C program to find smallest element in an array.

Algorithm:

1. Start

2. Input size

3. Display how many elements do you want to enter.

4. Display enter %od 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 and step 11.

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

8. if (array [i] < smallest)

   second smallest = smallest

   Smallest = array [i]

   goto step 10 and step 11

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

   Second smallest = array[i]

10. Print the second smallest element

11. Stop

Flowchart:

```
                    ( Start )
                        |
                        v
                 | Input size |
                        |
                        v
              / print how many      /
             /  elements do you    /
            /   want to enter      /
                        |
                        v
                 / Read size /
                        |
                        v
            / enter %d elements /
                        |
                        v
                  | i = 0 |
                        |
                        v
                  < i < size >--------False------------+
                        |                              |
                        | (True)                       v
                        v                    < array[0] <        >---False---+
              | input array[i] |            < array[i] >                    |
                        |                         |                         v
                        v                      True|            | Smallest = array[1] |
                     | i++ |                       v                        |
                        |              | Smallest = array[i] |              v
                        |                         |              | Second smallest = array[0] |
                        |                         v                        |
                        |         | Second smallest = array[i] |           v
                        |                                             | i = 2 |
                        |                                                  |
                        |                                                  v
                        |                                          < i < size >----False----+
                        |                                                |                  |
                        |                                            True|                  |
                        |                      False                     v                  |
                        |            +----------------------< array[i] < smallest >         |
                        |            |                                 |                    |
                        |            v                             True|                    |
                        |   < array[i] < second >                      v                    |
                        |   <      smallest    >           | Second smallest = smallest |   |
                        |            |                                 |                    |
              False      |           v                                 v                    |
          +--------------+                              | Smallest = array[i] |             |
          |                          |                                 |                    |
          v                          v                                 |                    |
       | i++ |          / Print the second smallest  /<----------------+                    |
                       /      element               /                                       |
                                    |                                                        |
                                    v                                                        |
                                ( Stop )                                                     
```