TASK-8

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Roll number - 01

Q-1

Practice.py Harry.py | Q-1.py | Q-2

Q-1.py > ...

```
1   import numpy as np
2   a = int(input("Please Enter the length of array = "))
3   r = []
4   for i in range(a):
5       r.append(input())
6   n = np.array(r)
7   print("Given array is -:",n)
8   p = 5
9   m = np.zeros(len(n) + (len(n)-1)*(p))
10  m[::p+1] = n
11  print("\nEdited array-:",m)
12
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Python

```
PS C:\Users\ABHISHEK SHARMA\OneDrive\Desktop\WORK\Python> & C:/Python/python.exe "c:/Users/ABHISHEK SHARMA/OneDrive/Desktop/WORK/Python/Q-1.py"
Please Enter the length of array = 5
10
11
12
13
14
Given array is -: ['10' '11' '12' '13' '14']

Edited array-: [10.  0.  0.  0.  0.  0. 11.  0.  0.  0.  0.  0. 12.  0.  0.  0.  0.  0.
 13.  0.  0.  0.  0.  0. 14.]
PS C:\Users\ABHISHEK SHARMA\OneDrive\Desktop\WORK\Python>
```

Q-2

Practice.py Harry.py | Q-1.py | Q-2

Q-2 > ...

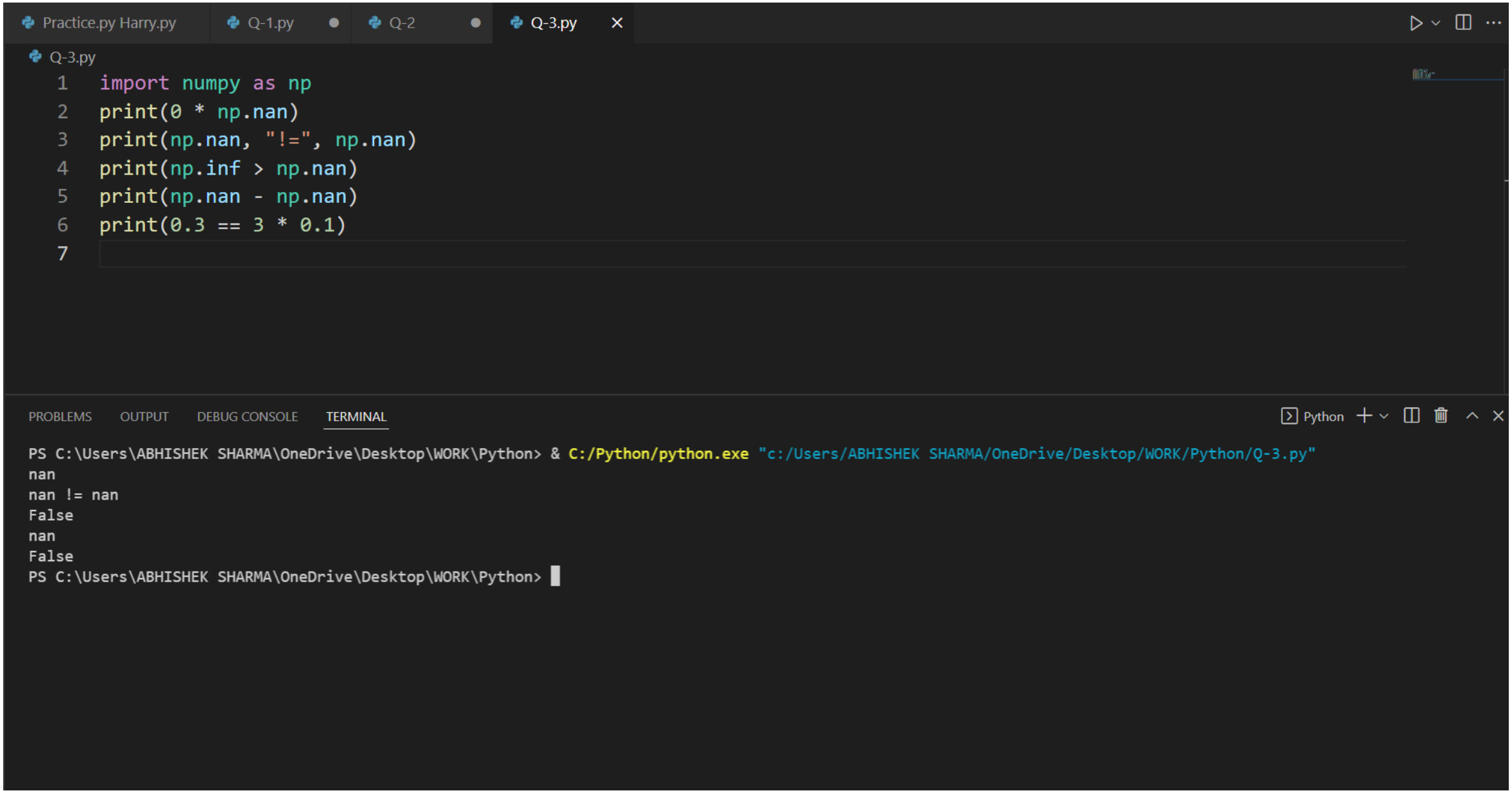
```python
import numpy as np
a = int(input("Please Enter the length of 1st array = "))
b = int(input("Please Enter the length of 2nd array = "))
r_a = []
r_b = []
if a == b :
    print("Please give elements in 1st array = ")
    for i in range(a):
        r_a.append(input())
    print("Please give the elements in 2nd array = ")
    for i in range(b):
        r_b.append(input())
    l = len(r_a)
    r_aa = np.sort(r_a)
    r_bb = np.sort(r_b)
    print(r_aa,type(r_aa))
    print(r_bb,type(r_bb))
    print(np.array_equal(r_aa, r_bb))
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Python

```
Please Enter the length of 1st array = 5
Please Enter the length of 2nd array = 5
Please give elements in 1st array =
1
2
3
5
9
Please give the elements in 2nd array =
1
2
3
5
9
['1' '2' '3' '5' '9'] <class 'numpy.ndarray'>
['1' '2' '3' '5' '9'] <class 'numpy.ndarray'>
True
```

