INVERSE-OF-A-MATRIX

Aim:

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

Equipment's required:

1. Hardware – PCs
2. Anaconda – Python 3.7 Installation / Moodle-Code Runner

Algorithm:

Step1 :

Import numpy library as np.

Step 2:

Create a matrix using array() function.

Step 3:

Using the np.linalg.inv(), we get the inverse of the given matrix.

Step 4:

Get the output and end the program

Program:

```
#Program to find the inverse of a matrix.
#Developed by: Harishkumar R
#RegisterNumber: 23013540
import numpy as np
A= np.array([[1,0,3],[-1,2,-2],[2,3,-1]])
inverse=np.linalg.inv(A)
print(inverse)
```

Output:

```
#Program to find the inverse of a matrix.
#Developed by: Harishkumar R
#RegisterNumber: 23013540
import numpy as np
A= np.array([[1,0,3],[-1,2,-2],[2,3,-1]])
inverse=np.linalg.inv(A)
print(inverse)

```

	Expected	Got	
✔	[[-0.23529412 -0.52941176 0.35294118] [0.29411765 0.41176471 0.05882353] [0.41176471 0.17647059 -0.11764706]]	[[-0.23529412 -0.52941176 0.35294118] [0.29411765 0.41176471 0.05882353] [0.41176471 0.17647059 -0.11764706]]	✔

Passed all tests! ✔

Result:

Thus the inverse of given matrix is successfully solved using python program