ELEC 390 Lab 1

Thursday, January 26th 2023
Section 3

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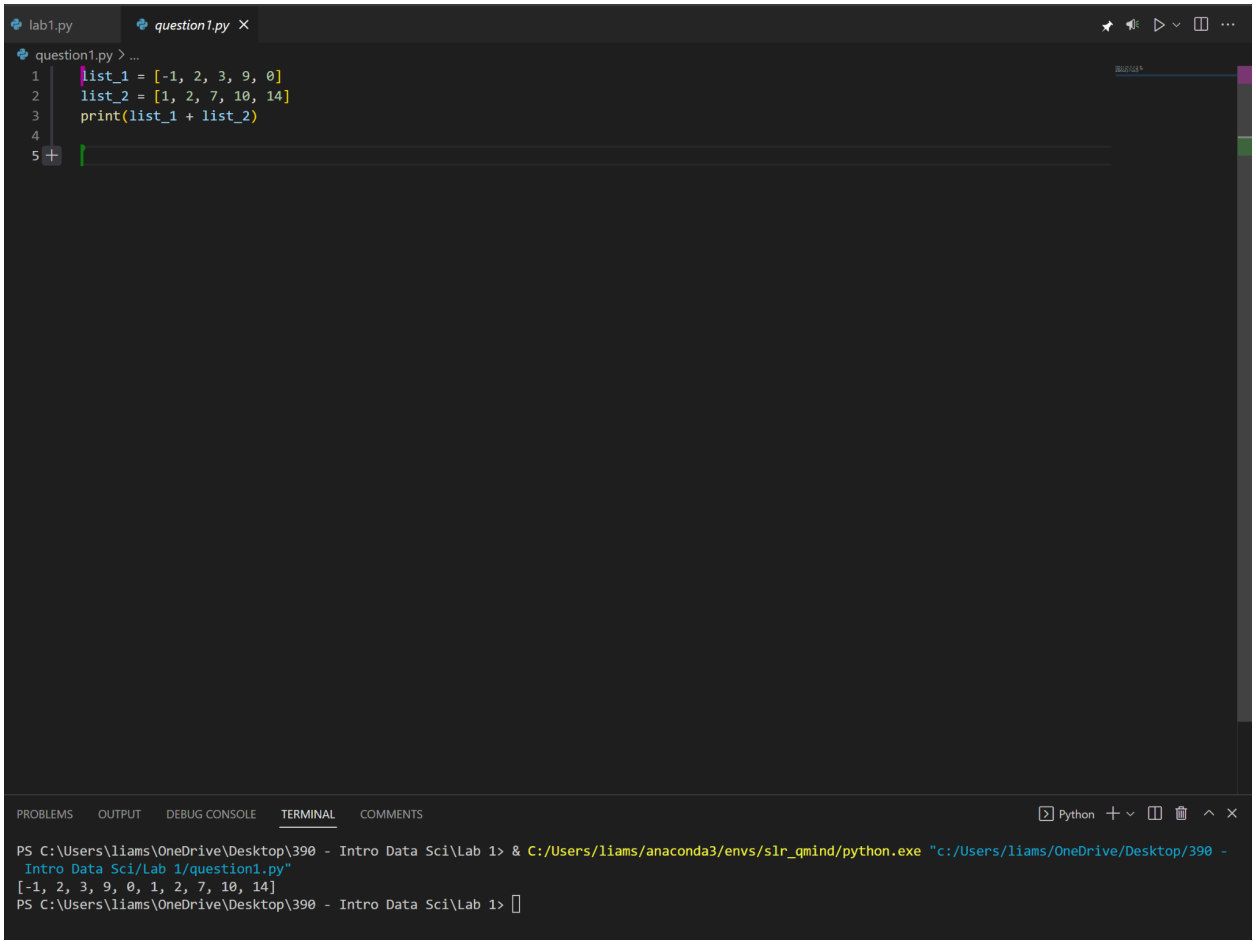

lab1.py
question1.py
question1.py > ...
1 list_1 = [-1, 2, 3, 9, 0]
2 list_2 = [1, 2, 7, 10, 14]
3 print(list_1 + list_2)
4
5
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
COMMENTS
Python
PS C:\Users\liams\OneDrive\Desktop\390 - Intro Data Sci\Lab 1> & C:/Users/liams/anaconda3/envs/slr_qmind/python.exe "c:/Users/liams/OneDrive/Desktop/390 - Intro Data Sci/Lab 1/question1.py"
[-1, 2, 3, 9, 0, 1, 2, 7, 10, 14]
PS C:\Users\liams\OneDrive\Desktop\390 - Intro Data Sci\Lab 1>

