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CS-114

ME-15

SEC-A

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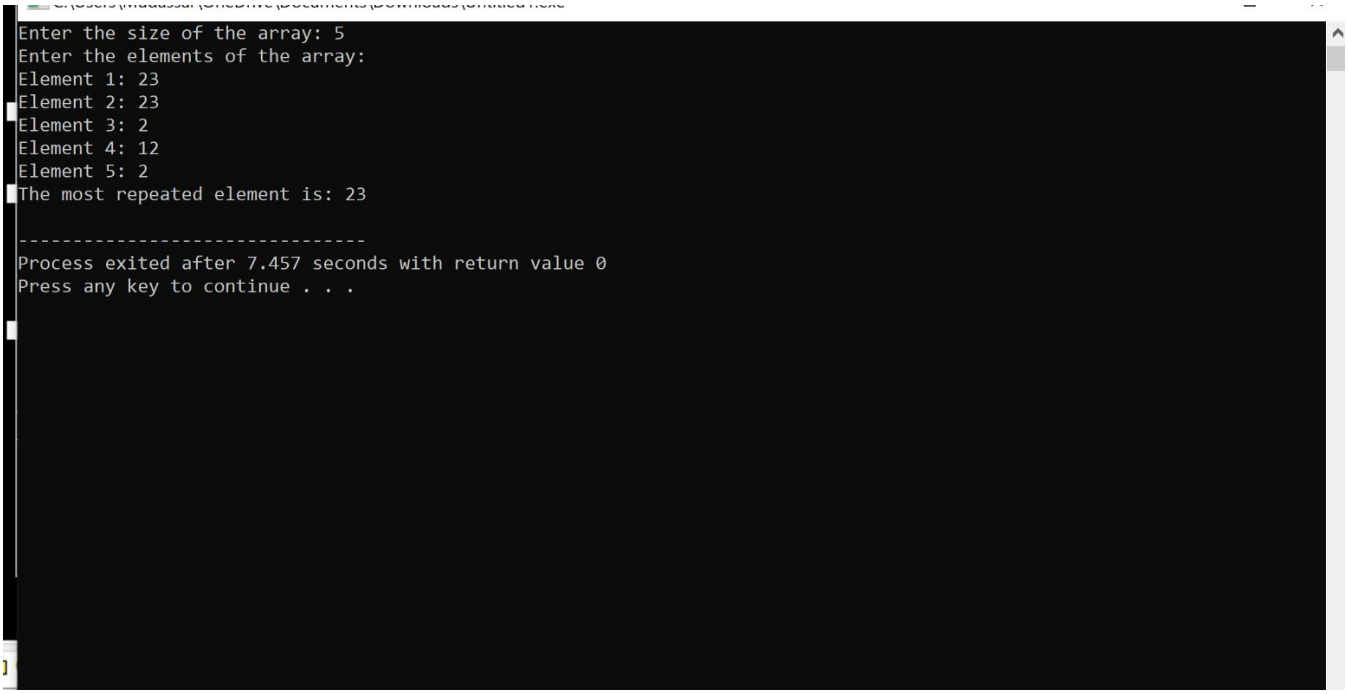
HOME TASK 1:

