

Q1. Which function is used to open a file? What are the different modes of opening a file? Explain each mode of file opening.

Python, we use the `open()` method to open files.

Different Mode of opening file : 1) `r` (read) : Open for reading 2) `w` (write) : open for writing, truncating the file first 3) `x` : Create a new file and open it for writing 4) `a` : Open for writing appending to the end of the file if it exists 5) `b` : Binary mode 6) `t` : Text Mode 7) `+` : Open a disk file for updating 8) `U` : Universal newline mode

Q2. Why `close()` function is used? Why is it important to close a file?

it ensures that any pending writes that might be in a cache are completed and committed to the file, and also frees up memory that the operating system has been using to keep track of file information so that it can read and write to it efficiently, ensure that other programs don't try to write to it at the same time

Q3. Write a python program to create a text file. Write 'I want to become a Data Scientist' in that file. Then close the file. Open this file and read the content of the file.

In [1]:

```
file = open("text.txt", "w")
file.write("I want to become a Data Scientist")
file.close()
file = open("text.txt", "r")
file.read()
```

Out[1]:

```
'I want to become a Data Scientist'
```

Q4. Explain the following with python code: `read()`, `readline()` and `readlines()`.

`read()` : method will return the specified number of bytes from the file. Python `readline()` method will return a line from the file when called. `readlines()` method will return all the lines in a file in the format of a list where each element is a line in the file.

Q5. Explain why `with` statement is used with `open()`. What is the advantage of using `with` statement and `open()` together?

The `with` statement works with the `open()` function to open a file. `with` statement is used in exception handling to make the code cleaner and much more readable. Unlike `open()` where you have to close the file with the `close()` method, the `with` statement closes the file for you without you telling it to.

Q6. Explain the `write()` and `writelines()` functions. Give a suitable example.

`Write()` : method displays the output but do not provide a new line character.

