

Experiment 5 : Array.

1. WAP to read a list of integers and store it in a single dimensional array. Write a C program to print the second largest integer in a list of integers.

```
#include <stdio.h>

int main() {
    int n;
    printf("Enter the number of elements: ");
    scanf("%d", &n);
    int arr[n];
    printf("Enter %d integers: \n", n);
    for(int i=0; i<n; i++) {
        scanf("%d", &arr[i]);
    }

    int largest, secondLargest;
    if (arr[0] > arr[1]) {
        largest = arr[0];
        secondLargest = arr[1];
    }
    else {
        largest = arr[1];
        secondLargest = arr[0];
    }

    for (int i=2; i<n; i++) {
        if (arr[i] > largest) {
            secondLargest = largest;

```



```
largest = arr[i];
```

```
}
```

```
else if (arr[i] > secondLargest && arr[i] != largest) {
```

```
secondLargest = arr[i];
```

```
}
```

```
}
```

```
printf("Second largest number is : %d \n", secondLargest);
```

```
return 0;
```

```
}
```



C exp5store.c > ...

```
1
2  #include <stdio.h>
3
4  int main() {
5      int n;
6
7      // Ask user for number of elements
8      printf("Enter the number of elements: ");
9      scanf("%d", &n);
10
11     int arr[n];
12
13     // Read elements into array
14     printf("Enter %d integers:\n", n);
15     for (int i = 0; i < n; i++) {
16         scanf("%d", &arr[i]);
17     }
18
19     int largest, secondLargest;
20
21     // Initialize largest and secondLargest
22     if (arr[0] > arr[1]) {
23         largest = arr[0];
24         secondLargest = arr[1];
25     } else {
26         largest = arr[1];
27         secondLargest = arr[0];
28     }
29
30     // Find second largest
31     for (int i = 2; i < n; i++) {
32         if (arr[i] > largest) {
33             secondLargest = largest;
```



```

33         secondLargest = largest;
34         largest = arr[i];
35     } else if (arr[i] > secondLargest && arr[i] != largest) {
36         secondLargest = arr[i];
37     }
38 }
39
40 printf("Second largest number is: %d\n", secondLargest);
41
42 return 0;
43 }
44

```

PROBLEMS

OUTPUT

TERMINAL

DEBUG CONSOLE

PORTS

```

> cd "c:\Users\abiga\OneDrive\Desktop\Absproj\" ; if ($?) {
p5store.c -o exp5store } ; if ($?) { .\exp5store }
Enter the number of elements: 5
Enter 5 integers:
3 7 89 76 4
Second largest number is: 76
PS C:\Users\abiga\OneDrive\Desktop\Absproj>

```