Assignment 9 Solutions

1. To what does a relative path refer?

ANS: Relative paths are relative to the current working directory (PWD).

NOTE:PWD + relative path = absolute path

2. What does an absolute path start with your operating system?

ANS: Absolute paths start with the root folder, such as `/` or `C:`.

3. What do the functions os.getcwd() and os.chdir() do?

ANS: The os.getcwd() function returns the current working directory (CWD). The os.chdir() function changes the current working directory.

4. What are the . and .. folders?

ANS: The `.` Represents the Current Directory/current folder Whereas `..` Represents the Parent Directory/parent folder of the Current Directory

5.In `C:\bacon\eggs\spam.txt` which part is the dir name and which part is the base name ?

ANS: For `C:\bacon\eggs\spam.txt`
The Directory name is `C:\\bacon\\eggs`
The Base name is `spam.txt`

6. What are the three “mode” arguments that can be passed to the open() function?

ANSThe string `r` for read mode, `w` for write mode, and `a` for append mode.

- `'r'` - `Read Mode:` This is the default mode for open(). The file is opened and a pointer is positioned at the beginning of the file's content.
- `‘w’` – `Write Mode:` Using this mode will overwrite any existing content in a file. If the given file does not exist, a new one will be created.
- `‘a’` – `Append Mode:` With this mode the user can append the data without overwriting any already existing data in the file.

7. What happens if an existing file is opened in write mode?

ANS: Using this mode, we can overwrite any existing content in a file. If the given file does not exist then a new one will be created.

8. How do you tell the difference between read() and readlines()?

ANS: The main difference is that **`read()`** will read the whole file at once and then print out the first characters that take up as many bytes as we specify in the parenthesis

- whereas the **`readline()`** that will read and print out only the first characters that take up as many bytes as we specify in the parenthesis. We may want to use readline() when we are reading files that are too big for our RAM.
- The **`read()`** would treat each character in the file separately, meaning that the iteration would happen for every character.
- The **`readline()`** function, on the other hand, only reads a single line of the file. This means that if the first line of the file were three lines long, the readline() function would only parse (or iterate/operate) on the first line of the file.

9. What data structure does a shelf value resemble?

ANS:A shelf value resembles a dictionary value; it has keys and values, along with keys() and values() methods that work similarly to the dictionary methods of the same names.

It contains key and values it represents dictionary. The Shelve Module of Python is a very popular module of Python which works like an effective tool for persistent data storage inside files using a Python program. As the name of this module suggests, i.e., Shelve, we can easily interpret that it will work as a shelf object to keep all our data inside a file and save all the necessary information. In the Shelve Module, a shelf object is defined, which acts like a dictionary-type object, and it is persistently stored in the disk file of our computer. That's how we can save all the data and information through Python Shelve Module in our system and keep it till whenever we want.