

Assignment (Build a matrix)

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 one.

Solution

1. Import **numpy**.

```
[1]: import numpy as np
```

2. Generate a **random matrix** of 6*4.

```
[2]: random_ints_matrix = np.random.randint(1, 10, [6, 4])  
random_ints_matrix
```

```
[2]: array([[4, 6, 5, 3],  
           [7, 3, 2, 6],  
           [9, 5, 8, 1],  
           [6, 6, 1, 1],  
           [8, 4, 4, 1],  
           [7, 2, 2, 5]])
```

3. Slice the **random_ints_matrix** and replace the R5 by the sum of R1 and R3 and R6 by the sum of R2 and R4.

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

Peer Assignment

Sheikh Muhammad Sabih (2303.KHI.DEG.010)

M Humza Moeen (2303.KHI.DEG.019)

4. And the **updated matrix** is.

```
[4]: random_ints_matrix
```

```
[4]: array([[ 4,  6,  5,  3],
           [ 7,  3,  2,  6],
           [ 9,  5,  8,  1],
           [ 6,  6,  1,  1],
           [13, 11, 13,  4],
           [13,  9,  3,  7]])
```