**Day 10 – REGULAR EXPRESSION**

# Python has a built-in package called re, which can be used to work with Regular Expressions.

# Import re

# The re module offers a set of functions that allows us to search a string for a match:

A Regular Expression (RegEx) is a sequence of characters that defines a search pattern. For example,

^b...g$

The above code defines a RegEx pattern. The pattern is: any five letter string starting with b and ending with g.

A pattern defined using RegEx can be used to match against a string.

| Expression | String | Matched? |
| --- | --- | --- |
| ^b...g$ | Bag | No match |
| Buuug | Match |
| Baaag | Match |
| Bgm | No match |
| Buiscuit | No match |

# 

## re.findall()

The re.findall() method returns a list of strings containing all matches.

## re.split()

The re.split method splits the string where there is a match and returns a list of strings where the splits have occurred.

## re.sub()

The syntax of re.sub() is:

re.sub(pattern, replace, string)

## re.search()

The re.search() method takes two arguments: a pattern and a string. The method looks for the first location where the RegEx pattern produces a match with the string.

# Exercise:

# Write a Python program for all the cases which can check a string contains only a certain set of characters (in this case a-z, A-Z and 0-9).

# Write a Python program that matches a word containing 'ab'.

# Write a Python program to check for a number at the end of a word/sentence.

# Write a Python program to search the numbers (0-9) of length between 1 to 3 in a given string

# Write a Python program to match a string that contains only uppercase letters