HATFD1025

Find the Second Largest Element in an Array

Write a program to find the second-largest element in an array of integers without using any sorting algorithms or built-in array functions.

Instructions: Traverse the array manually to find both the largest and second-largest elements

CODE:

```
package main
import "fmt"
func findLargestAndSecondLargest(arr []float64) {
   if len(arr) < 2 {
      fmt.Println("Array should have at least two elements")
      return
   }

   largest := arr[0]
   secondLargest := arr[0]
   for _, num := range arr {
      if num > largest {
         secondLargest = largest
         largest = num
      } else if num > secondLargest && num != largest {
         secondLargest = num
      }
   }
   fmt.Printf("The largest element is: %.2f\n", largest)
   fmt.Printf("The second largest element is: %.2f\n", secondLargest)
}
func main() {
   // Example array of float64 numbers
   arr := []float64{12.8,98.7,89.7,23.5,67.5,56.6}
   findLargestAndSecondLargest(arr)}
```

```
go run /tmp/HCpnwUtBBB.go
The largest element is: 98.70
The second largest element is: 89.70
```

```
go run /tmp/TZuxIHb56p.go
The largest element is: 92.10
The second largest element is: 83.50
```

```
go run /tmp/NfjpgHP9qs.go
The largest element is: 86.50
The second largest element is: 67.50
```