08-Python-Files-and-Data

Files and Data

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Files

For this section, we'll learn how to open and read text files.
When we open up files, we need to consider the location or **path** to the file.
The path to the file is where the **text file** is with respect to the **python file**. This includes information about the file's **name** and the **folder** that the file lives in.

Opening Files

To open a file, we use the `open()` function.
the `open()` function returns a **file stream**.
Once open, the **file stream** is like a pipe that we van get information from.

```
# information.txt is a file we want
# to connect to
file = open("infrmation.txt")
```

Reading their contents

When reading a file stream, you receive the first part of the file first. Then the second, ..., all the way to the end.
To read a part of the file stream, we use the `readline()` method. It gives one line of informatio. If you call it again, you'll get the next line.

```
# omitte code above

# read a line of text from file
line = file.readline()          # returns string
second_line = file.readline() # next line
```

If you want to read all lines, you can iterat over the file stream.

```
# omitted code above
# read every line until the end
for line in file:
    # do something with that line's data
    print(line)
```

Managing File Streams

When we open a file stream, we should always close it when we finish. This helps to lower the risk of corrupting any data in the file. To close a file strea, use the `.close()` method.

```
# omited code aobve
file.close()                    # closes stream safely
```

Use with `with` expression to deal with closures

```
with open("information.txt") as file:
    line = file.readline()
    for line in file:
        print(line)

file.readline()                 # this will break
```

Lists