SolvingLinearAlgebraproblemusingSciPy

October 12, 2020

1 Assignment 01: Solve a Linear Algebra Problem

The comments/sections provided are your cues to perform the assignment. You don't need to limit yourself to the number of rows/cells provided. You can add additional rows in each section to add more lines of code.

If at any point in time you need help on solving this assignment, view our demo video to understand the different steps of the code.

Happy coding!

1: Import required libraries

[5]:
```
import numpy as np
import scipy
from scipy import linalg
```

2: Formulate two linear equations based on the given scenario

[8]:
```
#Test has 30 questions, worth 150 points
#True and false questions, worth 4 marks each
#Multiple choice questions, worth 9 points each
numArray = np.array([[2,3,1],[-1,5,4],[3,2,9]])
numArrValue = np.array([21,9,6])
#Let x be the number of true/false questions
#Let y be the number of multiple choice questions
# ( x + y = 30)
# ( 4x + 9y = 150)
testQuestionsVariable = np.array([[1,1],[4,9]])
testQuestionsValue = np.array([30,150])
```

3: Apply a suitable method to solve the linear equation

[7]:
```
linalg.solve(numArray,numArrValue)
```

[7]:
```
array([ 4.95,  4.35, -1.95])
```

[10]:
```
linalg.solve(testQuestionsVariable,testQuestionsValue)
```

[10]:
```
array([24.,  6.])
```

[ ]:
```

```

[ ]:
```

```