File handling:

- In python file handling allows us to create,read,write and delete the files.
- It's used to store the data permanently.
- The built in function "open()" is used to work with files.
- Open("file_path","mode")
- Common modes used:
- 'r': read
- 'w': write
- 'a': append
- 'b': binary
- 't': text
- 'rb': read binary
- 'wb': write binary
- 'wt': write text

Types of file path:

- **Relative path:** If ain file and sub file is present in same folder.

    Eg: d1=open("Mydata.txt","r")

      d1.read()

    After reading we have to close the file

      d1.close()

- **Absolut path:** If its outside, give the complete path name.

      Eg:s1=open(r"C;\Users\hp\Dektopinfo.txt","w")

      s1.write("hi")

      s1.close()

Error and Exception:

- Error also known as exception are issues that stop your program from running properly.
- Error handling means detecting and managing those errors gracefully instead of letting the program crash.

- Syntax of exception:

Try:

   #error code

Except:

  #code to handle error

Libraries:

- They contain modules and functions which perform a specific task.
- Types:
- Pandas: used for data manipulation
- Numpy: numerical python used for multi-dimensional array and mathematical operation.
- Statistics: for all kind of statistical operation.
- Matplotlib, seaborn, plotly: used for data visualisation.
- Sklearn(scikit learn): used for all machine learning algorithms.
- Keras: used for deep learning, helpful for neural network.
- Tensorflow: Deep learning (developed by google).
- Pytorch:deep learning (developed by facebook).

Pandas lib:

- Import pandas as pd
- To overcome module error : !pip install module_name
- To avoid warnings: If we get like 1 page of warnings:

  import warnings

  warnings.filterwarnings('ignore')

- Pandas and ML lib: supports only tabular form data
- In pandas we just read data:

  Eg:import pandas as pd

    D1=pd.read_excel

- Txt file is in the format of csv so read txt file as .csv only
- tsv file is also like csv file just a separator is tab space

Eg: D2=pd.read_csv(r" c:\users\hp\downloads\chipotle.tsv", sep="t")

- To see how many rows and columns are present in a table data

Eg: D2.shape

- To access the element:

Eg: D2.shape[0]

- To get no. of records from the top[5 records]

Eg:d2.head(10) [It gives 10 records]

- To get no. of records from bottom

Eg:d2.tail() [Its gives last 5 records]

- To get random records

Eg:d2.sample(3) [We get random 3 records]