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 and 24 representing the total number of items. The as per instructed we are gonna use slicing to get the sum of row 5th and 6th which is given 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]])
```