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**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).

**Solution:**

import re

material = 'abcEFG01234!'

pattern = r'[a-zA-Z0-9]+'

output = re.findall(pattern,material)

if output:

  print(f'material substring found:{output}')

else:

  print('substring not found')

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

**Solutions:**

import re

pattern = re.compile(r'ab\*')

# Test the pattern

test\_strings = ['a', 'ab', 'abb', 'aabbb', 'ac', 'bc']

for test\_string in test\_strings:

if pattern.match(test\_string):

print(f'{test\_string} matches the pattern.')

else:

print(f'for example {test\_string} does not match the pattern.')

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

**Solution**:

import re

pattern = re.compile(r'ab+')

# Test the pattern

test\_strings = ['ab', 'abb', 'abbb', 'a', 'ac']

for test\_string in test\_strings:

if pattern.match(test\_string):

print(f'{test\_string} matches the pattern.')

else:

print(f'for example {test\_string} does not match the pattern.')

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

**Solutions:**

import re

pattern = re.compile(r'ab?')

# Test the pattern

test\_strings = ["a", "ab", "ac", "ad", "ae"]

for test\_string in test\_strings:

if pattern.match(test\_string):

print(f"{test\_string} matches the pattern.")

else:

print(f"{test\_string} does not match the pattern.")

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

**Solution**:

import re

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

# Test the pattern

test\_strings = ["abbb", "abbbb", "abb", "abc", "ab", "a"]

for test\_string in test\_strings:

if pattern.match(test\_string):

print(f"{test\_string} matches the pattern.")

else:

print(f"{test\_string} does not match the pattern.")

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

**Solution:**

import re

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

# Test the pattern

test\_strings = ["abb", "abbb", "abbbb", "abc", "ab", "a"]

for test\_string in test\_strings:

if pattern.match(test\_string):

print(f"{test\_string} matches the pattern.")

else:

print(f"{test\_string} does not match the pattern.")

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

**Solution**

import re

pattern = re.compile(r'a.\*b$')

#Testing pattern

material = ['abc','a123b','ac','abbb','axyzb']

for item in material:

if pattern.match(item):

print(f'{item} matches the pattern')

else:

print(f'{item} does not match the pattern.')

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

**Solution**:

import re

pattern = re.compile(r'^\w')

material = ['Action','a1234b','123abc','!Phone','%\_of\_crime','Word']

for item in material:

if pattern.match(item):

print(f'{item} matches the pattern')

else:

print(f'{item} does not match the pattern.')

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

**Solution**

import re

pattern = re.compile(r'\w+$')

# Test the pattern

material = ['Hello', '123abc', 'Word', 'Special!', '12345']

for item in material:

if pattern.match(item):

print(f'{item} matches the pattern.')

else:

print(f'{item} does not match the pattern.')

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']

**Solutions**

import re

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

sample\_text = '01 0132 231875 1458 301 2725.'

matchs = pattern.findall(sample\_text)

print(f'Four Digits: {matchs}')