#include <iostream>

using namespace std;

const int MAX\_SIZE = 100; // Maximum size of the array

// Function to insert an element at the end of the array

void insert(int arr[], int &size, int element)

{

if (size < MAX\_SIZE)

{

arr[size++] = element;

cout << "Element inserted successfully.\n";

}

else

{

cout << "Array is full. Cannot insert element.\n";

}

}

// Function to display all elements of the array

void display(const int arr[], int size)

{

cout << "Array elements: ";

for (int i = 0; i < size; ++i)

{

cout << arr[i] << " ";

}

cout << "\n";

}

// Function to search for an element in the array

int search(const int arr[], int size, int element)

{

for (int i = 0; i < size; ++i)

{

if (arr[i] == element)

{

return i; // Return index of the element if found

}

}

return -1; // Return -1 if element not found

}

// Function to delete an element from the array

void remove(int arr[], int &size, int element)

{

int index = search(arr, size, element);

if (index != -1)

{

// Shift elements to the left to fill the gap

for (int i = index; i < size - 1; ++i)

{

arr[i] = arr[i + 1];

}

size--; // Reduce the size of the array

cout << "Element removed successfully.\n";

}

else

{

cout << "Element not found in the array.\n";

}

}

int main()

{

int arr[MAX\_SIZE];

int size = 0;

insert(arr, size, 5);

insert(arr, size, 10);

insert(arr, size, 15);

display(arr, size); // Output: Array elements: 5 10 15

cout << "Index of 10: " << search(arr, size, 10) << "\n"; // Output: Index of 10: 1

remove(arr, size, 10);

display(arr, size); // Output: Array elements: 5 15

return 0;

}