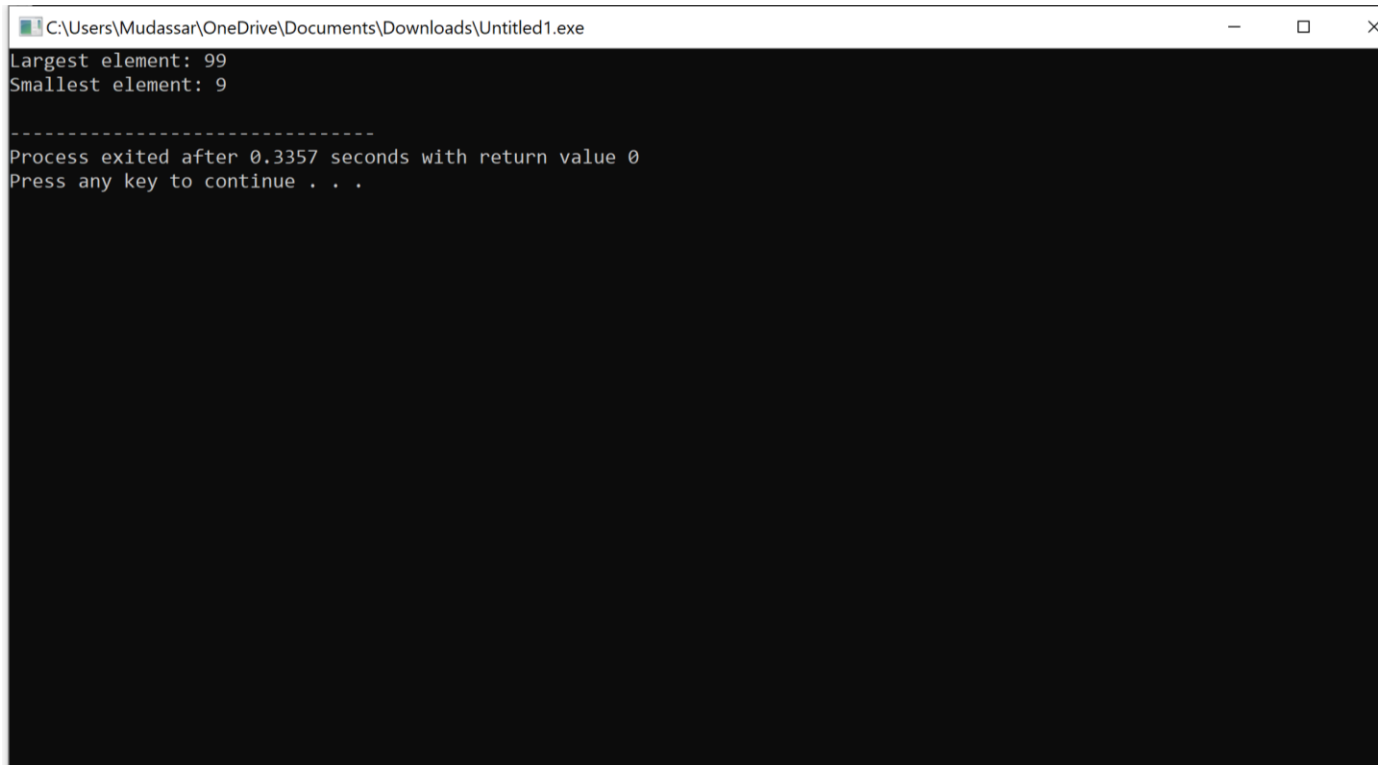
```
#include <iostream>

int main() {
    const int maxSize = 100; // You can adjust the maximum size of the array
    int arr[maxSize];

    int n;
    std::cout << "Enter the size of the array: ";
    std::cin >> n;

    if (n <= 0 || n > maxSize) {
        std::cout << "Invalid size. Please enter a valid size." << std::endl;
        return 1; // Exit with an error code
    }

    std::cout << "Enter the elements of the array:" << std::endl;
    for (int i = 0; i < n; ++i) {
        std::cout << "Element " << i + 1 << ": ";
        std::cin >> arr[i];
    }

    int mostRepeated = arr[0];
    int maxCount = 1;

    for (int i = 0; i < n; ++i) {
        int count = 1;
```

```
        for (int j = i + 1; j < n; ++j) {
            if (arr[i] == arr[j])
                ++count;
        }

        if (count > maxCount) {
            maxCount = count;
            mostRepeated = arr[i];
        }
    }

    std::cout << "The most repeated element is: " << mostRepeated << std::endl;

    return 0; // Exit successfully
}
```



TASK 2:

```
#include <iostream>
#include <climits> // for INT_MAX and INT_MIN

int main() {
   int a[8] = {13, 15, 17, 9, 99, 77, 65, 43}

   int maxElement = INT_MIN;
   int minElement = INT_MAX;

   for (int i = 0; i < 8; ++i) {
      if (a[i] > maxElement) {
         maxElement = a[i];
      }

      if (a[i] < minElement) {
         minElement = a[i];
      }
   }

   std::cout << "Largest element: " << maxElement << std::endl;
   std::cout << "Smallest element: " << minElement << std::endl;

   return 0;
}
```



TASK 3:

```
#include <iostream>


int main() {
   const int size = 5;
   int arr[size];



   std::cout << "Enter 5 elements for the array:\n";
   for (int i = 0; i < size; ++i) {
      std::cout << "Element " << i + 1 << ": ";
      std::cin >> arr[i];
   }
```

```
    int temp = arr[1]; // Element at position 2
    arr[1] = arr[3];   // Swap with element at position 4
    arr[3] = temp;     // Place the original element at position 2 in position 4


    std::cout << "\nArray after swapping elements at positions 2 and 4:\n";
    for (int i = 0; i < size; ++i) {
        std::cout << "Element " << i + 1 << ": " << arr[i] << "\n";
    }

    return 0;
}
```