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### **1] PROBLEM STATEMENT:**

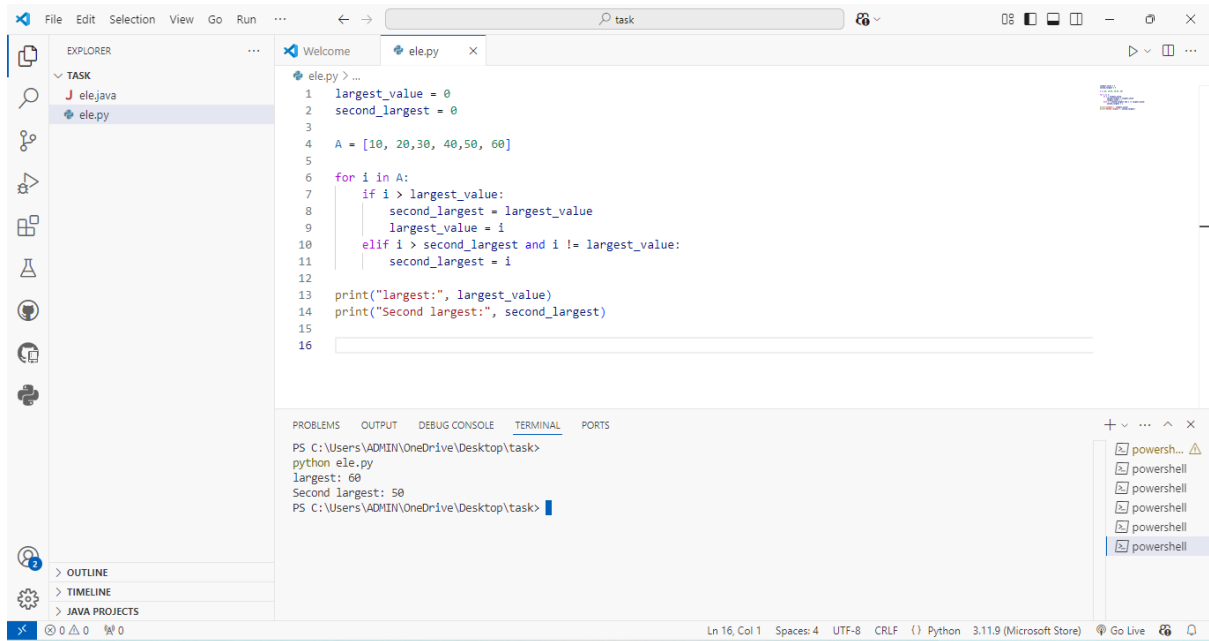
Find the Second Largest Element in an Array

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:**

```
largest_value = 0
second_largest = 0
A = [10, 20, 30, 40, 50, 60]
for i in A:
    if i > largest_value:
        second_largest = largest_value
        largest_value = i
    elif i > second_largest and i != largest_value:
        second_largest = i
print("largest:", largest_value)
print("Second largest:", second_largest)
```



2<sup>ND</sup>

largest\_value = 0

second\_largest = 0

B= [101,444,999,000]

for i in B:

    if i > largest\_value:

        second\_largest = largest\_value

        largest\_value = i

    elif i > second\_largest and i != largest\_value:

        second\_largest = i

print("largest:", largest\_value)

print("Second largest:", second\_largest)

**OUTPUT:**

The screenshot shows the Visual Studio Code interface. The Explorer panel on the left shows a project named 'TASK' with files 'ele.java' and 'ele.py'. The main editor window displays the code for 'ele.py':

```
1 largest_value = 0
2 second_largest = 0
3
4 B = [101,444,999,000]
5
6 for i in B:
7     if i > largest_value:
8         second_largest = largest_value
9         largest_value = i
10    elif i > second_largest and i != largest_value:
11        second_largest = i
12
13 print("largest:", largest_value)
14 print("Second largest:", second_largest)
15
16
```

The bottom panel shows the 'TERMINAL' tab with the following output:

