

Source code:

```
#quiz 12
#Shriharsha

minmax = [0,0]
i = 2;
def findSmallAndLarge(arr,n):

    if(n % 2 == 0):
        if (arr[0] > arr[1]):
            minmax[0] = arr[0]
            minmax[1] = arr[1]
        else:
            minmax[0] = arr[0]
            minmax[1] = arr[1]
    else:
        minmax[0] = arr[0]
        minmax[1] = arr[0]

    i = 1

    while (i < n - 1):
        if (arr[i] > arr[i + 1]):
            if (arr[i] > minmax[1]):
                minmax[1] = arr[i]

            if (arr[i + 1] < minmax[0]):
                minmax[0] = arr[i + 1]
        else:
            if (arr[i + 1] > minmax[1]):
                minmax[1] = arr[i + 1]

            if (arr[i] < minmax[0]):
                minmax[0] = arr[i]

    i += 2
```

```

#test case 1
print(" ")
print("test case 1: ")
arr1 = [ 1, 8, 3, 9, 6, 5, 4]
N = len(arr1)

findSmallAndLarge(arr1, N);
print( "Smallest is: " , minmax[0] )
print( "Largest is: " , minmax[1] )
print(" ")

#test case 2

print("test case 2: ")
arr2 = [ 9, 8, 7, 6, 10]
N = len(arr2)

findSmallAndLarge(arr2, N);
print( "Smallest is: " , minmax[0] )
print( "Largest is: " , minmax[1] )
print(" ")

#test case 3

print("test case 3: ")
arr3 = [ 11, 2, 3, 4, 5, 7, 8, 9, 10]
N = len(arr3)

findSmallAndLarge(arr3, N);
print( "Smallest is: " , minmax[0] )
print( "Largest is: " , minmax[1] )

```

Output:

```

harshavaidhyam@Harshas-MacBook-Pro quiz 12 % cd /Users/harshavaidhyam/Desktop/Pitt\
term-1/Algo\ Design/quiz\ 12 ; /usr/bin/env /usr/local/bin/python3 /Users/harshavai

```

```
dhyam/.vscode/extensions/ms-python.python-  
2022.16.1/pythonFiles/lib/python/debugpy/adapters/..../debugpy/launcher 57123 --  
/Users/harshavaidhyam/Desktop/Pitt\ term-1/Al  
go\ Design\quiz\ 12\quiz12.py
```

**test case 1:**

**Smallest is: 1**

**Largest is: 9**

**test case 2:**

**Smallest is: 6**

**Largest is: 10**

**test case 3:**

**Smallest is: 2**

**Largest is: 11**