Day 4 01 November 2023

**Introduction to Regular Expressions**

Regular expression are compact way of representing a collection of strings. The way Python communicates and creates expressions is done with **re** module.

Regexes are used for five reasons:

* Parsing: Identifying and extracting pieces of text that match certain criteria.
* Searching: Locating substrings that can have more than one form like: ‘pet.png’, ‘pet.gif’, ‘pet.mpg’ while avoiding ‘carpet.gif’.
* Searching and replacing: find substrings and replace specified words within the matched strings.
* Splitting strings: splitting string where a certain character occurs.
* Validation: checking if the string meets a certain criteria, e.g to check whether an email address is in standard format.

**Characters and Character Classes**

Regex special characters are: \. ^ $ ? + [] {} (). Then the Pythons escape characters that are also used in regex: \t.

**Quantifiers**

Quantifiers in Python are used in regular expressions to specify the number of times a particular character or group of characters should appear in the input text.

**Flags**

Flags are used to tell the regex how to behave when looking for expressions.