

Types of File

Text File: Text file usually we use to store character data. For example, test.txt

Binary File: The binary files are used to store binary data such as images, video files, audio files, etc.

File Path

A file path defines the location of a file or folder in the computer system. There are two ways to specify a file path.

Absolute path: which always begins with the root folder

Relative path: which is relative to the program's current working directory

The absolute path includes the complete directory list required to locate the file.

For example, /user/Pynative/data/sales.txt is an absolute path to discover the sales.txt.

All of the information needed to find the file is contained in the path string.

After the filename, the part with a period(.) is called the file's extension, and that tells us the type of file. Here, project.pdf is a pdf document.

Absolute Path

/user/Pynative/data/sales.txt

Directory Path File Name

Full File Path

file path

Read File

To read or write a file, we need to open that file. For this purpose, Python provides a built-in function `open()`.

Pass file path and access mode to the `open(file_path, access_mode)` function. It returns the file object. This object is used to read or write the file according to the access mode.

Access mode represents the purpose of opening the file. For example, R is for reading and W is for writing

In [31]:

```
1 text="Welcome"
2 fp = open('file1.txt', 'r+')
3 fp.write(text)
```

7

In [27]:

```
1 # Opening the file with relative path
2 fp = open('file.txt', 'r')
3 # read file
4 print(fp.read())
5 # Closing the file after reading
6 fp.close()
```

Hello

Welcome to file handling

line 1

line 2

....

r	It opens an existing file to read-only mode. The file pointer exists at the beginning.
rb	It opens the file to read-only in binary format. The file pointer exists at the beginning.
r+	It opens the file to read and write both. The file pointer exists at the beginning.
rb+	It opens the file to read and write both in binary format. The file pointer exists at the beginning of the file.
w	It opens the file to write only. It overwrites the file if previously exists or creates a new one if no file exists with the same name.
wb	It opens the file to write only in binary format. It overwrites the file if it exists previously or creates a new one if no file exists.
w+	It opens the file to write and read data. It will override existing data.
wb+	It opens the file to write and read both in binary format
a	It opens the file in the append mode. It will not override existing data. It creates a new file if no file exists with the same name.
ab	It opens the file in the append mode in binary format.
a+	It opens a file to append and read both.
ab+	It opens a file to append and read both in binary format.

Writing to a File

To write content into a file, Use the access mode w to open a file in a write mode.

Note:

If a file already exists, it truncates the existing content and places the filehandle at the beginning of the file. A new file is created if the mentioned file doesn't exist. If you want to add content at the end of the file, use the access mode a to open a file in append mode

In [46]:

```
1 text = "This is new content"
2 text2 = "This is a new demo"
3 # writing new content to the file
4 fp = open("write_demo.txt", 'r+')
5 fp.write(text)
6 fp.write(text2)
7 print('Done Writing')
8
```

Done Writing

In [47]:

```
1 data = fp.readlines(2)
2 data
```

Out[47]:

```
['This is new contentThis is new contentThis is new contentThis is a n
ew demo']
```