

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).

1.

```
In [7]: s= "it will print everything except oHa wertyui5grt fghj 1 2,3 456 778"
x=re.findall('[a-z]',s)
print(x)

['i', 't', 'w', 'i', 'l', 'l', 'p', 'r', 'i', 'n', 't', 'e', 'v', 'e', 'r', 'y', 't', 'h', 'i', 'n', 'g', 'e', 'x', 'c', 'e',
 'p', 't', 'o', 'a', 'w', 'e', 'r', 't', 'y', 'u', 'i', 'g', 'f', 'd', 'f', 'g', 'h', 'j']

In [8]: s="it will print everything except oHa A DJIE DJWO PIE DLOWN:D DJLW wertyui5gfd fghj 1 2,3 456 778"
x=re.findall('[A-Z]',s)
print(x)

['H', 'A', 'D', 'J', 'I', 'E', 'D', 'J', 'W', 'O', 'P', 'I', 'E', 'D', 'L', 'O', 'U', 'W', 'N', 'D', 'D', 'J', 'L', 'W']

In [9]: s="it will print everything except oHa A DJIE DJWO PIE DLOWN:D DJLW wertyui5gfd fghj 1 2,3 456 34,6n77,8.9.,8,9,9,3,56,7778"
x=re.findall('[0-9]',s)
print(x)

['5', '1', '2', '3', '4', '5', '6', '3', '4', '6', '7', '7', '8', '9', '8', '9', '9', '3', '5', '6', '7', '7', '7', '8']
```

2.

```
: str='Sachin Tendulkar made his debut for the Indian cricket team at the age of 16 in 1989'
#pattern = re.compile("[a-zA-Z0-9]+$")

pattern = re.compile("[a-zA-Z0-9]+")

result=re.findall(pattern,str)

print(result)

['Sachin', 'Tendulkar', 'made', 'his', 'debut', 'for', 'the', 'Indian', 'cricket', 'team', 'at', 'the', 'age', 'of', '16', 'i
n', '1989']
```

3.

```
In [79]: import re

def string(input_string):
    # Define the regular expression pattern
    pattern = re.compile("[a-zA-Z0-9]+$")

    # Use the pattern to check the input string
    if pattern.match(input_string):
        return True
    else:
        return False

# Example usage:
str1 = "sandeepdhuk1123456"
str2 = "Sandeep shukl 8304#@ 1o3p4"

result1 = string(str1)
result2 = string(str2)

print(result1)

print(result2)

True
False
```

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

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In [86]: #Write a RegEx pattern that matches a string that has an a followed by zero or more b's

S1 = "abb"
pattern='a+b*'

result=re.match(pattern,S1)

print(result)

<re.Match object; span=(0, 3), match='abb'>
```

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

```
In [88]: # Write a RegEx pattern that matches a string that has an a followed by one or more b's
S1 = "abb"
pattern = 'ab+'

result = re.match(pattern, S1)

print(result)

<re.Match object; span=(0, 3), match='abb'>
```

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

```
In [89]: # Write a RegEx pattern that matches a string that has an a followed by zero or one 'b'
S1 = "ab"
pattern = 'ab?'

result = re.match(pattern, S1)

print(result)

<re.Match object; span=(0, 2), match='ab'>
```

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

```
4]: # Write a RegEx pattern in python program that matches a string that has an a followed by three 'b'.
S1 = "sandeep shukla abbb"
pattern = 'ab{3}'

result = re.search(pattern, S1)

print(result)

<re.Match object; span=(15, 19), match='abbb'>
```

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

```
In [99]: # Write a RegEx pattern in python program that matches a string that has an a followed by two to three 'b'.
str = """
This is a sample string with some patterns.
There is an abbb pattern here, but also an abb pattern.
Another string with a random sequence: abbaabbbabbbb.
And here is a string without the pattern: acbb.
"""

pattern = 'ab{2,3}'

result = re.findall(pattern, str)

print(result)

['abbb', 'abb', 'abb', 'abbb', 'abbb']
```

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

```
In [11]: # Write a Python program that matches a string that has an 'a' followed by anything, ending in 'b'.

string1 = "a followed by anything and ending in b"
string2 = "starts with a and ends with b"
string3 = "abc"
pattern = 'a.*b$'

result1 = re.match(pattern, string1)
result2 = re.match(pattern, string2)
result3 = re.match(pattern, string3)

print(result1)
print(result2)
print(result3)

<re.Match object; span=(0, 38), match='a followed by anything and ending in b'>
None
None
```

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

In [26]: *#Write a RegEx pattern in python program that matches a word at the beginning of a string.*

```
input_str = 'apple is good fruit'
input_str1 = 'an apple is good fruit'
word_to_match = 'apple'

pattern = re.match(fr'\b{re.escape(word_to_match)}', input_str)
result1 = (bool(pattern), pattern.group() if pattern else "No match")

pattern = re.match(fr'\b{re.escape(word_to_match)}', input_str1)
result2 = (bool(pattern), pattern.group() if pattern else "No match")

print(result1)
print(result2)

(True, 'apple')
(False, 'No match')
```

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

In [31]: *#Write a RegEx pattern in python program that matches a word at the end of a string.*

```
input_str = 'apple is good fruit'
input_str1 = 'an apple is good fruit ddd'
word_to_match = 'fruit'

pattern = re.search(fr'{re.escape(word_to_match)}\b$', input_str)
result1 = (bool(pattern), pattern.group() if pattern else "No match")

pattern = re.search(fr'{re.escape(word_to_match)}\b$', input_str1)
result2 = (bool(pattern), pattern.group() if pattern else "No match")

print(result1)
print(result2)

(True, 'fruit')
(False, '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']

In [44]: *# 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']

```
Sample_text='01 0132 231875 1458 301 2725'
```

```
pattern = re.findall(r'\b\d{4}\b', Sample_text)
```

```
result=(pattern)
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```
print(result)
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```
['0132', '1458', '2725']
```
