



# **Examples**

## **Introduction to Regular Expression in Python**



# Python RegEx

**A RegEx, or Regular Expression, is a sequence of characters that forms a search pattern.**

**RegEx can be used to check if a string contains the specified search pattern.**



# RegEx Module

Python has a built-in package called `re`, which can be used to work with Regular Expressions.

Import the `re` module:

```
import re
```



## Performing Matches

1. `match()`
2. `search()`
3. `findall()`
4. `finditer()`

**The Match object has properties and methods used to retrieve information about the search, and the result:**

**.span()** returns a tuple containing the start-, and end positions of the match.

**.string** returns the string passed into the function

**.group()** returns the part of the string where there was a match

# The sub() Function

The **sub()** function replaces the matches with the text of your choice:

```
import re

txt = "The rain in Spain"
x = re.sub("\s", "9", txt)
print(x)
```

You can control the number of replacements by specifying the **count** parameter:

```
import re

txt = "The rain in Spain"
x = re.sub("\s", "9", txt, 2)
print(x)
```

Character	Meaning
()	Groups. Group together multiple patterns into a single group.
+	Matches one or more characters
*	Matches 0 or more characters
{ }	Repeat preceding character or group.
?	Indicates Optional search <b>OR</b> Matches the shortest possible match when used after { }
.	Matches any character other than newline.
[ ]	Matches all characters specified within square brackets.
	Pipe character. Matches either of the characters.
^	Caret symbol. Matches the pattern in the beginning of the text. <b>OR</b> Reversed the match when used inside [ ]
\$	Dollar symbol. Matches the pattern at the end of the text.

Character	Meaning
\d	Digit character. Matches any numeric digit from 0 to 9
\w	Word character. Matches any letter, numeric digit, or the underscore character
\s	Space character. Matches any space, tab, or newline character
\D	Non Digit character. Matches any character that is not a numeric digit from 0 to 9
\W <sub>+</sub>	Non Word character. Matches any character that is not a letter, numeric digit, or the underscore character
\S	Non Space character. Matches any character that is not a space, tab, or newline.



Special Characters	Used in RE as	Meaning
.	\.	dot
^	\^	caret
\$	\\$	dollar
*	\*	star / asterisk
+	\+	plus
?	\?	question mark
{	\{	open braces / open flower bracket
}	\}	close braces / close flower bracket
[	\[	open square bracket
]	\]	close square bracket
\	\\	backslash
	\	pipe
(	\(	open parenthesis
)	\)	close parenthesis