**Student Questions:**

1. Refer to the lesson slides to do the following:
   1. Create a folder called “resources”
   2. Create a file called “myfile.txt”
   3. Select “myfile.txt” to be displayed in the Repl editor window
   4. Copy & paste the following text into “myfile.txt”

*Hello kind student\n*

*This is a message from your computer\n*

*I hope you are having fun learning to program\n*

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

1. Refer to the lesson slides to create a program do the following:
   1. Open “myfile.txt” for reading
   2. Read each line from “myfile.txt” and print it to the console output
   3. Close “myfile.txt”
   4. Provide your program listing below.

fileHandle = open("Resources/myfile.txt", "r")

numLines = 0

for line in fileHandle :

print(line)

numLines += 1

print ("Number of lines is ", numLines)

fileHandle.close()

1. Refer to the lesson slides to create a program do the following:
   1. Create “newfile.txt” and open it for writing
   2. Write several lines of text to the file
   3. Close “newfile.txt”
   4. Select “newfile.txt” to be displayed in the Repl editor window to confirm   
      the proper text was written
   5. Provide your program listing below.

fileHandle = open("newfile.text", "w+")

fileHandle.write("Hello, this is new file.\n")

fileHandle.write("You should see this text when you")

fileHandle.write("select the file in the file in the file chooser window. \n")

fileHandle.write ("It works and this file is displayed in the file chooser window. \n")

fileHandle.close()

1. Research “Python open() Text Files” to learn more about text files
   1. List and explain of the following modes: r, r+, w, w+, a, a+, x

**r:** Opens the file in read-only mode. Starts reading from the beginning of the file and is the default mode for the open() function.

**r+:** Opens a file for reading and writing, placing the pointer at the beginning of the file.

**w:** Opens in write-only mode. The pointer is placed at the beginning of the file and this will overwrite any existing file with the same name. It will create a new file if one with the same name doesn't exist.

**w+:** Opens a file for writing and reading.

**a:** Opens a file for appending new information to it. The pointer is placed at the end of the file. A new file is created if one with the same name doesn't exist.

**a+:** Opens a file for both appending and reading.

**x:** Creates a new file. If file already exists, the operation fails.

1. Research “Python Binary Files” to learn more about binary data files
   1. List and explain of the following modes: t, b

t is a text file

b is a binary file

* 1. Explain the difference between a text file and a binary file

The major difference between these two is that a text file contains textual information in the form of alphabets, digits and special characters or symbols. On the other hand, a binary file contains bytes or a compiled version of a text file.

* 1. List some applications that use text data files

.doc and .docx - Microsoft Word file.

.odt - OpenOffice Writer document file.

.pdf - PDF file.

.rtf - Rich Text Format.

.tex - A LaTeX document file.

.txt - Plain text file.

.wks and .wps- Microsoft Works file.

.wpd - WordPerfect document.

* 1. List some applications that use binary data files

Examples of such software include Microsoft Office, Adobe Photoshop, and various audio/video/media players.

**Extension Question: (Optional)**

1. Write a program to do the following:
   1. Open a file for read, write and append.
   2. Print the contents of the existing file to console output
   3. Ask the user to type a line of text on the console input and store the text in a variable
   4. Ask the user if they want to append or overwrite the text in the file
   5. If they say “append” then append the new text to the end of the file
   6. If they say “overwrite” then delete the existing text and just add the   
      new text to the file
   7. Provide your program listing below.

fileHandle = open("newfile.text", "a+")

lineOftext = input("Type in a line of text: ")

fileHandle.write(lineOftext)

appendOverwrite = input ("Do you want to append or overwrite?")

if appendOverwrite == "append":

fileHandle = open("newfile.text", "a")

elif appendOverwrite == "overwrite":

fileHandle = open("newfile.text", "w")

print ("Operation is complete!")

fileHandle.close()