

## 10. Search and Match Functions

❖ Using `re.search()` and `re.match()` functions in Python's `re` module for pattern matching.

1. `re.match()` :

- Tries to match a pattern only at the beginning of the string.
- If the pattern matches at the start, it returns a match object.
- If it doesn't match at the start, it returns `None`. Key point:
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2. `re.search()` :

- Searches the entire string for the first occurrence of the pattern.
- Returns a match object if found anywhere in the string.
- Returns `None` if no match is found.

## ❖ Difference between search and match.

| Aspect            | <code>re.match()</code>                                       | <code>re.search()</code>                                    |
|-------------------|---|---|
| Purpose           | Checks for a match only at the start of the string            | Searches for a match anywhere in the string                 |
| Matching behavior | Must match from the beginning (position 0)                    | Can match at any position in the string                     |
| Return value      | Returns a match object if pattern matches at start, else None | Returns a match object if pattern found anywhere, else None |
| Use case          | When you want to verify if the string starts with a pattern   | When you want to find the pattern anywhere in the string    |

- Use `re.match()` to check start of string only.
- Use `re.search()` to find pattern anywhere in the string.