**PRACTICAL 10**

**AIM** : Program to demonstrate read and write data to the file in various modes.

**Introduction**

Python too supports file handling and allows users to handle files i.e., to read and write files, along with many other file handling options, to operate on files. The concept of file handling has stretched over various other languages, but the implementation is either complicated or lengthy, but alike other concepts of Python, this concept here is also easy and short. Python treats file differently as text or binary and this is important. Each line of code includes a sequence of characters and they form text file. Each line of a file is terminated with a special character, called the EOL or End of Line characters like comma {,} or newline character. It ends the current line and tells the interpreter a new one has begun.

**Some important function of file handling :**

**1) read( ) :** To read the file.

**2) readline( ) :** To read one line at a time.

**3) write( ) :** To write in to the file.

**4) close( ) :** To close the file.

**5) open( ) :** To open the file for read ,write or appending.

**Working of open() function**

We use **open ()** function in Python to open a file in read or write mode. As explained above, open ( ) will return a file object. To return a file object we use **open()** function along with two arguments, that accepts file name and the mode, whether to read or write. So, the syntax being: **open(filename, mode)**. There are three kinds of mode, that Python provides and how files can be opened:

* “ **r** “, for reading.
* “ **w** “, for writing.
* “ **a** “, for appending.
* “ **r+** “, for both reading and writing
* “ **x** “, for creating empty file which does not exixt previously.

**Working of read() mode**

There is more than one way to read a file in Python. If you need to extract a string that contains all characters in the file then we can use **file.read()**

**Source code :**

**#opening a file in write mode**

f=open('sample.txt','w')

string1=input('Enter text for sample.txt to write : ')

f.write(string1)

print('file sample.txt is written')

f.close()

#opening a file in read mode

f=open('sample.txt','r')

print('content of sample.txt is ',f.read())

f.close()

#opening a file in append mode

f=open('sample.txt','a')

string1=input('Enter text for sample.txt to be appended : ')

f.write(string1)

print('file sample.txt appended')

f.close()

#opening a file in read mode

f=open('sample.txt','r')

print('content of sample1.txt after apending is ',f.read())

f.close()

#opening another file in write mode

f=open('sample1.txt','w')

f.write('i am Akshay Jawla uid 17bcs2774')

f.close()

#opening another file in read and write mode

f=open('sample1.txt','r+')

print('content of file2 is : ',f.read())

string2=input('Enter text for sample1.txt to write : ')

f.write(string2)

f.close()

#reading it again through read mode

f=open('sample1.txt','r')

print('content of file1 is : ',f.read())

f.close()

#demonstration of readline function()

f=open('sample1.txt','r')

print('readline() is : ',f.readline())

print('readline(4) is : ',f.readline(4))

f.close()

# x mode for exclusive creation of file

f=open('sample69s.txt','x')

f.write('Akshay')

f.close()

f=open('sample69s.txt','r')

print('Empty file created through x mode')

f.close()

#removing the exixting file by using remove function of imported package os

import os

os.remove("jawla.txt")

print("jawla.txt File Removed!")

**Output :**

A screenshot of a social media post

Description automatically generated