- **Basic Symbols**

```
.          # Matches any single character except newline
^          # Matches the start of a string
$          # Matches the end of a string
\          # Escapes a special character (e.g., \. matches a literal dot)
```

- **Character Classes**

```
[abc]           # Matches any one of 'a', 'b', or 'c'
[^abc]          # Matches any character except 'a', 'b', or 'c'
[a-z]           # Matches any lowercase letter from 'a' to 'z'
[0-9]           # Matches any digit
\w              # Matches any word character (alphanumeric plus underscore)
\W              # Matches any non-word character
\d              # Matches any digit (equivalent to [0-9])
\D              # Matches any non-digit
\s              # Matches any whitespace character (spaces, tabs, etc.)
\S              # Matches any non-whitespace character
```

- **Quantifiers**

```
*        # Matches 0 or more occurrences of the preceding element
+        # Matches 1 or more occurrences of the preceding element
?        # Matches 0 or 1 occurrence of the preceding element
{n}      # Matches exactly n occurrences of the preceding element
{n,}     # Matches n or more occurrences of the preceding element
{n,m}    # Matches between n and m occurrences of the preceding element
```

- **Groups and Alternation**

```
()        # Groups multiple tokens together (creates a capturing group)
(?:...)   # Non-capturing group
|         # Alternation (OR) between expressions (e.g., a|b matches 'a' or 'b')
\1        # Backreference to the first capturing group
```

- **Anchors**

```
\b       # Word boundary (position between a word character and a non-word character)
\B       # Non-word boundary
\A       # Start of the string (similar to ^ but matches start of string only)
\Z       # End of the string (similar to $ but matches end of string only)
```

- **Common Use Cases**

```
^\d{3}-\d{2}-\d{4}$      # Matches a Social Security number format (e.g., 123-45-6789)
^[A-Za-z]+$              # Matches a string containing only letters
\d{3}-\d{3}-\d{4}        # Matches a phone number format (e.g., 123-456-7890)
[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}   # Matches an email address
```

- **Lookahead and Lookbehind**

```
(?=...)  # Positive lookahead (matches if ... follows the current position)
(?!...)  # Negative lookahead (matches if ... does NOT follow the current position)
(?<=...) # Positive lookbehind (matches if ... precedes the current position)
(?<!...) # Negative lookbehind (matches if ... does NOT precede the current position)
```