Reference guide: Python concepts from module 4

File operations

The following functions, methods, and keywords are used with operations involving files.

`with`

Handles errors and manages external resources

> `with open("logs.txt", "r") as file:`
> Used to handle errors and manage external resources while opening a file; the variable `file` stores the file information while inside of the `with` statement; manages resources by closing the file after exiting the `with` statement

`open()`

Opens a file in Python

> `with open("login_attempts.txt", "r") as file:`
> Opens the file `"login_attempts.txt"` in order to read it `("r")`
> `with open("update_log.txt", "w") as file:`
> Opens the file `"update_log.txt"` into the variable `file` in order to write over its contents `("w")`

> `with open(import_file, "a") as file:`
> Opens the file assigned to the `import_file` variable into the variable `file` in order to append information to the end of it `("a")`

`as`

Assigns a variable that references another object

`with open("logs.txt", "r") as file:`
Assigns the `file` variable to reference the output of the `open()` function

`.read()`

Converts files into strings; returns the content of an open file as a string by default

```
with open("login_attempts.txt", "r") as file:
    file_text = file.read()
```

Converts the file object referenced in the `file` variable into a string and then stores this string in the `file_text` variable

`.write()`

Writes string data to a specified file

```
with open("access_log.txt", "a") as file:
        file.write("jrafael")
```

Writes the string "jrafael" to the `"access_log.txt"` file; because the second argument in the call to the `open()` function is `"a"`, this string is appended to the end of the file

Parsing

The following methods are useful when parsing data.

`.split()`

Converts a string into a list; separates the string based on the character that is passed in as an argument; if an argument is not passed in, it will separate the string each time it encounters whitespace characters such as a space or return

```
approved_users = "elarson,bmoreno,tshah".split(",")
```

Converts the string `"elarson,bmoreno,tshah"` into the list `["elarson","bmoreno","tshah"]` by splitting the string into a separate list element at each occurrence of the `","` character

```
removed_users = "wjaffrey jsoto abernard".split()
```

Converts the string `"wjaffrey jsoto abernard"` into the list `["wjaffrey","jsoto","abernard"]` by splitting the string into a separate list element at each space

`.join()`

Concatenates the elements of an iterable into a string; takes the iterable to be concatenated as an argument; is appended to a character that will separate each element once they are joined into a string

```
approved_users = ",".join(["elarson", "bmoreno", "tshah"])
```

Concatenates the elements of the list `["elarson","bmoreno","tshah"]` into the string `"elarson,bmoreno,tshah"`, separating each element with the `","` character within the

string

Revision #2
Created 2024-01-03 00:32:55 UTC by naruzkurai
Updated 2024-01-03 00:33:30 UTC by naruzkurai