```c
//36 (A)Second largest
/**
 * C program to find second largest number in an array
 */

#include <stdio.h>
#include <limits.h> // For INT_MIN

#define MAX_SIZE 1000     // Maximum array size

int main()
{
    int arr[MAX_SIZE], size, i;
    int max1, max2;

    /* Input size of the array */
    printf("Enter size of the array (1-1000): ");
    scanf("%d", &size);

    /* Input array elements */
    printf("Enter elements in the array: ");
    for(i=0; i<size; i++)
    {
        scanf("%d", &arr[i]);
    }

    max1 = max2 = INT_MIN;


    /*
     * Check for first largest and second
     */
    for(i=0; i<size; i++)
    {
        if(arr[i] > max1)
        {
            /*
             * If current element of the array is first largest
             * then make current max as second max
             * and then max as current array element
             */
            max2 = max1;
            max1 = arr[i];
        }
        else if(arr[i] > max2 && arr[i] < max1)
        {
            /*
             * If current array element is less than first largest
             * but is greater than second largest then make it
             * second largest
             */
            max2 = arr[i];
        }
    }

    printf("First largest = %d\n", max1);
    printf("Second largest = %d", max2);

    return 0;
}
```

Output

```
Enter size of the array (1-1000): 10
Enter elements in the array: -7 2 3 8 6 6 75 38 3 2
First largest = 75
```

```
Second largest = 38
```

```
//Sorting using bubble sort
#include <stdio.h>

int main(){

    int arr[50], num, x, y, temp;

    printf("Please Enter the Number of Elements you want in the array: ");

    scanf("%d", &num);

    printf("Please Enter the Value of Elements: ");

    for(x = 0; x < num; x++)

        scanf("%d", &arr[x]);

    for(x = 0; x < num - 1; x++){

        for(y = 0; y < num - x - 1; y++){

            if(arr[y] > arr[y + 1]){

                temp = arr[y];

                arr[y] = arr[y + 1];

                arr[y + 1] = temp;

            }

        }

    }

    printf("Array after implementing bubble sort: ");

    for(x = 0; x < num; x++){

        printf("%d  ", arr[x]);

    }

    return 0;

}
```

```
Output:
Enter number of elements in array
```