Python regex `findall` function

Python regex findall() function explained with examples.

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Python string findall

`findall()` is a powerful function in the `re` module. It finds *all* the matches and returns them as a list of strings, with each string representing one match.

Syntax

```
re.findall(pattern, string, flags=0)
```

The string is scanned **left-to-right**, and matches are returned in the order found. If **one or more** groups are present in the pattern, return a `list of groups`. Empty matches are included in the result unless they touch the beginning of another match.

Example 1

Find all and return the email addresses:

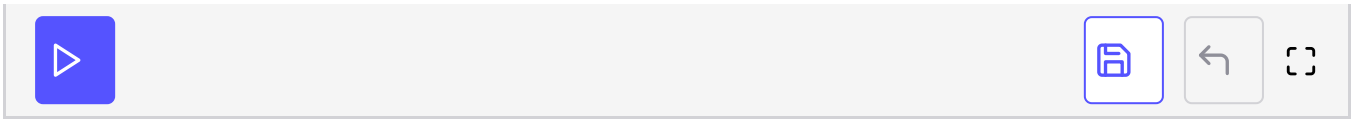
```
#!/usr/bin/python
import re

line = 'your alpha@scientificprograming.io, blah beta@scientificprogramming.io blah user'

emails = re.findall(r'[\w\.-]+@[\w\.-]+', line)

if emails:
```

```
  print emails
else:
  print "No match!"
```



Example 2: `findall` and Groups

Now let's make a second example. Groups `()` can be combined with `findall()`. If the pattern includes 2 or more parenthesis groups, then instead of returning a list of strings, `findall()` returns a list of *tuples*. Each tuple represents one match of the pattern, and inside the tuple is the `group(1)`, `group(2)`, etc.

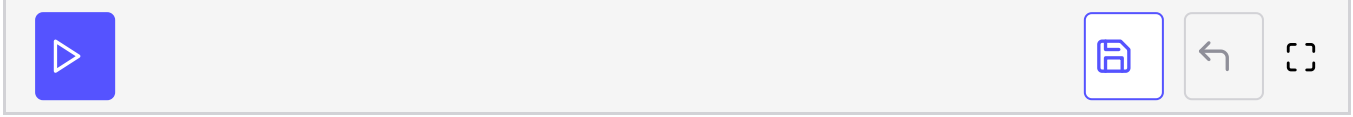
The following example, will find, `'alpha'`, `'scientificprograming.io'`, `'beta'`, and `'scientificprogramming.me'`.

```
#!/usr/bin/python
import re

line = 'your alpha@scientificprograming.io, blah beta@scientificprogramming.me blah user'

tuples = re.findall(r'([\w\.-]+)@([\w\.-]+)', line)

if tuples:
  print tuples
else:
  print "No match!"
```



Once you have the list of tuples, you can loop over it to do some computation for each tuple.