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.

```c
#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;
```

```c
            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 > ...

```c
#include <stdio.h>

int main() {
    int n;

    // Ask user for number of elements
    printf("Enter the number of elements: ");
    scanf("%d", &n);

    int arr[n];

    // Read elements into array
    printf("Enter %d integers:\n", n);
    for (int i = 0; i < n; i++) {
        scanf("%d", &arr[i]);
    }

    int largest, secondLargest;

    // Initialize largest and secondLargest
    if (arr[0] > arr[1]) {
        largest = arr[0];
        secondLargest = arr[1];
    } else {
        largest = arr[1];
        secondLargest = arr[0];
    }

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

```c
                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;
}
```

```
                                        > 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>
```