**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 – To open a file for writing or using in Python
   2. The read() method – It will display all the text inside the file, the same text that was added by the interpreter
   3. The readline() method – It will display a string of characters that contains a single line if from the file
   4. The write() method – To add information or content to an existing file
   5. The close() method – To close file completely, terminate resources in use and free them up for the system to deploy elsewhere
2. Research and explain the “Mode” used to open files in a Python program.
   1. ‘r’ mode – Read mode is used when the file is only being read
   2. ‘w’ mode – Write Mode 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)
   3. ‘a’ mode – Appending mode is used to add new data to the end of the file
   4. ‘r+’ mode – Special read and write mode is used to handle both actions when working with a file
   5. Explain when and where the mode is used in a Python program

F = open(“workfile”, “w”)

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.

# Opens the file and reads its contents

f = open ("myFile.txt","r")

if f.mode == 'r':

# the read() function is used to read the content

contents = f.read()

# the print() function is used to print the contents of the text file on the console

print(contents)

1. 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.
2. 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