Leet Code

Day-40 Q-02 Simplify Path

Given an **absolute path** for a file (Unix-style), simplify it. Or in other words, convert it to the **canonical path**.

In a UNIX-style file system, a period `.` refers to the current directory. Furthermore, a double period `..` moves the directory up a level.

Note that the returned canonical path must always begin with a slash `/`, and there must be only a single slash `/` between two directory names. The last directory name (if it exists) **must not** end with a trailing `/`. Also, the canonical path must be the **shortest** string representing the absolute path.

Example 1:

```
Input: "/home/"

Output: "/home"

Explanation: Note that there is no trailing slash after the last directory name.
```

Example 2:

```
Input: "/../"

Output: "/"

Explanation: Going one level up from the root directory is a no-op, as the root
level is the highest level you can go.
```

Example 3:

```
Input: "/home//foo/"

Output: "/home/foo"

Explanation: In the canonical path, multiple consecutive slashes are replaced by a
single one.
```

Example 4:

```
Input: "/a/./b/../../c/"

Output: "/c"
```

Example 5:

```
Input: "/a/../../b/../c//.//"

Output: "/c"
```

Example 6:

```
Input: "/a//b////c/d//././/.."

Output: "/a/b/c"
```