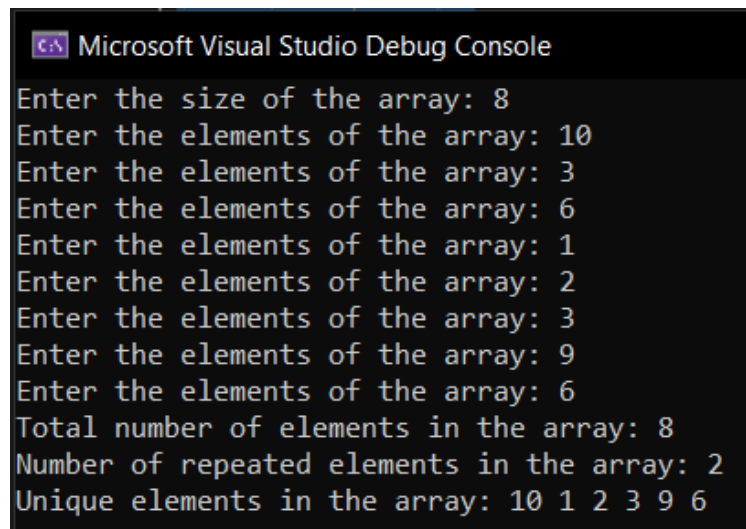
```cpp
for (int i = 0; i < uCount; i++)
{
cout << unique[i] << " ";
}
cout << endl;

return 0;
}
```

Output:

Tasks: 04

Write a program in C++ to identify array in which no zero present, and print those numbers. If user input a value without zero program should terminate.

Code:

```cpp
#include <iOStream>
using namespace std;

int main() {

int arr[100], n;
cout << "Enter the number of elements of array: ";
cin >> n;
```

```cpp
int i;
for ( i = 0; i < n; i++) {
cout << "Enter the element of index no " << i << " : ";
cin >> arr[i];

if (arr[i] == 0) {
cout << "Program terminated because you enetered 0";
break;
}
}
cout << endl;
int updated_n = i;

cout << "Array of the entered elements = ";

for (int l = 0; l < i; l++) {
cout << arr[l] << " ";
}


return 0;
}
```
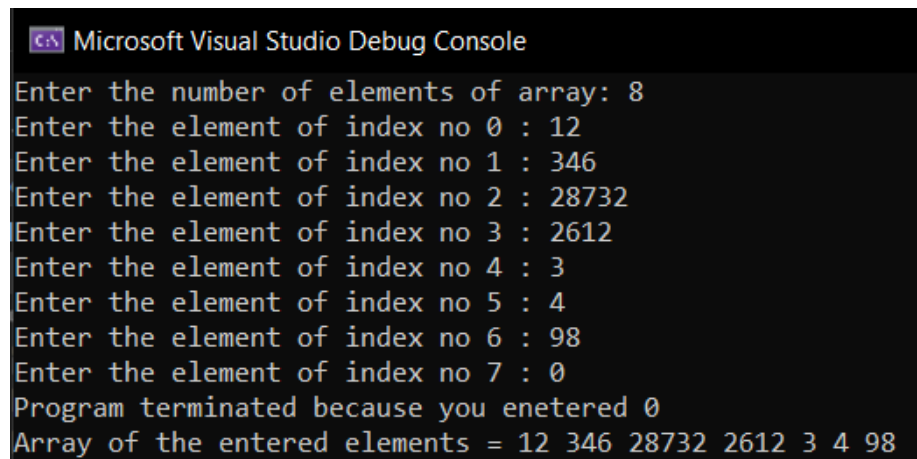
Output 1:

Output 2:

```
Microsoft Visual Studio Debug Console
Enter the number of elements of array: 5
Enter the element of index no 0 : 12
Enter the element of index no 1 : 65
Enter the element of index no 2 : 5
Enter the element of index no 3 : 9
Enter the element of index no 4 : 2

Array of the entered elements = 12 65 5 9 2
```
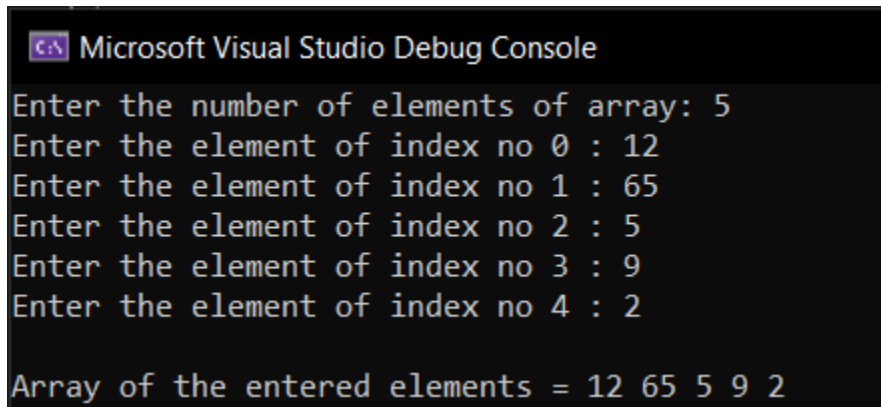
Tasks: 05

Write a C++ program that asks user to enter 10 integer values. Store those values in one dimensional array. Create another one-dimensional array of same size, and store the values of first array in reverse order. Print the result on Screen.

Code:

```cpp
#include <iOStream>
using namespace std;

int main() {

int arr[10];

for (int i = 0; i < 10; i++) {
cout << "Enter the value of index no: " << i << " : ";
cin >> arr[i];
}

cout << endl << "Original array = ";
for (int i = 0; i < 10; i++) {
cout << arr[i] << " ";
}
cout << endl << "Reversed array = ";
for (int i = 9
; i > 0; i--) {
cout << arr[i] << " ";
}

return 0;
}
```

Output:

```
Microsoft Visual Studio Debug Console

Enter the value of index no: 0 : 45
Enter the value of index no: 1 : 30
Enter the value of index no: 2 : 89
Enter the value of index no: 3 : 21
Enter the value of index no: 4 : -45
Enter the value of index no: 5 : 3
Enter the value of index no: 6 : -94
Enter the value of index no: 7 : 2
Enter the value of index no: 8 : 0
Enter the value of index no: 9 : 21


Original array = 45 30 89 21 -45 3 -94 2 0 21
Reversed array = 21 0 2 -94 3 -45 21 89 30
```