Lab: 5

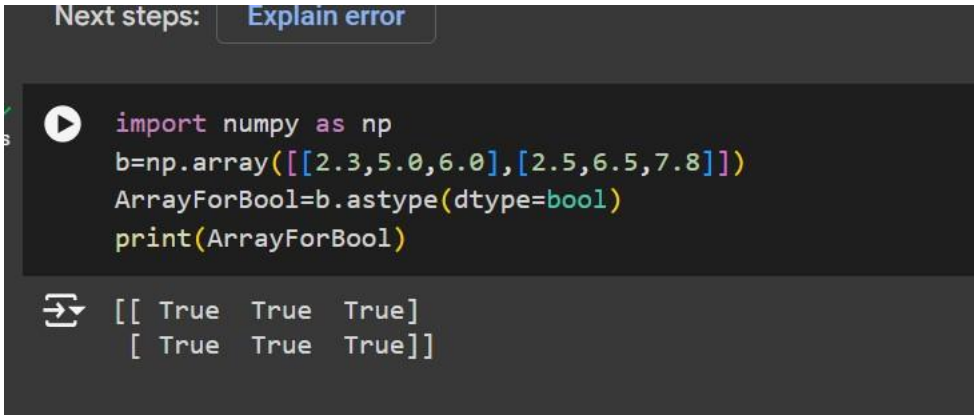
Artificial Intelligence

01/10/2024

Task 1:

Consider 2-d array and Convert all the elements of a num py array from float to Bool datatype.

Code:



Task 2:

Write a Python program that uses `insert` function to add an element to a specific position in a array.

- add the element `55` at position `2`.
- Print the updated array after the insertion

Code:

```
import numpy as np
c=np.array([1,2,3,4,5])
print("original array",c)
c=np.insert(c,2,55)
print("After insertion in original array we get",c)
```

```
original array [1 2 3 4 5]
After insertion in original array we get [ 1  2 55  3  4  5]
```

Task 3:

Generate a sequence of numbers in the form of a numpy array from 0 to 100 with gaps of 2 numbers, for example: 0, 2, 4 **Code:**

```
import numpy as np
d=np.arange(0,101,2)
print(d)
```

```
[  0   2   4   6   8  10  12  14  16  18  20  22  24  26  28  30  32  34
  36  38  40  42  44  46  48  50  52  54  56  58  60  62  64  66  68  70
  72  74  76  78  80  82  84  86  88  90  92  94  96  98 100]
```

Task 4:

Given 2 numpy arrays as matrices, output the result of multiplying the 2 matrices (as a numpy array) **Code:**

```
import numpy as np
matrix1=np.array([[2,3],[5,6]])
matrix2=np.array([[4,5],[7,8]])

Result=np.dot(matrix1,matrix2)

print(Result)
```

```
[[29 34]
 [62 73]]
```

Task 5:

Consider a 1-d array and check whether the specific number is present or not?

Code:

```
import numpy as np
a=np.array([[1,2,3,4,5]])

num=4
if num in a:
        print("num is present")
else:
      print("number not present")
```

```
num is present
```