Python Regex Anchors

Summary: in this tutorial, you'll learn how to use regular expression anchors to match the character positions including the beginning and the end of a string.

Introduction to the regex anchors

[Regular expressions](https://www.pythontutorial.net/python-regex/python-regular-expressions/) provide you with two anchors that match the positions of characters:

- `^` – the caret anchor matches at the beginning of a string.
- `$` – the dollar anchor matches at the end of a string.

The following example uses the `\d\d` to match two digits in a time string:

```python
import re


time = '12:20'
matches = re.finditer('\d\d', time)
for match in matches:
    print(match.group())
```

It returns two matches:

```
12
20
```

If you use the caret anchor (^), you'll get one group which is the two digits at the beginning of the string. For example:

```
import re

time = '12:20'
matches = re.finditer('^\d\d', time)
for match in matches:
    print(match.group())
```

Output:

```
12
```

Similarly, if you use the $ anchor, you'll get the last two digits because the $ matches \d\d at the end of the time string:

```
import re

time = '12:20'
matches = re.finditer('\d\d$', time)
for match in matches:
    print(match.group())
```

Output:

```
20
```

To check if a string is a time string, you can combine the caret (`^`) and dollar (`$`) anchors. For example:

```python
import re

time = '12:20'
matches = re.finditer('^\d\d:\d\d$', time)
for match in matches:
    print(match.group())
```

Output:

```
12:20
```

Note that the pattern `^\d\d:\d\d$` doesn't validate the valid hour and minute. For example, it also matches the following string:

```
30:99
```

It's not a valid time string because the valid hour is from 1 to 24 and the valid minute is from 00 to 59. Later, you'll learn how to match the time string with valid values using the alternation (https://www.pythontutorial.net/python-regex/python-regex-alternation/) .

Summary

- Regx anchors match character positions, not the characters.
- The caret anchor (`^`) matches at the begining of a string.
- The dollar anchor (`$`) matches at the end of a string.