Advanced Python Programming

Day 01 2020-Feb-06

Day Objectives

Files

Collection of data stored in the memory

Types of data

- Structed data
- Semi-structed data
- Un-structed data

Un-structed data

Text files

Steps involved while working on files

1. Open a file
2. Do required operations
3. Close the opened file

Modes of operation in Files

- **r** Read
- **w** write
- **a** append

syntax

1. Opening the file

$open(filepath, mode)$

3. Closing the opened file

$opened\_file.close()$

In [1]:

```
f = open('file1.txt','r')


f.close()
```

Methods for reading the data from the file

$read()$

$readline()$

$readlines()$

In [2]:

```
f = open('file1.txt','r')

data = f.read()
print(data)
print(type(data))

f.close()
```

```
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### Files
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## Un-structed data

### Text files

## Steps involved while working on files

1. Open a file
2. Do required operations
3. Close the opened file

## Modes of operation in Files

- **r** Read
- **w** write
- **a** append
<class 'str'>
```

In [3]:

```
f = open('file1.txt','r')

line1 = f.readline()
line2 = f.readline()
print(line1)
print(line2)
#print(type(data))

f.close()
```

```
### Day Objectives
```

In [4]:

```
f = open('file1.txt','r')

data = f.readlines()
print(data)
print(type(data))

f.close()
```

```
['### Day Objectives\n', '\n', '\n', '### Files\n', 'Collection of data st
ored in the memory\n', '\n', '### Types of data\n', '\n', '- Structed data
\n', '- Semi-structed data\n', '- Un-structed data\n', '\n', '## Un-struct
ed data\n', '\n', '### Text files\n', '\n', '## Steps involved while worki
ng on files\n', '\n', '1. Open a file\n', '2. Do required operations\n',
'3. Close the opened file\n', '\n', '## Modes of operation in Files\n',
'\n', '- **r** Read\n', '- **w** write\n', '- **a** append']
<class 'list'>
```

Reading the first 10 lines in the file

In [5]:

```
f = open('file1.txt','r')

for i in range(0,10,1):
    line = f.readline()
    print(i,line)

f.close()
```

```
0 ### Day Objectives

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2

3 ### Files

4 Collection of data stored in the memory

5

6 ### Types of data

7

8 - Structed data

9 - Semi-structed data
```

Reading the data located in the even line numbers

In [6]:

```
f = open('file1.txt','r')

for i in range(0,10):
    line = f.readline()
    if i % 2 == 0:
        print(i,line)
f.close()
```

```
0 ### Day Objectives

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4 Collection of data stored in the memory

6 ### Types of data

8 - Structed data
```

Methods for Writing data into a file

$write()$

$writelines()$

Creating a empty file

In [7]:

```
f = open('WriteFile.txt','w')

f.close()
```

Writing the data to the file

In [8]:

```
f = open('WriteFile.txt','w')

data = "Hii File I'm from Jupyter Notebook"

f.write(data)

f.close()
```

appending the data to the existing file

In [9]:

```
f = open('WriteFile.txt','a')

data = "\nHello File I'm from Jupyter Notebook"

f.write(data)

f.close()
```

Writing the data from one file to another file

In [10]:

```
f1 = open('file1.txt','r')
f2 = open('file2.txt','w')

for i in range(0,10):
    line = f1.readline()
    f2.writelines(line)

f1.close()
f2.close()
```

Writing the data from one file to another file with line numbers

In [11]:

```
f1 = open('file1.txt','r')
f2 = open('file2.txt','a')

for i in range(0,10):
    line = f1.readline()
    f2.writelines(str(i)+' '+line+)

f1.close()
f2.close()
```

```
  File "<ipython-input-11-9d931187f7ab>", line 6
    f2.writelines(str(i)+' '+line+)
                                  ^
SyntaxError: invalid syntax
```

Day-1 Outcomes

- What is a file
- Types of Data
- work on unstructed data type of files