1. To what does a relative path refer?

Answer: - A relative path refers to the location of a file or directory relative to the current working directory. It does not start with the root directory but instead describes the path in relation to the current location.

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

Answer: - An absolute path starts with the root directory of the operating system. In most operating systems, the root directory is represented by a forward slash ("/") on Unix-like systems (e.g., Linux) and by a drive letter followed by a colon (e.g., "C:") on Windows systems.

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

Answer: - The os.getcwd() function returns the current working directory, which is the directory in which the Python script is currently executing. On the other hand, os.chdir() is used to change the current working directory to the specified path.

4. What are the . and .. folders?

Answer: - The "." (dot) folder represents the current directory, while ".." (dot dot) represents the parent directory. For example, if you are in the directory "C:\bacon\eggs", then "." refers to "C:\bacon\eggs" itself, and ".." refers to the parent directory "C:\bacon".

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

Answer: - In the path "C:\bacon\eggs\spam.txt", the directory name (dir name) is "C:\bacon\eggs", and the base name is "spam.txt". The directory name refers to the path of the directory containing the file, and the base name refers to the actual file name.

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

Answer: - The three "mode" arguments that can be passed to the open() function are:

- 'r': Read mode, used for reading files.
- 'w': Write mode, used for creating or overwriting files.
- 'a': Append mode, used for appending content to an existing file.

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

Answer: - If an existing file is opened in write mode ('w'), the contents of the file will be truncated (deleted) and overwritten with the new data. Therefore, caution must be exercised when opening a file in write mode to avoid unintentional data loss.

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

Answer: - The read() method reads the entire content of a file and returns it as a string. It treats the file as a single string entity. On the other hand, the readlines() method reads the lines of a file and returns them as a list of strings, where each element represents a line from the file. It treats each line as a separate string entity.

9. What data structure does a shelf value resemble?

Answer: - A shelf value in Python resembles a dictionary-like data structure. It is an object that stores key-value pairs like a dictionary but with the additional ability to persist the data to a file. It provides methods such as close(), keys(), values(), and items(), similar to a dictionary.