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"