**Basic Syntax Elements:**

Literal Characters (r'abc')

* The pattern "b" is checked at the start of the text, but the text starts with "a", so it does **not match**.
* split() breaks the text into **separate words**.
* findall("c") finds **all "c" letters** in the text.

Dot (r'a.c')

* The dot (.) means **"any one letter"** between "a" and "c".
* "afc" matches because "f" is between "a" and "c".
* "abc" and "axc" match in findall(), because both have **one letter** in the middle.

Caret (^)

* The caret (^) means **"start of the text"**.
* "abcdef" matches "abc" because "abc" is at the **start**.
* In findall(), only the **first** "abc" is found.

Dollar ($)

* The dollar sign ($) means **"end of the text"**.
* "xyzabc" matches "abc" because "abc" is at the **end**.
* findall() finds "abc", but only when it is **at the end**.

Square Brackets ([])

* [aeiou] means **"any vowel (a, e, i, o, u)"**.
* It finds "e" first in "hello world all item".
* findall() collects **all vowels** in the text.

Hyphen (-)

* [0-9] means **"any number from 0 to 9"**.
* The first found number is "9".
* findall() collects **all numbers** one by one.

Asterisk (\*)

* \* means **"zero or more"** of the previous letter.
* "abc\*" means "ab" + many "c" letters".
* "abcc" and "ab" match because both fit the rule.

Plus (+)

* + means **"one or more"** of the previous letter.
* "abc+" means "ab" + at least one "c".
* "abcc" and "abc" match, but "ab" does not.

Question Mark (?)

* ? means **"zero or one"** of the previous letter.
* "abc?" means "ab", and "c" is optional.
* "ab" matches, "abcdf" is fully found.

Parentheses (())

* () means **"grouping"** of letters.
* (abc)+ means "abc" repeated **one or more times**.
* "abcabcabcabc" is fully matched.

Pipe (|)

* | means **"OR"** in regex.
* "abc|" finds "abc".
* "abc|abcdef|def" finds "abc", "def", "abc", "abc", "def".

Backslash (\)

* \. finds **the dot character (.)**.
* re.search(r"\.", "file.txt") finds "." in "file.txt".
* re.findall(r"\.", text) finds **all dots** in the text.