To find second smallest element in an array.

Algorithm

1. start
2. input size
3. Display how many elements you want to entry
4. Display enter '/' d elements

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

   input array [i]

5. if (array [0] < array [1])

   5.1   smallest = array [0]
   5.2   second smallest = array [1]
   5.3   goto step 10 and step 11

6. else

   Smallest = array [1]

   Second smallest = array [0]

   goto step 10 & step 11

7. for (i=2; i< size; i++)

8. if (array [i] < smallest)

   second smallest = smallest

   Smallest = array [i]

   goto step 10 & step 11

9. else if (array [i] < second smallest)

   Second smallest = array [i]

10. print the second smallest element

11. stop.

Flow chart :

```
                    ( Start )
                        ↓
                 [ Input size ]
                        ↓
            [ Print how many
              elements you want
                 to enter ]
                        ↓
               / Read size /
                        ↓
            / Enter '/.d elements /
                        ↓
                  [ i := 0 ]
                        ↓
        ┌──────────< i <        >──── False ──┐
        │           \ size /                    │
        │              │ True                   ↓
        │       [ input array[i] ]      < array[0]      >── False ──┐
        │              │                 < array[1]                  │
        │           [ i++ ]                    │ True                ↓
        └──────────────┘              [ Smallest = array[i] ]  [ Smallest = array[i] ]
                                              ↓                      ↓
                                 [ Second Smallest = array[i] ]  [ Second Smallest = array[0] ]
                                                                     ↓
                                                                 [ i = 2 ]
                                                                     ↓
        ┌───────────────────────────────────>< i < size >──── False ──┐
        │                                          │ True               │
        │                                          ↓                    │
        │                      ┌─── False ──< array[i]  >── True ──┐    │
        │                      │              < Smallest            │    │
        │                      ↓                                    ↓    │
        │          < array[i]       >              [ Second smallest = Smallest ] │
        │          < Second                                        ↓    │
        │            Smallest >                     [ Smallest = array[i] ] │
        │    [ i++ ]      │ True                                         │
        └─────────────────┤                                             │
                          ↓                                             │
              / Print the Second /←──────────────────────────────────────┘
              / largest  element /
                          ↓
                    ( Stop )
```