Name:- Muhammad Huzaifa Waseem (2303-KHI-DEG-021)
Pair Partner:- Muhammad Faizan Rafique (2303.005.KHI.DEG)

UNIT 2.2:

<u>Assignment</u>

At First we import numpy as np then we build a 6x4 matrix of random numbers between a range of 1 to 10 by using "np.random.randint(1, 10, [6, 4])"

```python
import numpy as np
random_no_matrix = np.random.randint(1, 10, [6, 4])
random_no_matrix
```

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

After this we slice 1st and 3rd raw of random no matrix by giving index no of rows and add together that become row5. similarly we slice 2st and 4rd raw of random no matrix and add together that becomes row6 then finally we slice starting four rows of random no matrix and combine them with new raw5 and raw6 by using "np.concatenate".

```python
mat_row5 = [random_no_matrix[0] + random_no_matrix[2]]
mat_row6 = [random_no_matrix[1] + random_no_matrix[3]]
new_matrix = np.concatenate((random_no_matrix[:4], mat_row5, mat_row6))
new_matrix
```

```
array([[ 2,  2,  8,  3],
       [ 4,  2,  3,  5],
       [ 1,  7,  5,  5],
       [ 6,  9,  1,  5],
       [ 3,  9, 13,  8],
       [10, 11,  4, 10]])
```

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```python
[42]: import numpy as np
      random_no_matrix = np.random.randint(1, 10, [6, 4])
      random_no_matrix
```

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

```python
[43]: mat_row5 = [random_no_matrix[0] + random_no_matrix[2]]
      mat_row6 = [random_no_matrix[1] + random_no_matrix[3]]
      new_matrix = np.concatenate((random_no_matrix[:4], mat_row5, mat_row6))
      new_matrix
```

```
[43]: array([[ 2,  2,  8,  3],
             [ 4,  2,  3,  5],
             [ 1,  7,  5,  5],
             [ 6,  9,  1,  5],
             [ 3,  9, 13,  8],
             [10, 11,  4, 10]])
```