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F section

Find second smallest element in an array

Algorithm

Step 1: Start

Step 2: input size

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

Step 4: Display enter %.d elements

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

input array [i]

Step 5: if (array[0] < array[i])

Step 5.1: smallest = array[0]

Step 5.2: second smallest = array[1]

Step 5.3: goto step 10 and step 11.

Step 6: else

smallest = array[i]

second smallest = array[0]

goto step 10 and step11

Step 7: for (i=2; i < size; i++)

Step 8: if (array[i] < smallest)

second smallest = smallest

smallest = array[i]

goto step 10 and step 11

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

second smallest = array[i]

Step 10: Print the second smallest element

Step 11: Stop.

Flowchart

Start

↓

input size

↓

print how many element do you want to enter

↓

Read size

↓

Enter % d elements

↓

i = 0

↓

i < size — False → array[0] < array[1] — False → smallest = array[1]

True ↓ (i < size)

input array

↓

i++

array[0] < array[1] — True → smallest = array[1]

↓

second smallest = array[0]

smallest = array[1]

↓

second smallest = array[0]

↓

i = 2

↓

i < size — False

True ↓

array[i] < smallest

False ←

True ↓

second smallest = smallest

↓

smallest = array[i]

array[i] < second smallest — False → i++

True ↓

Print the second smallest element

↓

Stop