HATFD1025

Instructions: Traverse the array manually to find both the largest and second-largest elements

PROBLEM STATEMENT

Input:

- The input consists of
- an array of integers arr []
- an integer n representing the size of the array.

Output:

- The program should output the second largest element in the array.
- If there is no second largest element (e.g., the array contains only one unique element), output a message like "No second largest element found."

PROGRAM

```
#include<stdio.h>
int Largest(int arr[], int n) {
    int largest = arr[0];
    int second_largest = -1;
    for(int j=1;j<n;j++)
    {
        if (arr[j]>largest)
        {
            second_largest = largest;
            largest = arr[j];
        } else if (arr[j] > second_largest && arr[j] != largest) {
            second_largest = arr[j];
        }
}
```

```
}
  return second_largest;
}
int main()
{
  int arr1[]={};
  int n1 = sizeof(arr1)/sizeof(arr1[0]);
  int result1 = Largest(arr1, n1);
  if (result1 != -1) {
     printf("The second largest element is: %d\n", result1);
  } else {
     printf("No second largest element found.\n");
  }
  int arr2[] = \{12,34,56\};
  int n2 = sizeof(arr2) / sizeof(arr2[0]);
  int result2 = Largest(arr2, n2);
  if (result2 != -1) {
     printf("The second largest element is: %d\n", result2);
  } else {
     printf("No second largest element found.\n");
  }
  int arr3[] = \{100\};
  int n3 = sizeof(arr3) / sizeof(arr3[0]);
  int result3 = Largest(arr3, n3);
  if (result3 != -1) {
```

```
printf("The second largest element is: %d\n", result3);
} else {
    printf("No second largest element found.\n");
}
return 0;
}
```

OUTPUT

No second largest element found.

The second largest element is: 34

No second largest element found.

SCREENSHOTS