Q-3


Practice.py Harry.py
Q-1.py
Q-2
Q-3.py
Q-3.py
1 import numpy as np
2 print(0 * np.nan)
3 print(np.nan, "!=", np.nan)
4 print(np.inf > np.nan)
5 print(np.nan - np.nan)
6 print(0.3 == 3 * 0.1)
7
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
Python
PS C:\Users\ABHISHEK SHARMA\OneDrive\Desktop\WORK\Python> & C:/Python/python.exe "c:/Users/ABHISHEK SHARMA/OneDrive/Desktop/WORK/Python/Q-3.py"
nan
nan != nan
False
nan
False
PS C:\Users\ABHISHEK SHARMA\OneDrive\Desktop\WORK\Python>

Q-4

Practice.py Harry.py | Q-1.py | Q-2 | Q-3.py | Q-4.py

Q-4.py > ...

```python
import pandas as pd
stri = input("Please Enter the strings = ")
l = list(stri.split(" "))
print(l)
series = pd.Series(l)
newSeries = series.map(lambda x: x[0].upper() + x[1:-1] + x[-1].lower())
print(newSeries)

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
PS C:\Users\ABHISHEK SHARMA\OneDrive\Desktop\WORK\Python> & C:/Python/python.exe "c:/Users/ABHISHEK SHARMA/OneDrive/Desktop/WORK/Python/Q-4.py"
Please Enter the strings = amrita school of engineering chennai campus
['amrita', 'school', 'of', 'engineering', 'chennai', 'campus']
0         Amrita
1         School
2             Of
3    Engineering
4        Chennai
5         Campus
dtype: object
PS C:\Users\ABHISHEK SHARMA\OneDrive\Desktop\WORK\Python>
```

Python
Python

Q-5(a)

Practice.py Harry.py | Q-1.py | Q-2 | Q-3.py | Q-4.py | Q-5.py

Q-5.py > ...

```python
#Addition of two numpy arrays
import numpy as np
arra = []
arrb = []
a = int(input("Please Enter the Size of first array : "))
b = int(input("Please Enter Size of second array :"))
if a==b:
    for i in range(0,a):
        m = int(input("Please Enter the elements in 1st array = "))
        arra.append(m)
    for i in range(0,b):
        m = int(input("Please Enter the elements in 2nd array = "))
        arrb.append(m)
    arra = np.array(arra)
    arrb = np.array(arrb)
    add_arr = np.add(arra,arrb)
    print("The Added array is = ",add_arr)
else:
    print("please Enter equal size arrays for addition ") #Addition not possible of unequal size arrays

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
PS C:\Users\ABHISHEK SHARMA\OneDrive\Desktop\WORK\Python> & C:/Python/python.exe "c:/Users/ABHISHEK SHARMA/OneDrive/Desktop/WORK/Python/Q-5.py"
Please Enter the Size of first array : 2
Please Enter Size of second array :2
Please Enter the elements in 1st array = 5
Please Enter the elements in 1st array = 6
Please Enter the elements in 2nd array = 10
Please Enter the elements in 2nd array = 11
The Added array is =  [15 17]
PS C:\Users\ABHISHEK SHARMA\OneDrive\Desktop\WORK\Python>
```

Python
Python

Q-5(b)

Practice.py Harry.py | Q-1.py | Q-2 | Q-3.py | Q-4.py | Q-5.py | Q-5b.py

Q-5b.py > ...

```python
# Array datatype conversion
import numpy as np
array = []
x = int(input("Please Enter Size of first array = "))
for i in range(0,x):
    a = int(input("Please Enter the elements of first array = "))
    array.append(a)
array = np.array(array)
print("Data type of an array is :", array.dtype)
array = array = array.astype('float64')
print(array)
print(array.dtype)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
Please Enter Size of first array = 5
Please Enter the elements of first array = 1
Please Enter the elements of first array = 2
Please Enter the elements of first array = 3
Please Enter the elements of first array = 4
Please Enter the elements of first array = 5
Data type of an array is : int32
[1. 2. 3. 4. 5.]
float64
PS C:\Users\ABHISHEK SHARMA\OneDrive\Desktop\WORK\Python>
```

Python
Python