

Assignment for Advanced Regular Expression Techniques

Instructions:

- Solve the following exercises related to advanced regular expression techniques in Python.
- Write the solution code for each exercise.
- Include comments to explain your code where necessary.
- Test your regular expressions with sample inputs to ensure correctness.
- Write the answers in a Python script file or a Jupyter Notebook.

Questions:

Named Groups:

Explain the concept of named groups in regular expressions. Provide an example demonstrating the use of named groups.

Positive Lookahead:

Describe what positive lookahead assertions are in regular expressions. Provide an example demonstrating their usage.

Negative Lookbehind:

Discuss the functionality of negative lookbehind assertions in regular expressions. Provide an example illustrating their application.

Splitting Text:

Explain how regular expressions can be used to split text into substrings. Provide an example demonstrating the splitting of a sentence into words.

Replacing Text:

Describe how regular expressions can be used to replace text patterns within a string. Provide an example illustrating the replacement of specific words in a sentence.