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MACHINE LEARNING

CRN: 30521

ASSIGNMENT 1

JUNE 20*th*2023

GITHUB LINK: <https://github.com/nikithreddy30/ML.Assginment1>

VIDEO LINK: <https://drive.google.com/file/d/1bTfPaydGDy7F0I39N-Q_nKlivIL5ZXzh/view?usp=sharing>

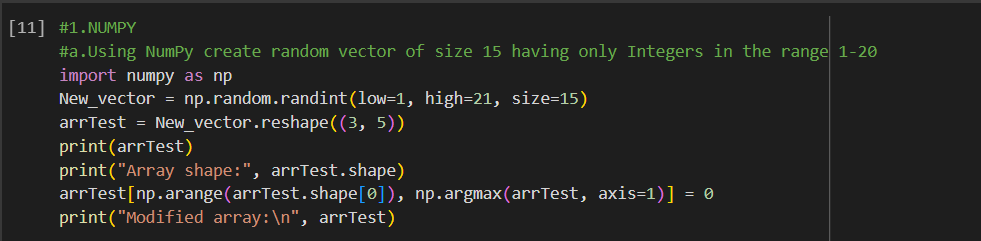
**1. NUMPY:**

a. Using NumPy creates a random vector of size 15 having only Integers in the range 1-20.

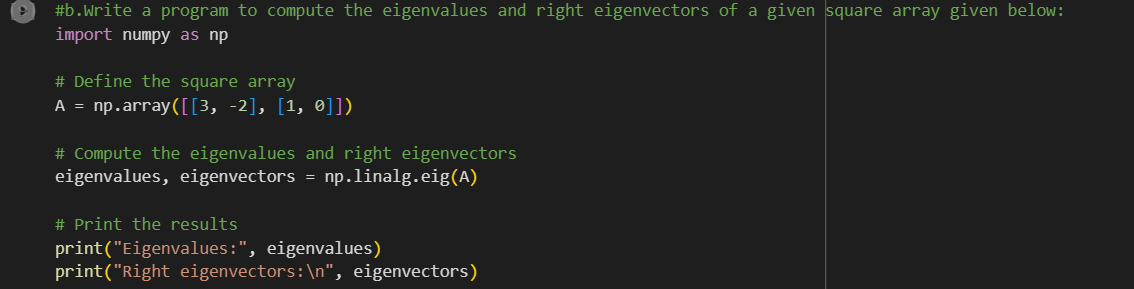
1. Reshape the array to 3 by 5

2. Print array shape.

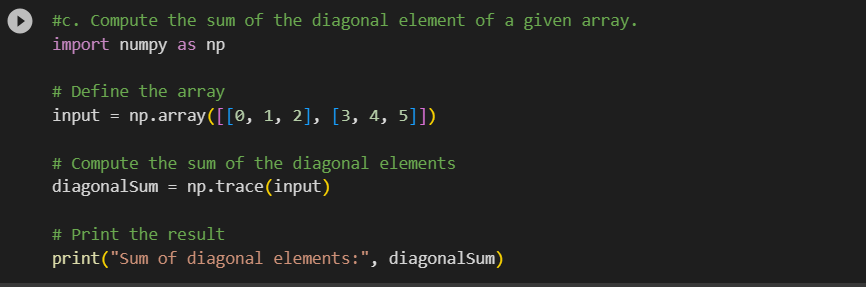
3. Replace the max in each row by 0 Create a 2-dimensional array of size 4 x 3 (composed of 4-byte integer elements), also print the shape, type and data type of the array.



b. Write a program to compute the eigenvalues and right eigenvectors of a given square array given below: [[ 3 -2] [ 1 0]]



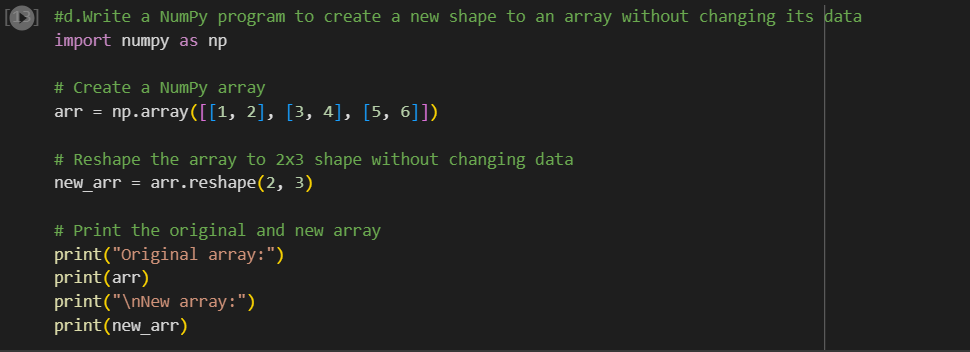
c. Compute the sum of the diagonal element of a given array. [[0 1 2] [3 4 5]]



d. Write a NumPy program to create a new shape to an array without changing its data.

Reshape 3x2: [[1 2] [3 4] [5 6]]

Reshape 2x3: [[1 2 3] [4 5 6]]



**2. MATPLOTLIB**

a. Write a Python programming to create a below chart of the popularity of programming Languages.

b. Sample data:

Programming languages: Java, Python, PHP, JavaScript, C#, C++

Popularity: 22.2, 17.6, 8.8, 8, 7.7, 6.7

