File Concept in Python:-

open():- we use open() in file python to open a file in read or write mode

→ open ( ) will return a file object.

→ To return a file object we use open() along with two arguments that accepts file name and mode, wheather read or write

Syn E:— open(filename, mode).

Their are three kind of mode that python provides and how files can be opened.

1) 'r', for reading

11) 'W', for writing

111) 'a' for appending

v) 'r+ for reading & writing

Ex:—

```
file = open('geek.txt', 'r')

#Printing each line of file

for each in file:
        print(each)
```

—*—

→ file concepts in python :

→ **Working of read() mode :-** If we need to extract or display each & every character of file then we have to use file.read()

```
Ex:- file = open ("filename.txt", 'r')
     print (file.read())
```

→ **Extract Set of characters from file :-** This is also uses to extract the characters from file, but it extract only certain set of character which we pass in read() as argument
or.
It read certain set of stored data of file and return it as a string.

Ex:-

```
file = open ('niharika.txt', 'r')
print (file.read( 5 ))
                  └──> argument pass
                       in read().
```

O/P :-
It will display 1st 5 character from file Start with 0 & end at 4
(0 — 4)

→ **Creating a file using write() mode :-** This is used to Create a new file and add text in the file and it will be
replace the written text with new one.
Also uses to ~~up~~ update in the existing file.

Ex:— To create new file with write ()

```
file = open (" new file name.txt", 'w')
file.write ("  Text of new file")
file.write ("   "            ")
file.close ( )
```

O:/P: new file.txt (created)

Ex:- To replace text of previously created file.

```
file = open ("old file name.txt", 'w')
file.write (" New text of old file")
file. ~~[illegible]~~ close ()
```

O/P :— Old text of existing file will be replaced by new text.

→ Working with append ( ) mode:— This mode is uses to open file in read mode and write mode.

Ex:—

```
file = open (" niharika1.txt", 'r+)
print (file . read ())
file.write (" ghfj")
file.close()
```

→ 'with' statement of python :— The file open with 'with' statement doesn't need to be close. it will be saved by default.

→ with statement itself ensures proper acquisition & release of resources

Ex:—

```
L=["This is Delhi \n", "This is Paris\n", "This is london\n"]

with open ("nihanka.txt", 'w') as file1:
    file1. write ("Hello\n")
    file1. writelines (L)  → variable of List type
           → This is used to
             Store multiple line

with open ("~~Ni~~hanka.txt", 'a') as file1:
    file1. write ("Today")

with open ("nihanka.txt", 'r') as file1:
    print (file1. read ( ))
```

→ O/P:

```
Hello              → with write ( )
This is Delhi.     →   "   with writelines ( )
 "   "  Paris.
 "   "  London
Today.             → with write ( ) in append ( )
```

→ Read Ms Excel files:— To read Excel files in python we have to import a inbuilt library of python i.e : 'Pandas'

```
import pandas as pd
       └→ library  └→ 'pd' is alias or
                      'nickname' of pandas
df = Pd. read (r' Path where file stored \ filename.
                                    x1sx')
print (df)
```

It type is ↙ (dataframe)

→ Read '.CSV' file → This is uses
To read 'CSV' file in python we have to import library 'pandas'

Ex:- import pandas as Pd

```
df1 = pd.read_csv (r' path of CSV file/
                      filename.csv')

print (df1)
```

→ difference b/w Excel file and CSV file (comma Seprated Value)
is both are excel file but in CSV each values are seprated with comma.

→ .json file (Java script object notation)

for using this

```
import json

with open (r" path ", 'r') as f :
                          └→ attributes or mode

data = json.load(f)

print (data)

employees = data["Employees"]

for i in employees:
    print (f" name :{i['name']}")
```

```
o/p:
    name : John Doe
      "  : Smith
      "  :   "    john
      "  :   "    Brown
```

→ Reading xml file :— (Extended markup languag)

For reading 'xml' or any markup language like: html, we have to import a prebuilt or in built library

```
from bs4 import BeautifulSoup
  └> Parent library of BeautifulSoup

with open('file path or filename if it is in working
        folder', 'r') as f:
                  └──> mode to open
                       file.

    data = f.read()

  Bs_data = BeautifulSoup(data, "xml")

  b_unique = Bs_data.find_all
```

Ex:—