Exercise: File Handling

Problems for exercise and homework for the Python Advanced Course @SoftUni.

1. Even Lines

Write a program that reads a **text** file and prints on the console its **even lines**. Line numbers start from 0. Before you print the result, replace {"-", ",", ".", "!", "?"} with "@" and reverse the order of the words.

Examples

text.txt	output
-I was quick to judge him, but it wasn't his fault. -Is this some kind of joke?! Is it? -Quick, hide here. It is safer.	fault@ his wasn't it but him@ judge to quick was @I safer@ is It here@ hide @Quick@

2. Line Numbers

Write a program that **reads** a **text file**, inserts line numbers in front of each line, **and counts all the letters and punctuation marks**. The result should be **written** in **another** text file.

Examples

text.txt	output.txt
-I was quick to judge him, but it wasn't his fault. -Is this some kind of joke?! Is it? -Quick, hide here. It is safer.	Line 1: -I was quick to judge him, but it wasn't his fault. (37)(4) Line 2: -Is this some kind of joke?! Is it? (24)(4) Line 3: -Quick, hide here. It is safer. (22)(4)

3. File Manipulator

Create a program that will receive commands until the command **"End"**. The commands can be:

- **"Create-{file_name}"** - Creates the given file with empty content. If the file already exists, remove the existing text in it (as if the file is created again)
- **"Add-{file_name}-{content}"** - Append the content and a new line after it. If the file does not exist, create it, and add the content
- **"Replace-{file_name}-{old_string}-{new_string}"** - Open the file and replace all the occurrences of the old string with the new string. If the file does not exist, print: **"An error occurred"**
- **"Delete-{file_name}"** - Delete the file. If the file does not exist, print: **"An error occurred"**
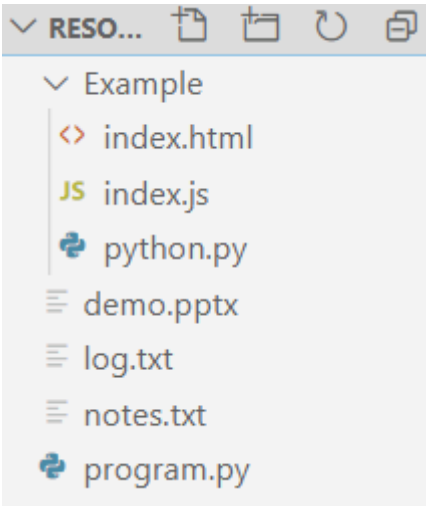
Example

Input	Comment
Create-file.txt	The first command creates the empty file

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Add-file.txt-First Line Add-file.txt-Second Line Replace-random.txt-Some-some Replace-file.txt-First-1st Replace-file.txt-Second-2nd Delete-random.txt Delete-file.txt End	After the first and second Add command, the content is: First Line Second Line On the first Replace command, an error must occur After the next two Replace commands, the content is: 1st Line 2nd Line After the first Delete command, an error occurs Finally, the 'file.txt' file is deleted

4. Directory Traversal

Write a program that traverses a given **directory** for **all files**. Search through the **first level** of the **directory only** and write information about each **found** file in **report.txt**. The files should be **grouped** by their **extension**. **Extensions** should be **ordered** by **name alphabetically**. The files with extensions should **also be sorted by name**. **report.txt** should be saved in the chosen **directory**.

Examples

Input	Directory View	report.txt
.		.html - - - index.html .js - - - index.js .pptx - - - demo.pptx .py - - - program.py - - - python.py .txt - - - log.txt - - - notes.txt