

Practical No. 9

Aim: - Write a program to explain concept of File Handling in Python.

Theory:

Python File Handling : File handling or data handling is the process of performing various operations on various types of files. The most popular file operations are opening a file, reading the contents of a file, creating a file, writing data to a file, appending data to a file, etc.

1. Opening a File

To open a file in python the open function is used. It takes 3 parameters: The path to the file, the mode in which the file should be opened and the buffer size in number of lines. The third parameter is optional. The open function returns file object. The syntax of the open function is as follows:

```
file_object = open(file_name, file_mode, buffer_size)
```

First create a file test.txt and place it in the root directory of the D drive.

```
file_object = open("D:/test.txt", "r+")
print(file_object.name)
print(file_object.mode)
print(file_object.closed)
```

Output:

D:/test.txt

2. Close a File

To close an opened file, we can use close method.

Example:

```
file_object=open("D:/test.txt","r+")
print(file_object.name)
print(file_object.closed)
file_object.close()
print(file_object.closed)
```

Output:

D:/test.txt

False

True

3. Writing Data to a File

To write data to a file, the write function is used. The content that is to be written to the file is passed as parameter to the write function.

Example:

```
file_object = open("D:/test1.txt", "w+")  
file_object.write( "Welcome to Python.\n The best programming language! \n")  
file_object.close()
```

Output:

Welcome to Python. The best programming language!

4. Reading Data from a File:

To read data from a file in Python, the read function is used. The number of bytes to read from a file is passed as a parameter to the read function.

Example:

```
file_object = open("D:/test1.txt", "r+")  
sen = file_object.read(12)  
print("The file reads: "+sen)  
file_object.close()
```

Output:

The file reads: Welcome to P

To read the complete file, do not pass anything to the read function. The following script reads the complete test1.txt file and prints its total content.

```
file_object = open("D:/test1.txt", "r+")  
sen = file_object.read()  
print(sen)  
file_object.close()
```

Output:

Welcome to Python.

The best programming language!

5. Renaming Python Files

We can rename and delete python files using Python os module. To rename a file, the rename function is used. The old name of the file is passed as first parameter while new name is passed as second parameter.

Example:

```
import os
```

```
os.rename( "D:/test1.txt", "D:/test2.txt" )
```

The above script renames file test1.txt to test2.txt

6. Delete Python Files

To delete a file in Python, the remove method is used.

Example:

```
import os
```

```
os.remove("D:/test.txt")
```

Result: The practical has been successfully studied.