

1. Write 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).

```
In [13]: import re
txt=str(input("enter a string:"))
if(re.match('[0-9a-zA-Z]',txt)):
    print("true")
else:
    print("false")

enter a string:09iio
true
```

2. Write a Python program that matches a string that has an a followed by zero or more b's.

```
In [14]: import re
x=input("enter a string:")
if(re.match(r'.*a(b*).*',x)):
    print("true")
else:
    print("false")

enter a string:nhyabbuf
true
```

3. Replace only the first occurrence of 5 with five for the given string

ip = 'They ate 5 apples and 5 oranges'

```
In [26]: txt='they ate 5 apple and 5 oranges'
x=txt.replace("5","five",1)
print(x)

they ate five apple and 5 oranges
```

4. Write a Python program that matches a string that has an 'a' followed by three 'b'.

```
In [27]: import re
x=input("enter a string:")
if(re.search(r'ab{3}?',x)):
    print("true")
else:
    print("false")

enter a string:fgabbb
true
```

5. Write a Python program that matches a string that has an 'a' followed by anything ending in 'b'.

```
In [28]: import re
x=input("enter a string:")
if(re.search(r'a.+b$',x)):
    print("true")
else:
    print("false")

enter a string:ffgfhajub
true
```

6. Write a Python program to search for numbers (0-9) of length between 1 and 3 in a given string.

txt="Exercises number 1, 12, 13, and 345 are important"

```
In [7]: import re
x="exercise the number 1,12,13 and 345 are important"
p=r'\d{1,3}'
matches=re.findall(p,x)
print(matches)

['1', '12', '13', '345']
```

7. Write a Python program to search for literal strings within a string.\

Sample text : 'The quick brown fox jumps over the lazy dog.'\

Searched words : 'fox', 'dog', 'horse'

```
In [6]: import re
x="the quik brown fox jumps over the lazy dog"
re.findall(r'\b\wo.',x)

Out[6]: ['fox', 'dog']
```

8. Write a Python program to search for a literal string in a string and also find the location within the original string where the pattern occurs.

Sample text : 'The quick brown fox jumps over the lazy dog.'

Searched words : 'fox'

```
In [20]: import re
x="the quick brown fox jumps over the dog"
y=re.search("fox",x)
print(y.group())

fox
```

9. Write a Python program to extract year, month and date from an URL

url1=

<https://www.washingtonpost.com/news/football-insider/wp/2016/09/02/odell-beckhams-fame-re-sts-on-one-stupid-little-ball-josh-norman-tells-author/>


```
4]: url1= "https://www.washingtonpost.com/news/football-insider/wp/2016/09/02/odell-beckhams-fame-rests-on-one-stupid-little-ball-jos
import re
y=re.search(r'(\d{4})/(\d{1,2})/(\d{1,2})/',url1)
print(y.group(3),':',y.group(2),':',y.group(1))
02 : 09 : 2016
```

10. Write a Python program to find URLs in a string.

text = '<p>Contents :</p>Python ExamplesEven More Examples'

```
2]: text = '<p>Contents :</p><a href="https://w3resource.com">Python Examples</a><a href="http://github.com">Even More Examples</a>'
import re
re.findall(r'https?://\w+[\.[a-z]{1,3}',text)
2]: ['https://w3resource.com', 'http://github.com']
```

11. Write a Python program to remove the parenthesis area in a string.

Sample data : ["example (.com)", "w3resource", "github (.com)", "stackoverflow (.com)"]

Expected Output:

example

w3resource

github

stackoverflow.

```
In [6]: import re
data = ["example (.com)", "w3resource", "github (.com)", "stackoverflow (.com)"]
for x in data:
    print(re.sub(r" ?\([^\)]+\)", " ",x))

example
w3resource
github
stackoverflow .
```

12. Write a Python program to concatenate the consecutive numbers in a given string. \

Original string:

Enter at 1 20 Kearny Street. The security desk can direct you to floor 1 6. Please have your identification ready.

After concatenating the consecutive numbers in the said string:

Enter at 120 Kearny Street. The security desk can direct you to floor 16. Please have your identification ready.

```
In [4]: import re
x="Enter at 1 20 Kearny Street. The security desk can direct you to floor 1 6. Please have your identification ready"
y=re.sub(r"(?<=\d)\s(?=\d)",'',x)
print(y)
```

Enter at 120 Kearny Street. The security desk can direct you to floor 16. Please have your identification ready