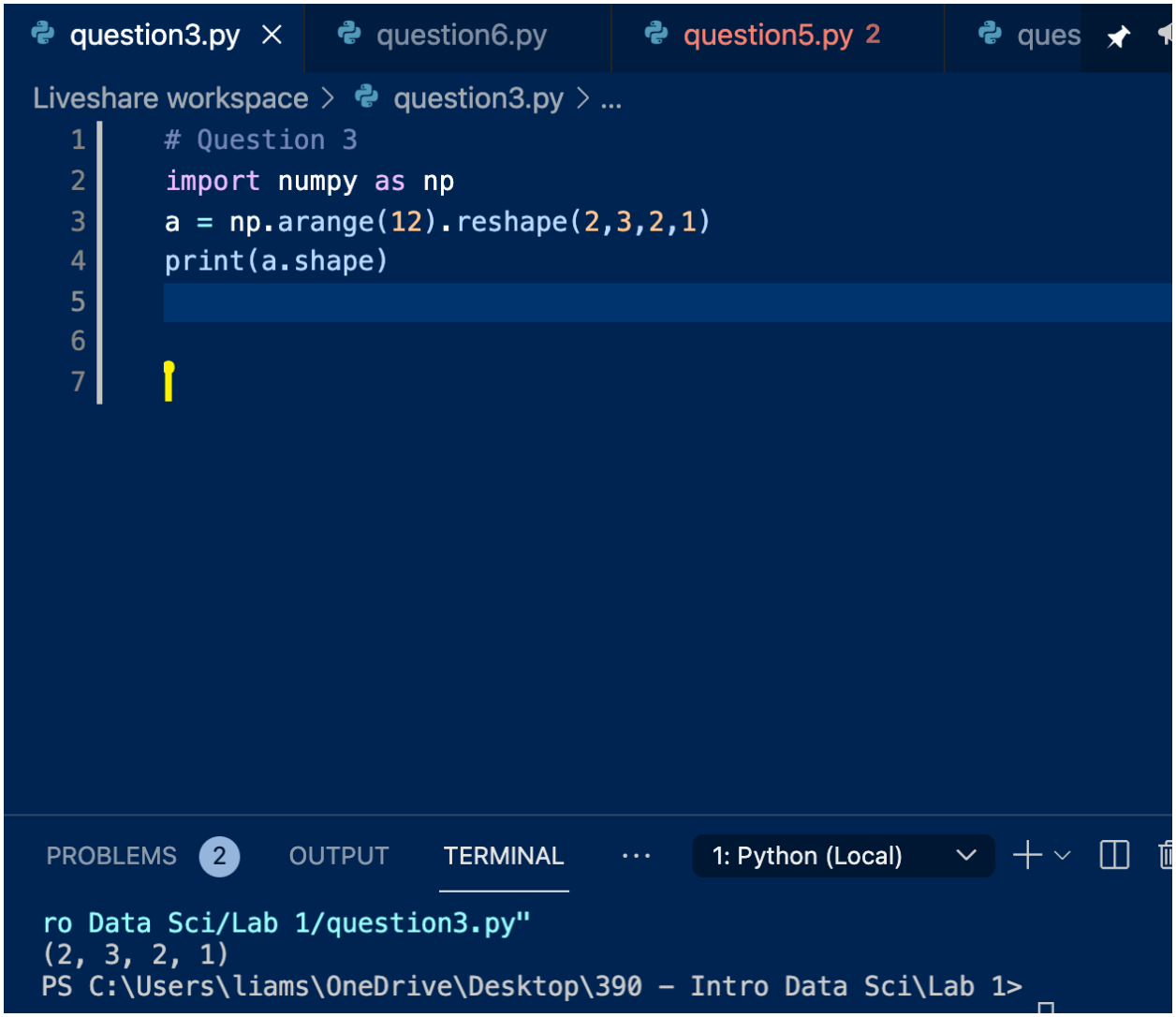
question2.py > ...

```python
list_1 = [-1, 2, 3, 9, 0]
list_2 = [1, 2, 7, 10, 14]

for i in range(0, len(list_1)):
    list_1[i] = list_1[i] + list_2[i]

print (list_1)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

Python

