**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.txt", "w+")

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

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

fileHandle.write("select the file 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

**a** - Append - will append to the end of the file

**a+** - Appending & Reading - allowing you both to append to the file and also read its contents.

**w**- Write - will create a file if the specified file does not exist

**w+**- opens for reading and writing - truncating the file but also allowing you to read back what's been written to the file.

**x**- Create - will create a file, returns an error if the file exists

**r** -Open - indicates that you wish to open the file in read mode

**r+** - Open for reading- Opens a text file for both reading and writing.

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

**t**-  stores sequences of characters- A text file is simply a file which stores sequences of characters using an encoding like utf-8, latin1 etc., whereas in the case of binary file data is stored in the same format as in Computer memory.

**b**- To open a file in binary format

* 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 textfile.)

* 1. List some applications that use text data files

(Microsoft Word, Google Docs, and Google Sites,)

* 1. List some applications that use binary data files

(GarageBand, Google Slides, and Video Games)

**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.