**Task 3**

explain absolute and relative path

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**Absolute Path:**

* An absolute path specifies the complete location of a file or directory from the root directory (/).
* It starts with a forward slash (/) and follows a hierarchy of directories to reach the target.
* It's independent of your current working directory.

**Example:**

/home/user/documents/report.txt

This absolute path describes a file named report.txt located within the documents directory inside the user directory, which is further under the root directory (/).

**Relative Path:**

* A relative path specifies the location of a file or directory relative to your current working directory (the directory you're currently in).
* It does not start with a forward slash (/).
* It uses special characters to represent positions relative to your current location.

**Common special characters used in relative paths:**

* ./: Represents the current directory.
* ../: Represents the parent directory of your current directory.
* Filename: Any filename within the current directory or a subdirectory.

**Example:**

Suppose your current working directory is `/home/user/documents`

- To access a file named `budget.csv` in the same directory, you can use: ./budget.csv

- To access a file named `images` in a subdirectory named `data`, you can use: data/images

- To access a file named `settings.cfg` in the parent directory (`/home/user`), you can use: ../settings.cfg

**Choosing the right path:**

* Use absolute paths when you need to access a file or directory from any location in the file system, regardless of your current working directory.
* Use relative paths when you're working within a specific directory and want to reference files or directories relative to that location. Relative paths can be more concise and easier to manage, especially when working within a project directory structure.

**Benefits of absolute paths:**

* Universally understood, works from any location.
* Useful for scripting as it provides a fixed reference.

**Benefits of relative paths:**

* More concise, especially within project directories.
* Makes scripts more adaptable to different working directory locations.