

Inverse-of-matrix

' AIM:

to write a python program to find the inverse of the matrix

' ALGORITHM:

' Step 1:

Use import numpy as np.

' Step 2:

enter the input.

' Step 3:

use.append().

' Step 4:

use*to multiply two matrix

' Step 5:

print

' PROGRAM:

```
import numpy as np
l1,l2=[],[]
r,c=int(input()),int(input())
for i in range(r):
    for j in range(c):
        num=int(input())
        l1.append(num)
    l2.append(l1)
    l1=[]
print(l2)
value1=np.array(l2)
inverse=np.linalg.inv(value1)
print(inverse)
```

OUTPUT:

Ex - Inverse of a matrix: Attempt

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SEC

Question 1
Correct
Mark 10.00 out of 10.00
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Grade 10.00 out of 10.00 (100%)

Finish review

Write a python program to find the inverse of a nested array
For example:

| Input | Result |
|-------|-----------------------------------|
| 3 | [[1, 0, 5], [2, 1, 6], [3, 4, 0]] |
| 3 | [[-24, 20, -5,] |
| 1 | [18, -15, 4,] |
| 0 | [5, -4, 1,]] |
| 5 | |
| 2 | |
| 1 | |
| 6 | |
| 3 | |
| 4 | |
| 0 | |

Answer: (penalty regime: 0 %)

```
1 import numpy as np
2 l1,l2=[],[ ]
3 r,c=int(input()),int(input())
4 for i in range(r):
5     for j in range(c):
6         num=int(input())
7         l1.append(num)
8     l2.append(l1)
9     l1=[]
10 print(l2)
11 value=np.array(l2)
12 inverse=np.linalg.pinv(value)
13 print(inverse)
```

| Input | Expected | Got |
|-------|-----------------------------------|-----------------------------------|
| 3 | [[1, 0, 5], [2, 1, 6], [3, 4, 0]] | [[1, 0, 5], [2, 1, 6], [3, 4, 0]] |
| 3 | [[-24, 20, -5,] | [[-24, 20, -5,] |
| 1 | [18, -15, 4,] | [18, -15, 4,] |
| 0 | [5, -4, 1,]] | [5, -4, 1,]] |

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RESULT: