Unit 2.2 Graded Assignment: Build a matrix

Instructions:

Build a 6x4 matrix of random numbers. Using slicing, replace rows 5-6 of the matrix so that the 5th row becomes a sum of the 1st and the 3rd row, and the 6th row becomes a sum of the 2nd and the 4th.

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Solution:

First we are gonna import numpy library and use np.random.randint(1,9,24).reshape(6,4) to create an array of random integers from 1-9 with shape 6,4. The as per instructed we are gonna use slicing to get the sum of row 5th and 6th which is goven us the required solution.

```
import numpy as np

matrix = np.random.randint(1,9,24).reshape(6,4)
matrix
```

[3] ✓ 0.0s

```
array([[4, 8, 2, 5],
       [7, 5, 8, 1],
       [1, 6, 3, 8],
       [7, 1, 5, 6],
       [7, 7, 8, 1],
       [4, 1, 1, 4]])
```

```
matrix[4:5]= matrix[0:1] + matrix[2:3]
matrix[-1] = matrix[1:2] + matrix[3:4]
matrix
```

[4] ✓ 0.0s

```
array([[ 4,  8,  2,  5],
       [ 7,  5,  8,  1],
       [ 1,  6,  3,  8],
       [ 7,  1,  5,  6],
       [ 5, 14,  5, 13],
       [14,  6, 13,  7]])
```

```
matrix[4:5]= sum(matrix[0:1], matrix[2:3])
matrix[-1]=  sum(matrix[1:2], matrix[3:4])
matrix
```

[5] ✓ 0.0s

```
array([[ 4,  8,  2,  5],
       [ 7,  5,  8,  1],
       [ 1,  6,  3,  8],
       [ 7,  1,  5,  6],
       [ 5, 14,  5, 13],
       [14,  6, 13,  7]])
```