

# Regex Cheatsheet

Please import **re** library to use regular expressions in Python:

```
import re
```

## Basic RE Module Functions

1. **re.findall(x, y)** → Matches all instances of an expression **x** in a string **y** and returns them in a list.
2. **re.sub(x, y, z)** → Replace an expression **x** with another expression **y** in a string **z**.

## Containers

1. **[a-k]** → Matches any alphabet from a to k.

Eg: `re.findall("[a-d0-3]", "cbr250r")`  
Output: ['c', 'b', '2', '0']

2. **[dym]** → Matches either d, y, or m and not dym.

Eg: `re.findall("[c5]", "cbr250r")`  
Output: ['c', '5']

3. **[^ab]** → Matches any character excluding a or b.

Eg: `re.findall("[^r]", "cbr250r")`  
Output: ['c', 'b', '2', '5', '0']

## Regular Expression Character Classes

1. **\w** → Matches an alphanumeric character, i.e., **a-z**, **A-Z**, and **0-9**. and underscore, **\_**.

Eg: `re.findall("\w", "red_blue #8")`  
Output: ['r', 'e', 'd', '\_', 'b', 'l', 'u', 'e', '8']

2. **'\d'** → Matches a digit, **0-9**.

Eg: `re.findall("\d", "red_blue #8")`  
`Output: ['8']`

3. **'\D'** → Matches a non-digit.

Eg: `re.findall("\D", "red_blue #8")`  
`Output: ['r', 'e', 'd', '_', 'b', 'l', 'u', 'e', ' ', '#']`

4. **'\s'** → Matches one whitespace character.

Eg: `re.findall("\s", "red_blue \t #8")`  
`Output: [' ', '\t', ' ']`

5. **'\S'** → Matches one non-whitespace character.

Eg: `re.findall("\S", "red_blue \t #8")`  
`Output: ['r', 'e', 'd', '_', 'b', 'l', 'u', 'e', '#', '8']`

## Special Characters

1. **'.'** → Matches any character except newline (`\n`).

Eg: `re.findall(".", "Hi guys\n")`  
`Output: ['H', 'i', ' ', 'g', 'u', 'y', 's']`

2. **'^'** → Matches beginning of a string.

Eg: `re.findall("^[a-zA-Z]\w", "Hi guys!")`  
`Output: ['Hi']`

`re.findall("^[a-zA-Z]\w", "5 star")`  
`Output: [ ]`

3. '\$' → Matches end of a string.

Eg: `re.findall("[a-zA-Z]$", "Hi guys")`

`Output: ['s']`

`re.findall("\w+[a-zA-Z]$", "Hi guys")`

`Output: ['guys']`

4. '\' → Escapes special characters.

Eg: `re.findall("*", "5 star *")`

`Output: Error`

`re.findall("\*", "5 star *")`

`Output: ['*']`

5. '\*' → Greedily matches the expression to its left 0 or more times (append '?' for non-greedy).

Eg: `re.findall("H*", "Hi guys")`

`Output: ['H', '', '', '', '', '', '', '']`

6. '+' → Greedily matches the expression to its left 1 or more times (append '?' for non-greedy).

Eg: `re.findall("H+", "Hi guys")`

`Output: ['H']`

7. '\*?' or '+?' → Non-greedy matching

Eg: `re.findall("a.*a", "Have a good day?")`

`Output: ['ave a good da']`

`re.findall("a.*?a", "Have a good day?")`

`Output: ['ave a']`

8. '{m}' → Matches the expression to its left m times.

Eg: `re.findall("H.{2}", "Have a good day?")`

`Output: ['Hav']`

`re.findall("H.{5}", "Have a good day?")`

`Output: ['Have a']`