**Numpy**

**🡪Range**

**🡪Length of the array**

**🡪Convert into multidimentional array**

**🡪Reshape**

**🡪Identity matrix can be created using using 2 functions**

**# eye()-->used to define both user defined rows and columns**

**# identity()-->used to define same number of rows and columns**

**# Syntax-->np.identity(5n-->5 is 5 row and 5 columns**

**# Syntax-->np.eye(3,4p-->3 rows and 4 columns**

**🡪Convert the array into complex form**

**Slicing**

**🡪Finding the array using negative index values**

**Lincise**

**🡪 to add base on column wise axis=0**

**🡪to add base on row wise axis=1**

**🡪to add base on column wise axis=0**

**🡪to find the sum of array**

**Linspace():It is used to print evenly separated points**

**# between 2 range of values**

**# Syntax-->linspace(start,end,num of values)**

**Random module**

**# To generate random number between the range**

**# np.random.randint(start,end)**

**🡪rand()-->**

**# To get the randomly generated value from 0 to 1,based on**

**# uniform distribution**

**🡪To Find the index of min values**

**# argmin-->to find the min values index position in an array**

**# argmax-->to find the max values index position in an array**

**🡪To print nan values**

**🡪 To eliminate nan values**

**Pandas**

**Pandas is defined as an open-source library that provides**

**# high=performance data manipulates in python**

**# data analysis requires lot of processing such as restructuring,cleaning,merging,manipulating,etc.....We prefer Pandas to perform above functionalities because it is fast , simple,than other tools.**

**# Pandas is built on Numpy ,Numpy is required for operating pandas**

**Pandas Series:**

**# It is an data structure with one dimensional labelled array**

**# It is a primary building block of DataFrame,making its rows and columns**

**# Syntax-->pandas.Series(data=None , index=None , dtype=None , name=None , copy=True or False)**

**🡪 Series with labels**

**🡪 Access values using index**

**DataFrame**

**# pd.DataFrame(datas,row\_label,col\_label)**

**🡪 To convert dictionary to DataFrame**

**# df.info():To get the information about DataFrame**

**🡪To access specific column in df**

**🡪To access multiple columns**

**🡪#To create new column**