```
PS C:\Users\liams\OneDrive\Desktop\390 - Intro Data Sci\Lab 1> & C:/Users/liams/anaconda3/envs/slr_qmind/python.exe "c:/Users/liams/OneDrive/Desktop/390 - Intro Data Sci/Lab 1/question2.py"
[0, 4, 10, 19, 14]
PS C:\Users\liams\OneDrive\Desktop\390 - Intro Data Sci\Lab 1>
```


question3.py
question6.py
question5.py 2
ques
Liveshare workspace > question3.py > ...
1 # Question 3
2 import numpy as np
3 a = np.arange(12).reshape(2,3,2,1)
4 print(a.shape)
5
6
7
PROBLEMS 2
OUTPUT
TERMINAL
1: Python (Local)
ro Data Sci/Lab 1/question3.py"
(2, 3, 2, 1)
PS C:\Users\liams\OneDrive\Desktop\390 - Intro Data Sci\Lab 1>

question4.py > ...

```python
import numpy as np
# Question 4
arr = np.arange(27).reshape(3,3,3)

print("\nTest1")
print (arr[:,:,0])
print("\nTest2")
print (arr[1,1,:])
print("\nTest3")
print (arr[:, 0:3:2, 0:3:2])
```

PROBLEMS 2 OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

Python

```
PS C:\Users\liams\OneDrive\Desktop\390 - Intro Data Sci\Lab 1> & C:/Users/liams/anaconda3/envs/slr_qmind/python.exe "c:/Users/liams/OneDrive/Desktop/390 - Intro Data Sci/Lab 1/question4.py"

Test1
[[ 0  3  6]
 [ 9 12 15]
 [18 21 24]]

Test2
[12 13 14]

Test3
[[[ 0  2]
  [ 6  8]]

 [[ 9 11]
  [15 17]]

 [[18 20]
  [24 26]]]
PS C:\Users\liams\OneDrive\Desktop\390 - Intro Data Sci\Lab 1>
```

question5.py > ...

```python
import numpy as np
# Question 5
arr = np.arange(27).reshape(3,3,3)

print("\nTest1")
print (arr[0,1,1])
print (arr[1,2,2])
print (arr[2,0,0])

print("\nTest2")
print (arr[1,0,0])
print (arr[1,2,2])
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

Python

```
PS C:\Users\liams\OneDrive\Desktop\390 - Intro Data Sci\Lab 1> & C:/Users/liams/anaconda3/envs/slr_qmind/python.exe "c:/Users/liams/OneDrive/Desktop/390 - Intro Data Sci/Lab 1/question5.py"

Test1
4
17
18

Test2
9
17
PS C:\Users\liams\OneDrive\Desktop\390 - Intro Data Sci\Lab 1>
```

```python
# Question 6
import numpy as np
a = np.arange(-10,20).reshape(5,6)
sum_cols = a.sum(axis=0)
for i in range(0, len(sum_cols)):
    if (sum_cols[i] % 10 == 0):
        print(a[:,i])
```

PROBLEMS OUTPUT TERMINAL ··· 1: Python (Local)

```
> & C:/Users/liams
/anaconda3/envs/slr_qmind/python.exe "c:/Users/liams/OneDrive/Desktop/390 - Int
ro Data Sci/Lab 1/question6.py"
[-10  -4   2   8  14]
[-8 -2  4 10 16]
[-6  0  6 12 18]
PS C:\Users\liams\OneDrive\Desktop\390 - Intro Data Sci\Lab 1>
```