Python for Class XII _ - Part 7

Topics:

File handling: Need for a data file, Types of file: Text files, Binary files and CSV (Comma separated values) files. *(CSV will be discussed separately)*

Text File: Basic operations on a text file: Open (filename – absolute or relative path, mode) / Close a text file, Reading and Manipulation of data from a text file, Appending data into a text file, standard input /output and error streams, relative and absolute paths.

Binary File: Basic operations on a binary file: Open (filename – absolute or relative path, mode) / Close a binary file, Pickle Module – methods load and dump; Read, Write/Create, Search, Append and Update operations in a binary file. (continued)

Python Check If File or Directory Exists

Here we will learn how to determine whether a file (or directory) exists using Python. To check this, we use Built-in library functions.

There are different ways to verify a file or directory exists, using functions as listed below.

os.path.exists()

os.path.isfile()

os.path.isdir()

pathlibPath.exists()

os.path.exists()

Using path.exists you can quickly check that a file or directory exists. Here are the steps:

Steps 1) Before you run the code, it is important that you import the os.path module.

import os.path

from os import path

Steps 2) Now, use the path.exists() function to check whether a File Exists.

```python
path.exists("student.txt")
```

Steps 3) Here is the complete code

```python
import os.path
from os import path

def main():

    print ("File exists:" + str(path.exists('student.txt')))
    print ("File exists:" + str(path.exists('career.student.txt')))
    print ("directory exists:" + str(path.exists('myDirectory')))

if __name__ == "__main__":
    main()
```

Output:

```
File exists:True
File exists:False
directory exists:False
```

In our case only file student.txt is created in the working directory

os.path.isfile()

We can use the `isfile` command to check whether a given input is a file or directory.

```python
import os.path
from os import path


def main():


    print ("Is it File? " + str(path.isfile('student.txt')))
    print ("Is it File? " + str(path.isfile('myDirectory')))
if __name__ == "__main__":
    main()
```

Output:

Is it File? True

Is it File? False

os.path.isdir()

If we want to confirm that a given path points to a directory, we can use the os.path.dir() function

```python
import os.path
from os import path


def main():


    print ("Is it Directory? " + str(path.isdir('student.txt')))
    print ("Is it Directory? " + str(path.isdir('aDirectory')))
```

```
if __name__ == "__main__":

    main()
```

Output:

```
Is it Directory? False

Is it Directory? True
```

pathlibPath.exists() For Python 3.4 and above

Python 3.4 and above versions have pathlib Module for handling with file system path. It used object-oriented approach to check if file exist or not.

```
import pathlib

file = pathlib.Path("student.txt")

if file.exists ():

    print ("File exist")

else:

    print ("File not exist")
```

Output:

```
File exist
```

Summary: How to check If File Exists

os.path.exists() – Returns True if path or directory does exists.

os.path.isfile() – Returns True if path is File.

os.path.isdir() - Returns True if path is Directory.

pathlib.Path.exists() - Returns True if path or directory does exists. (In Python 3.4 and above versions)