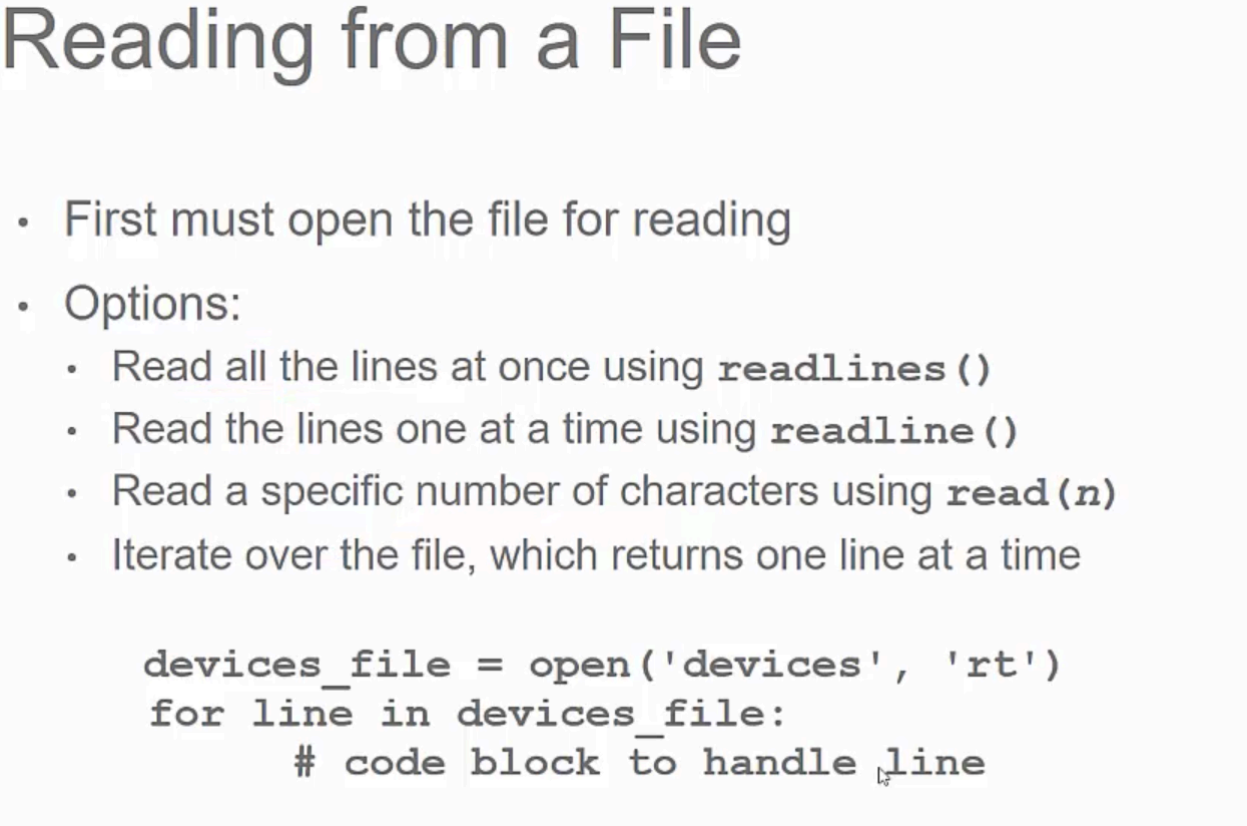

Reading from a file is simple and getting the actual contents can be done in multiple ways:

Open. The file must first be opened.

```
my_input_file = open("/home/Documents/input.txt", 'r')
```

Read. There are multiple options for reading the file:

`readlines()`. Allows you to read all lines in the file into your read buffer.

```
my_input = my_input_file.readlines()
```

`readline()`. Allows you to read one line at a time into your read buffer.

```
my_input = my_input_file.readline()
```

Readlines vs Readline – note the “s”

`read()`. Allows you to read a specific number of characters into your read buffer

```
my_input = my_input_file.read(10)
```

If you choose to not bother with specific read operations, and want to iterate over the entire file one text line at a time, you can use a basic **`for`** loop. In exploring Python, you will learn about control structures, such as **`for`** loops. For now, you will need to know how to read through a file, line by line, using a **`for`** loop. The code to read a file is:

```
my_file = open('myfile', 'rt')
for line in my_file:
        # code block to handle text data in 'line'
```

This code opens the file, then immediately jumps into a **`for`** loop, which will iterate over all the lines in the file, one at a time. At each iteration, the line of the text file is placed into the variable that is called line, to be used in whatever functionality the code block is implementing.

```
cisco@cisco-python:/var/local/PyNE/labs/sections/section05$ cat SEC05-1-read.py
# Read in the device information
file = open('dev-01-info','r')

# Read in the device information one line at a time
name = file.readline()
ip_address = file.readline()
os_type = file.readline()
username = file.readline()
password = file.readline()

# print out the information
print 'device name: ',name
print 'ip address:  ',ip_address
print 'os type:     ',os_type
print 'username:    ',username
print 'password:    ',password
```

The ‘r’ refers to the “mode” – read

There may be characters within the file/s being read that skew our output. These can be removed. We can use the *strip( )* method to remove spaces at the beginning, leading, or at the end, trailing.

```
cisco@cisco-python:/var/local/PyNE/labs/sections/section05$ cat SEC05-2-read-strip.py
# Read in the device information
file = open('dev-01-info','r')

# Read in the device information one line at a time
name = file.readline().strip()
ip_address = file.readline().strip()
os_type = file.readline().strip()
username = file.readline().strip()
password = file.readline().strip()

# print out the information
print 'device name: ',name
print 'ip address:  ',ip_address
print 'os type:     ',os_type
print 'username:    ',username
print 'password:    ',password
```

Coding Challenge

Read Information from a File

In this exercise, you will write an application that reads device information from a file, strips off excess whitespace characters, and prints the information that has been read. You will be using the file dev-01-info, which includes the following information:

- Device name
- IP address
- OS type
- Username
- Password

Each of these items is on its own line in the file.