ANSWERS

1. 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 and is dependent on the current working directory.

2. An absolute path starts with the root directory of the operating system. In Windows, an absolute path typically starts with a drive letter (e.g., C:\) followed by the directories leading to the file or directory. In Unix-based systems, an absolute path starts with a forward slash (/).

3. The `os.getcwd()` function returns the current working directory, which is the directory that the Python script is currently being executed in. The `os.chdir()` function is used to change the current working directory to the specified path.

4. The `.` (dot) refers to the current directory, and the `..` (dot dot) refers to the parent directory. They are used to navigate within a file system hierarchy. For example, if you are in the directory `/home/user/documents`, `.` refers to `/home/user/documents`, and `..` refers to `/home/user`.

5. In the path `C:\bacon\eggs\spam.txt`, the directory name is `C:\bacon\eggs`, and the base name is `spam.txt`.

6. The three "mode" arguments that can be passed to the `open()` function are:

- `'r'`: Read mode - opens the file for reading.

- `'w'`: Write mode - opens the file for writing. If the file already exists, it will be truncated. If it doesn't exist, a new file will be created.

- `'a'`: Append mode - opens the file for appending. The file is not truncated, and new data is appended to the end.

7. If an existing file is opened in write mode (`'w'`), its previous contents are erased, and the file is completely overwritten with the new data. Be cautious when using write mode, as it can result in the loss of existing data if not handled carefully.

8. The `read()` method reads the entire contents of a file as a single string, including newline characters. The `readlines()` method reads the file line by line and returns a list where each element represents a line from the file. It provides a convenient way to access individual lines of the file.

9. A shelf value in Python resembles a dictionary data structure. It is a persistent, dictionary-like object provided by the `shelve` module. It allows you to store and retrieve Python objects by a key, similar to a dictionary, but the data is persisted to disk.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?