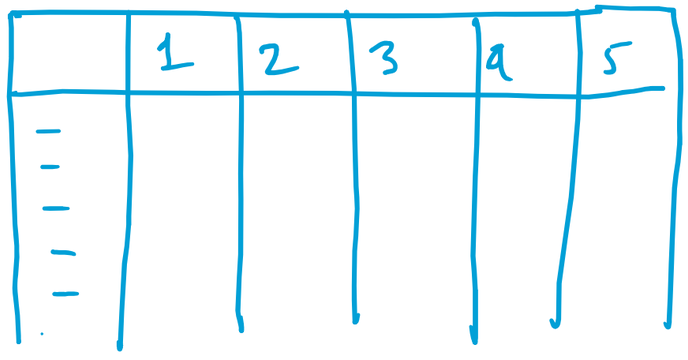
PanDas :- Pan-Da coined from Panel-Data : 2D data usually described in form a table or spread-sheet
excel, google-sheet.



Pandas is a open-source python library that provides fast, reliable & robust operation on data those are usually described in row-column fashion.

Benefits :- 1) PanDas provide fast & reliable APIs (function call) to retrieve, store, create data from various sources.

Various Sources :- (1) csv file (comma separated values) (.csv format)

name, rollno., marks
Joy, 211, 765
Vincent, 212, 720
. . . . . .

Benefits:- various sources:- (2) excel file (.xls, .xlsx format)

(3) SQL table.

(4) HTML

(5) JSON . . . . .

2) Pan Das is built on top of Numpy. So it is fast while operating on massive datasets.

3) PanDas is a very well known open-source project & we can find a wide community that uses Pandas regularly.

The Pandas library has two types of- Data structure

(1) series.

(2) DataFrame.

Series : (pandas.Series)

	Fruits
0	Apple
1	Orange
2	Banana
3	Mango.

indexes.

Series is a One-dimensional labelled array capable of holding any type of data.

DataFrame (pandas.DataFrame)

combination of few series.

	Fruits	Price
0	Apple	130
1	Orang	60
2	Banana	40
3	Mango	100

columns.

Index.

DataFrame is a two-dimensional data structure comprises of rows (index) & columns & can store values like tables or spread-sheet.

$3245 = 3.245 \times 10^3$

3.245e3