This program gives a brief illustration of a few of the features of the re (regular expression) module.

The re module has a lot of complicated and powerful features. You can find the official documentation here:

https://docs.python.org/3/library/re.html

```python
import re

# We're going to look for stuff inside the following string.
s = 'a frog, a dog, and a hog, were agog on the log in the bog'

print('This program will perform regular expression searches on the string:')
print('  "{}"'.format(s))
print()

# Find a simple match
regex = 'hog'
print('Looking for "{}".'.format(regex))
result = re.search(regex, s)
if result:
    print('The first match goes from index {} to {}
'.format(result.start(), result.end() - 1))
else:
    print('No match found.'
print()

# Find a sequence of letters ending in "og".
regex = '\w*og\W'  # Any guesses why we do \b instead of \b?
print('Looking for all occurrences of "{}".'.format(regex))
result = re.findall(regex, s)
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if result:
    print(result)
else:
    print('No match found.')
print()

# Split the string on a pattern.
regex = '\w+og\b'
print('Splitting the string on all occurrences of
"{0}".'.format(regex))
result = re.split(regex, s)
if result:
    print(result)
else:
    print('No match found.')
print()

# Replace all og-words with OGWORD.
regex = '\w+og\b'
print('Splitting the string on all occurrences of
"{0}".'.format(regex))
print(re.sub(regex, 'OGWORD', s))
print()