**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.
2. 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.
3. 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

|  |  |
| --- | --- |
| **Mode** | **Description** |
| 'r' | This is the default mode. It Opens file for reading. |
| 'w' | This Mode Opens file for writing. If file does not exist, it creates a new file. If file exists it truncates the file. |
| 'x' | Creates a new file. If file already exists, the operation fails. |
| 'a' | Open file in append mode. If file does not exist, it creates a new file. |
| 't' | This is the default mode. It opens in text mode. |
| 'b' | This opens in binary mode. |
| '+' | This will open a file for reading and writing (updating) |

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

|  |  |
| --- | --- |
| 't' | This is the default mode. It opens in text mode. |
| 'b' | This opens in binary mode. |

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

We have already operated on a lot of text files and a few binary files. 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

Python allows you to read, write and delete files.

Use the function open("filename","w+") to create a file. ...

To append data to an existing file use the command open("Filename", "a")

Use the read function to read the ENTIRE contents of a file.

Use the readlines function to read the content of the file one by one.

* 1. List some applications that use binary data files

The open() function opens a file in text format by default. To open a file in binary format, add 'b' to the mode parameter. Hence the "rb" mode opens the file in binary format for reading, while the "wb" mode opens the file in binary format for writing.

**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.