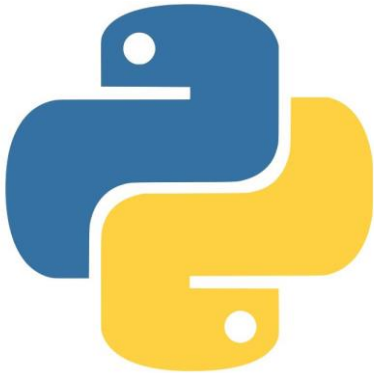
python



PROGRAMMING ESSENTIALS WEBINAR

DAY 9

Contents

- File Handling in Python
  - Opening a File
  - Reading a File
  - Reading multiple lines in a file
  - Writing to a File
  - Appending to a file
  - Removing a File
- Final TIPS on Python

file handling

Opening a file

- The `open()` function is used in Python to open and read a file, and returns a *file object*.
- The open() function accepts two arguments:
  - `open(file_name, mode)`
- There are *three* main modes when reading files:
  - Reading (default mode)
  - Writing
  - Appending

Opening a file | Some rules

- If the file **does not exist**:
  - During reading : `IOError`
  - During writing : New file will be created
  - During appending : New file will be created
- If the file **exists**:
  - During reading : File will be opened/accessed
  - During writing : Contents of the existing file will be erased
  - During appending : Contents of the existing file will be preserved

Reading a file

- Create a text file named `words.txt` with the following lines of text:

```
Hello
world,
I am inside a file!
```

Reading a file | Reading a single line

```
fin = open("words.txt","r")
file_container = fin.readline()
print(file_container)
fin.close()
# Hello\n
```

Reading a file | Reading multiple lines

```
fin = open("words.txt","r")
file_container = fin.readlines()
print(file_container)
fin.close()
# ['Hello\n', 'world,\n', 'I am inside a
file!\n']
```

Reading a file | Reading the entire file as a string

```
fin = open("words.txt","r")
file_container = fin.read()
print(file_container)
fin.close()
#Hello
#world,
#I am inside a file!
```

Reading a file | Reading multiple lines – removing next line characters

```
fin = open("words.txt","r")
file_container = fin.readlines()
fc = []
for line in file_container:
    fc.append(line.strip())
print(fc)
fin.close()
```

Reading a file | alt. way of reading files

```
with open("words.txt","r") as fin:
    file_container = fin.readlines()
    for line in file_container:
        print(line.strip())

#Hello
#world,
#I am inside a file!
```

Writing to a file

```
with open('output.txt', 'w') as fout:
    fout.write('hello')
    fout.write('world')
```

Appending to a file

```
with open('output.txt', 'a') as fslide:
    fslide.write('anotherone!')
```