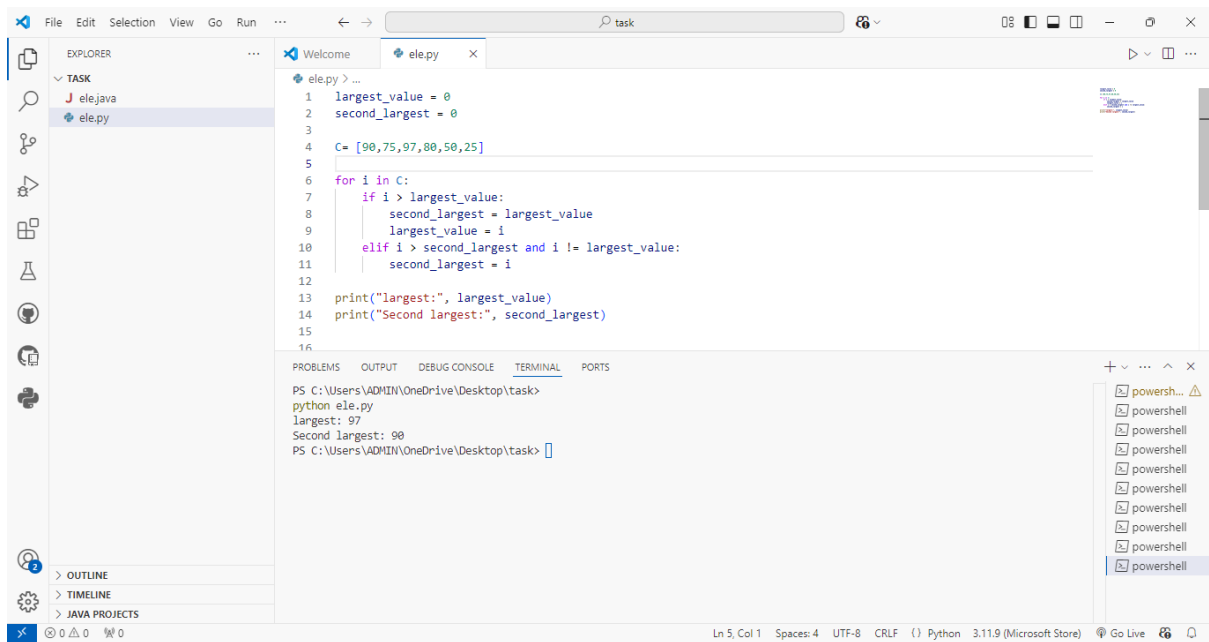
```
PS C:\Users\ADMIN\OneDrive\Desktop\task>
python ele.py
largest: 999
Second largest: 444
PS C:\Users\ADMIN\OneDrive\Desktop\task>
```

The status bar at the bottom indicates 'Ln 10, Col 52', 'Spaces: 4', 'UTF-8', 'CRLF', 'Python', '3.11.9 (Microsoft Store)', and 'Go Live'.

3<sup>rd</sup>

```
largest_value = 0
second_largest = 0
C = [90,75,97,80,50,25]
for i in C:
    if i > largest_value:
        second_largest = largest_value
        largest_value = i
    elif i > second_largest and i != largest_value:
        second_largest = i
print("largest:", largest_value)
print("Second largest:", second_largest)
```

## OUTPUT:



The screenshot displays the Visual Studio Code interface. The Explorer sidebar on the left shows a project named 'TASK' containing two files: 'ele.java' and 'ele.py'. The 'ele.py' file is open in the main editor. The code in 'ele.py' is as follows:

```
1 largest_value = 0
2 second_largest = 0
3
4 C = [90,75,97,80,50,25]
5
6 for i in C:
7     if i > largest_value:
8         second_largest = largest_value
9         largest_value = i
10    elif i > second_largest and i != largest_value:
11        second_largest = i
12
13 print("largest:", largest_value)
14 print("Second largest:", second_largest)
15
16
```

Below the code editor, the 'TERMINAL' tab is active, showing the command prompt output:

```
PS C:\Users\ADMIN\OneDrive\Desktop\task>
python ele.py
largest: 97
Second largest: 90
PS C:\Users\ADMIN\OneDrive\Desktop\task>
```

The status bar at the bottom indicates the current cursor position is 'Ln 5, Col 1', the file encoding is 'UTF-8', the line ending is 'CRLF', and the Python version is '3.11.9 (Microsoft Store)'.