

### Assignment Question:-

1. File handling is an integral part of programming. It is simplified with built in methods, which include creating, opening and closing files.
2. The different modes of opening a file is as follow:-
  - # read and write- By reading and writing, we mean that a file can be used to overwrite or read anything within it. Read is abbreviated in the form of 'r' and write can be abbreviated in the form of 'w'.
  - #append- By append, we mean that a file can be used to add any file within it. Append is abbreviated in the form of 'a'.
  - #close- By closing, we mean that a file is supposed to be closed which is created.
3. The easiest way to create a text file is to open up the notepad software program on your computer. The notepad is a text editor included with Microsoft windows. The windows Notepad program can be found by following either of the steps.
  - o Click Start
  - o In the Run or Search Box, type Notepad and press Enter
4. The write function can be used in an existing file is by opening the file in append mode. If the file does not exist, the file will be created.  
To write text in an existing file , first step is to verify if the file exists or not?

If the file you want to write to does not exist, program will create a new file.

append to file

In this Python example, it creates a file, write a string and then closes the file. After that, you will open the file in append mode "a" .

```
# write lines to an existing file
# after creating it
fo = open("example1.txt", "w")
fo.write("Hello world.")
fo.close()
```

Now that you have a file, you can append to it

```
# open the file in append mode
fo = open("example1.txt", "a")
fo.write("I like Python")
fo.close()
```

If you want you can read and display it

```
# read and display the file
fo = open("example1.txt", "r")
print("The file contains: ")
dummy = fo.read()
print(dummy)
fo.close()
```

The program above outputs this:

The file contains:

Hello world.I like Python

5. The important methods for reading from a file are as follows:-

- Read()- Returns the file content
  - Readline()- Returns one line from the file.
  - Readlines()- Returns a list of lines from the file.
6. The most common errors that can occur while working with a file are syntax errors, name errors, logical errors, type errors or when the file does not exist in the system.
  7. The difference between binary and text files is by the following:-
    - # Text file is like the combination of structured and semi-structured data. It is used to store data in the form of characters. It can be used to store data in the form of string.E.g.:- .txt, json file etc.
    - # Binary file is like the unstructured data. It is used to store data in the form of bytes (1 bytes=8 bits). E.g.- media files, jpg etc.
  8. If we have to reach the end of a file, then we have to use the function EOF. EOF file stands for 'end for file'. Unexpected EOF implies that the interpreter has reached the end of our program before executing all the code. This error is likely to occur when we fail to declare a statement.
  9. The steps involved in processing a large file:-
    - Open the file
    - Read and write
    - Append
    - Close
  10. The difference between write and append :-
    - Write only ('w')-This mode opens the file for writing only. The data in existing files are modified and overwritten. The start of the file is where the handle is located. If the file does not already exist in the folder, a new one gets created.
    - Append only ('a'): This mode allows the file to be opened for writing. If the file doesn't yet exist, a new one gets created. The handle is set at the end of the file. The newly written data will be added at the end, following the previously written data.
  11. The difference between read() and read(n) function:-
 

Read Only ('r'): This mode opens the text files for reading only. The start of the file is where the handle is located. The file does not exist. This is the default mode for opening files as well.

Read(n) : This mode helps us to evaluate the text in the file with the help of parameter.
  12. The difference between Absolute pathnames and Relative pathnames are:-
    - Absolute pathnames-It is the path of the file from the root directory.
    - Relative pathnames- It is the path of the file from the current working dictionary.
  13. The difference between r+ and w+ in form of python are:-
    - Read and Write ('r+'): This method opens the file for both reading and writing. The start of the file is where the handle is located.
    - Write and Read ('w+'): This mode opens the file for both reading and writing. The text is overwritten and deleted from an existing file.
  14. A file Mode governs the type of operations possible once a file is opened.  
The default file mode is 'r' i.e. read