**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 is used to open the files on our system. The open function takes 2 arguments, it takes the name of the file and the mode which you like to open.**

* 1. The read() method

**The read functions contains different methods, read(),readline() and readlines(). read(). #return one big string**

* 1. The readline() method

**Return one line at a time, it also returns a list of lines**

* 1. The write() method

**This method writes a sequence of string to the file. Write() its used to write a fixed sequence of characters to a file.**

* 1. The close() method

**When you’re done with a file, use close() to close it and free up any system resources taken up by the open file.**

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 write new information to the file (any existing files with the same name will be erased when this mode is activated)**

* 1. ‘a’ mode

**Appending mode, which is used to add new data to the end of the file; that is 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 a file**

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

**This snippet opens the file named “workfile” in writing mode so that we can make changes to it. The current information stored within the file is also displayed – or printed – for us to view.**

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. 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.
3. 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