**Assignment 2: Regular Expression Practice Questions**

**Question 1- Write** a RegEx pattern in python program to check that a string contains **only a certain set of characters (in this case a-z, A-Z and 0-9).**

* import re

text = "The Board of Directors of the Company at their meeting held on January 17, 2024"

matches = re.findall ('[ a-z, A-z,0-9]', text)

print (matches)

**Question 2-** Write a RegEx pattern that matches a string that has an **a followed by zero or more b's**

* import re

pattern = r'ba\*nana'

# -‘\*’ Matches 0 or more (greedy) repetitions of the preceding RE.

text = 'I love banana'

match = re.search(pattern,text)

if match:

print (f"match found:{match.group()}")

else:

print ("No match")

**Question 3-** Write a RegEx pattern that matches a string that has an **a followed by one or more b's**

* import re

pattern = r'ab+sent'

# - ‘+’Matches 1 or more (greedy) repetitions

text = 'sia was absent today'

match = re.search(pattern,text)

if match:

print (f"match found:{match.group()}")

else:

print ("no match")

**Question 4**- Write a RegEx patternthat matches a string that has an **a followed by zero or one 'b'.**

* import re

pattern = r'ba**?**nana'

# - ‘?’ Matches 0 or 1 (greedy) repetitions

text = 'I love banana'

match = re.search(pattern, text)

if match:

print(f"match found: {match.group()}")

else:

print ("No match")

**Question 5**- Write a RegEx pattern in python program that matches a string that has an **a followed by three 'b'.**

* import re

def match\_pattern(input\_string):

pattern = re.compile(r'ab{3}')

match = (pattern.search(input\_string))

return bool(match)

input\_string = 'abbbsfimsblflv'

print(f"Does '{input\_string}' match the pattern? {match\_pattern(input\_string)}")

**Question 6**- Write a RegEx pattern in python programthat matches a string that has an **a followed by two to three 'b'.**

* import re

def match\_pattern(input\_string):

pattern = **re.compile(r'ab{2,3}')**

**# -** ab{2,3} matches the letter 'a' followed by two to three 'b' characters.

pattern.search(input\_string) checks if the pattern is found anywhere in the input string.

The bool() function converts the match result to a boolean value.

match = (pattern.search(input\_string))

return bool(match)

input\_string = 'abbbsfimsblflv'

print(f"Does '{input\_string}' match the pattern? {match\_pattern(input\_string)}")

**Question 7-** Writea Python program that matches a string that has an **'a' followed by anything, ending in 'b'.**

* import re

target\_string = "a mountain claimb"

y = re.match**("^a.\*b$**", target\_string)

if y:

print("Match found:", y.group())

else:

print("No match")

**Question 8-** Write a RegEx pattern in python program **that matches a word at the beginning of a string.**

* import re

pattern **=** r'**^[**A-Za-z]'

# - ’^’- matches aword at the beginning of a string

text = 'Good, morning!'

match = re.search(pattern, text)

if match:

print (f"Match found:{match.group()}")

else:

print ("No Match")

**Question 9-** Write a RegEx pattern in python program that **matches a word at the end of a string.**

* import re

pattern = r'morning**$**'

# - ‘$’ - matches a word at the end of a string

text = 'Good morning'

match = re.search (pattern, text)

if match:

print (f"Match found: {match.group()}")

else:

print ("No Match")

**Question 10-** Write a RegEx pattern in python program to **find all words that are 4 digits long in a string.**

Sample text- '01 0132 231875 1458 301 2725.'

Expected output- ['0132', '1458', '2725']

* import re

def find\_four\_digit\_words(**input\_string**):

pattern = re.compile(r'\b\d{4}\b')

# \b – Asserts a word boundry, \d{4} – matches exactly 4 digits.

return pattern.findall**(input\_string)**

**input\_string** = '01 0132 231875 1458 301 2725.'

result = find\_four\_digit\_words(input\_string)

print(result)