Regular Expression Practice(23/02/2024)

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

Ans:
```
import re
def is_allowed_specific_char(string):
    charRe = re.complier(r'[^a-zA-Z0-9]')
    string = charRe.search(string)
    return not bool(string)
print(is_alowed_specific_char("ABCDEFabcdef123450"))
print(is_allowed_specific_char("*&%@#!}{"))
```

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

Ans:
```
import re
def text_match(text):
    patterns = '^a(b*)$'
    if re.search(patterns, text):
            return 'Found a match!'
     else:
            return('Not matched!')
print(text_match("ac"))
print(text_match("abc"))
print(text_match("a"))
print(text_match("ab"))
print(text_match("abb"))
```

Question 3- Write a RegEx pattern that matches a string that has an a followed by one or more b's.
Ans:
```
import re
def text_match(text):
    patterns = 'ab+?'
    if re.search(patterns, text):
            return 'Found a match!'
     else
            return(Not matched!')
print(text_match("ab"))
print(text_match("abc"))
```

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

Ans:

```
import re
def text_match(text):
        patterns = 'ab?'
        if re.search(patterns, text):
                return 'Found a match!'

         else:
                 return('Not matched!')
print(text_match("ab"))
print(text_match("abc"))
print(text_match("abbc"))
print(text_match("aabbc"))
```

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

Ans:

```
import re
def text_match(text):
    patterns = 'ab {3}?'
    if re.search(patterns, text):
            return 'Found a match!'
    else:
            return('Not a matched!')
print(text_match("abbb")
print(text_match("aabbbbbc"))
```

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

Ans:

Import re
def text_match(text):
    patterns = 'ab {2,3}'
    if re. search(patterns, text):
            return 'Found a match!'
     else:
            return('Not matched!')

print(text_match("ab"))
print(text_match("aabbbbbc"))

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

Ans:
import re
def text_match(text):
patterns = 'a.*? b$'
if re.search(patterns, text):
return 'Found a match!'
else:
return('Not matched!')
print(text_match("aabbbbd"))
print(text_match("aabAbbbc"))
print(text_match("accddbbjjjb"))

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

Ans :
import re
def text_match(text):
    patterns = '^\w+'
    if re.search(patterns, text):
      return 'Found a match!'
    else:
      return('Not matched!')
print(text_match("The quick brown fox jumps over the lazy dog."))
print(text_match(" The quick brown fox jumps over the lazy dog."))

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

```
import re
    def text_match(text):
    patterns = '\w+\S*$'
    if re.search(patterns,  text):
        return 'Found a match!'
    else:
        return('Not matched!')
print(text_match("Wheels  on the bus."))
print(text_match("Wheels  on the bus. "))
print(text_match("Wheels  on the bus "))
```


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']

Ans: import re

text = '01 0132 231875 1458 301 2725.'

print(re.findall(r"\b\w{4,}\b", text))