Lecture 13: File Write and Read

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File

- Files are of two types.
  - binary or non-readable files
    - Images, Executables, etc
  - text of readable file
    - .txt files, .py files
- We can open a file in different modes.
  - Write ('w')): will create a file if the specified file does not exist
  - Append ('a')): will create a file if the specified file does not exist
  - Create ('x')): will create a file, returns an error if the file exist
  - Read ('r')): Returns an error if the file does not exist
- Lets create a file using the simple open() method

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

This will create a file in the same directory the the python file is or in the current directory from where the comand is executed.

File Write

- Each time a file is opened in write mode, it will create a new file, thus if a file existed, it will delete its content.
- We get the handle of the file in the variable f
- We can write strings in a file using the write() method.

```
f = open('sample.txt','w')
f.write("Hello Python.\n")
f.write("I am writing in a file.\n")
f.close()
```

sample.txt

Hello Python.
I am writing in a file.

File Append

- If we run the code again, it will create the file afresh and write again to that new file.
- To append, we need to open in append mode.

```
f = open('sample.txt','a')
f.write("Hello Python.\n")
f.write("I am writing in a file.\n")
f.close()
```

- It will appned next to the lines already existing.

File Read

- Lets consider a file where the following lines are written.

```
Hello Python.
I am writing in a file.
Hello Python.
I am writing in a file.
```

- Lets open this file and read its contents.

```
f = open('sample.txt','r')
print(f.read())
f.close()
```

- read() returns are contents as a string.

Read a line

- readLine() returns the first line from the file.
- As the file is read sequentially, s subsequent call will return the second line.

```
f = open('sample.txt','r')
print(f.readline(),end="")
print(f.readline(),end="")
f.close()
```

```
Hello Python.
I am writing in a file.
```

Read all lines

- readLines() returns a list with all the lines in a file.

```
f = open('sample.txt','r')
print(f.readlines(),end="")
f.close()
```

```
['Hello Python.\n', 'I am writing in a file.\n',
'Hello Python.\n', 'I am writing in a file.\n']
```