**Level 1: File Handling Definitions**

Use the following resources to answer the questions about file handling in Python.

* <https://www.pythonforbeginners.com/files/reading-and-writing-files-in-python>
* <https://www.pythonforbeginners.com/cheatsheet/python-file-handling>

1. Explain the function of each of the following file handling commands
   1. The open () function

The open function opens the file object

* 1. The read () method

The read method reads out a file and extracts a string that contains character in a file

* 1. The read line () method

The read line method reads the file line by line

* 1. The write () method

The write method is used to add info to an open file

* 1. The close () method

The close method closes a file that is open and is in use

1. Research and explain the “Mode” used to open files in a Python program.
   1. ‘r’ mode

Read mode which is used when the file is only being read

* 1. ‘w’ mode

Write mode which is used to edit and new information to the file

* 1. ‘a’ mode

Appending mode which is used to add new data to the end of the file that new information is automatically amended to the end

* 1. ‘r+’ mode

Special read and write mode which is used to handle both actions when working with files

* 1. Explain when and where the mode is used in a Python program

Read mode is used to read out a file, write mode is used when you want to write and fix errors, appending mode is when out want to add more info to your work, read and write mode is when you want the file to get read out and when you want to type.

1. Provide example code which opens a text file for reading and prints the contents of the file to the console display.
   1. Explain what each line of the program does.
2. fileHandle = open("rohanfile.txt","r")
3. fileContents = fileHandle.read()
4. print(fileContents)
5. fileHandle.close()
6. Provide example code which opens a text file for writing and writes some data to the file.
   1. Explain what each line of the program does.
7. Research and explain the difference between a “File Name” (type Python string) and   
   a File Object (type Python object).

**Level 2: Reading & Writing Files**

1. Add a text file to your project as follows:
   * Click on “Add File” icon in the files pane/window.
   * Type “myfile.txt” and return.
   * “myfile.txt” is now open in the editor pane/window.
   * Type some text into “myfile.txt”
   * Make sure to add several lines of text. A sample file contents could look like:

*Hello kind student*

*This is a message from your computer*

*I hope you are having fun learning to program*

*Remember to ask Mr. Nestor questions when you don’t understand*

1. Write a program that opens “myfile.txt” for reading and prints the contents to the file to the console display.
   1. The program should also print out the number of lines in the file
   2. Provide a listing of your program below
2. Write a program that opens “myfile.txt” for appending new contents to the file.
   1. You can “hard code” some commands to write new text to the file
   2. Make sure to use the close() method when your are finished.   
      (What happens if you don’t?)
   3. How can you tell that your program worked? (That the contents changed?)
   4. Provide a listing of your program below
3. Write a program that opens “myfile.txt” for writing new contents to the file.
   1. You can “hard code” some commands to write new text to the file
   2. Explain the difference between appending and writing to a file.
   3. Provide a listing of your program below

**Level 3: TBD**

Level 3 TBD