Adeem M Sanad 4AL19CS003 F-Section 05th June 2020

C program to find smallest and largest element in an array.

Algorithm:O

Step 1 :- Start

Step 2 : input n, a[50]

Step 3 : Display how many elements

Step 4 : Display Enter array elements

for (i=0; i<n; i++)

input a[i]

Step 5 : large = small = a[0]

Step 6 : for (i=0; i<n; i++)

Step 6.1 : if (a[i]>large)

Step 6.1.1 : large = a[i]

Step 6.2 : if (a[i]<small)

Step 6.2.1 : small = a[i]

Step 7 : Print the largest element

Step 8 : Print the smallest element

Step 9 : Stop.

Flow chart :-

```
                    ( Start )
                        |
                   [ input n ]
                        |
                 / print how many /
                /   elements     /
                        |
               / Enter the array /
              /   elements      /
                        |
                 [ input i=0 ]
                        |
                        v                F
                   < i<n >-------------------------------+
                        |                                |
                        | T                              v
                   [ read a[i] ]              [ large =small = a[o] ]
                        |                                |
                     [ i++ ]                   [ initialize i=1 ]
                                                         |
                                                         v
                    T                                  F
              +------------------------< i<n >----------------------+
              |                                                     |
              v                                                     |
         T         F                                                |
    +----< a[i]>large >----+                                        |
    |                      |                                        |
    v                      v                                        |
[ large =a[i] ]      < a[i] <  >----- f ----------------------------+
                     < small  >                                     |
                         |                                          v
                         v                              [ print the largest ]
                  [ small = a[i] ]                      [      element       ]
                                                                   |
                                                        [ print the smallest ]
                                                        [      element       ]
                                                                   |
                                                                   v
                                                              ( Stop )
```