

PYTHON ASSIGNMENT – 9

1. To what does a relative path refer?
2. What does an absolute path start with your operating system?
3. What do the functions `os.getcwd()` and `os.chdir()` do?
4. What are the `.` and `..` folders?
5. In `C:\bacon\eggs\spam.txt`, which part is the dir name, and which part is the base name?
6. What are the three “mode” arguments that can be passed to the `open()` function?
7. What happens if an existing file is opened in write mode?
8. How do you tell the difference between `read()` and `readlines()`?
9. What data structure does a shelf value resemble?

SOLUTIONS

1. Relative Path:

- A relative path in computing refers to a location or file path that is relative to a current working directory. It doesn't start from the root directory but describes a location in relation to the current directory.

2. Absolute Path Start:

- The absolute path starts with the root directory of the operating system. In Windows, it typically starts with a

drive letter (e.g., C:), while in Unix-based systems, it starts from the root directory (/).

3. **os.getcwd() and os.chdir():**

- **os.getcwd()**: Returns the current working directory as a string.
- **os.chdir(path)**: Changes the current working directory to the specified path.

4. **. and .. Folders:**

- **.** represents the current directory.
- **..** represents the parent directory.

5. **C:\bacon\eggs\spam.txt:**

- **C:\bacon\eggs** is the dir name (directory or folder).
- **spam.txt** is the base name (the actual file name).

6. **Mode Arguments in open() Function:**

- The three mode arguments are:
 - **'r'**: Read mode.
 - **'w'**: Write mode (creates a new file or overwrites an existing file).
 - **'a'**: Append mode (opens the file for writing, but appends to the end rather than overwriting).

7. **Opening an Existing File in Write Mode:**

- If an existing file is opened in write mode (**'w'**), it will truncate the file, erasing its contents. If the file doesn't exist, a new empty file will be created.

8. **Difference Between read() and readlines():**

- **read()**: Reads the entire file as a single string.
- **readlines()**: Reads the file line by line and returns a list where each element is a line in the file.

9. **Shelf Value Resemblance:**

- A shelf value in Python (using the **shelve** module) resembles a dictionary. It is a persistent, dictionary-like object that stores key-value pairs. It allows you to store and retrieve data between program executions.

