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Task # 10

NumPy_arrays.py | arithmetic_operations_2Darrays.py

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```python
import numpy as np

#  numpy array
arr1 = np.array([111, 20, 3, 4, 5])
print("Numpy array:", arr1)
print("----------------------------")

# Accessing elements of the numpy array
print("First element:", arr1[0])
print("Last element:", arr1[-1])
print("Elements from 2nd to 4th:", arr1[1:4])
print("----------------------------")

# Shape and size of the numpy array
print("Shape of array:", arr1.shape)
print("Size of array:", arr1.size)
print("----------------------------")

# Reshaping the numpy array
arr_reshape = arr1.reshape(5, 1)
print("Reshaped array:\n", arr_reshape)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
[Running] python -u "e:\Bytewise Fellowship\Task_10\code_files\NumPy_arrays.py"
Numpy array: [111  20   3   4   5]
----------------------------
First element: 111
Last element: 5
Elements from 2nd to 4th: [20  3  4]
----------------------------
Shape of array: (5,)
Size of array: 5
----------------------------
Reshaped array:
 [[111]
 [ 20]
 [  3]
 [  4]
 [  5]]
----------------------------
2D Numpy array:
 [[1 2 3]
 [4 5 6]]
----------------------------
Element at row 1, column 2: 2
Elements from 1st row: [1 2 3]
Elements from 2nd column: [2 5]
----------------------------
Numpy array with zeros:
```

NumPy_arrays.py | arithmetic_operations_2Darrays.py

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```python
import numpy as np

A = np.array([[11, 21], [3, 4]])
B = np.array([[51, 6], [71, 8]])

print("Addition")
C = A + B
print(C)
print("----------------------")

print("Subtraction")
C = A - B
print(C)
print("----------------------")

print("Multiplication")
C = A * B
print(C)
print("----------------------")

print("Matrix multiplication")
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
[Running] python -u "e:\Bytewise Fellowship\Task_10\code_files\arithmetic_operations_2Darrays.py"
Addition
[[62 27]
 [74 12]]
----------------------
Subtraction
[[-40  15]
 [-68  -4]]
----------------------
Multiplication
[[561 126]
 [213  32]]
----------------------
Matrix multiplication
[[2052  234]
 [ 437   50]]
----------------------
Division
[[0.21568627 3.5       ]
 [0.04225352 0.5       ]]

[Done] exited with code=0 in 0.33 seconds
```