

Lab:30.1.2025

Exercise on numpy and Pandas(without using functions)

Create a 1D and 2D using Numpy , print its datatype, shape,dimension.

2.Create a 1D and 2D with

- i) random initialization
- ii) Default initialization
- iii) Print Diagonal values
- vi) Print First Element
- v) Print Last Element
- vi) Print 2nd row and 2nd column Element
- vii) Print No. of Elements

3.Find the Determinant, Addition , Multiplication , Subtraction , Division , Transpose, Cross Product , Dot product of a matrix

4. Print range values in 1D and 2D.

5. Reshape an array.

6.find the min, max sum, mean, median mode and SD

7. Create a boolean mask for values greater than 5.

Use the mask to filter out values less than or equal to 5.

Count the number of values greater than 5.

8.Fancy Indexing

Use fancy indexing to access elements at specific indices.

Create a new array by selecting every other element.

9. structured array:

Create a structured array to store information about students (name, age, and grade).

Create a few sample students.

Access and modify specific fields of the structured array.

10.Linear Regression

Study Hours (x_1)	Practice Tests (x_2)	Score (y)
2	1	60
3	2	65
4	2	70
5	3	75
6	3	80

Find the best fit line without using functions