

Experiment 6: Array

6.1. 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.

Ans-:

```
#include <stdio.h>

int main() {
    printf("Name - Aryan kamboj\nSAP ID - 590025526\ncourse - BCA\nBatch -
6");
    printf("\n-----\n");
    int n;

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

    int arr[n];

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

    int largest, secondLargest;

    // Initialize largest and second largest
    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;
            largest = arr[i];
        } else if (arr[i] > secondLargest && arr[i] != largest) {
            secondLargest = arr[i];
        }
    }
}
```

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

    return 0;
}
```

Output:

```
● aryankamboj@users-MacBook-Air lab_9 % cd "/Users/aryankamboj/Desktop/c_programming_theory/lab_9/" && gcc tempCodeRunnerFile.c -o tempCodeRunnerFile && "/Users/aryankamboj/Desktop/c_programming_theory/lab_9/"tempCodeRunnerFile
Name - Aryan kamboj
SAP ID - 590025526
course - BCA
Batch - 6
-----
Enter the number of elements: 8
Enter 8 integers:
1 2 3 4 5 6 7 8
The second largest number is: 7
```