Regex

Assignment 6

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).

[ ]:
```
import re

pattern = "^[A-Za-z0-9]*$"

# input
str1 = "Hello88"
str2 =
"Assigment@6"
x=re.match(pattern,
str1) y=re.match(pattern,
str2)

print(x
)
print(y
)
```

```
<re.Matc
h object;
span=(0,
7),
match='
Hello88'
> None
```

[ ]:

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

```
import re
patterns = '^a(b*)$'
text="abbbb"
if re.search(patterns,
  text): print('Found a
  match!')
else:
print('Not matched!')
```

```
Found a match!
```

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

[ ]:
```
ip = 'They ate 5 apples and 5 oranges'
text = ip.replace("5", "five", 1) print(text)
```

```
They ate five apples and 5 oranges
```

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

[2]:
```
import re pattern=
'ab{3}?'
txt="abbbb"
if re.search(pattern,txt):
  print('Found  a
  match!')
else:
print('Not  matched!')
```

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

[5]:
```
import re
pattern  =
r'a.*b$'
txt="aytygusfer
gb"
if re.search(pattern,txt):
  print('Found  a
  match!')
else:
print('Not  matched!')
```

Found a match!

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

[8]:
```
txt="Exercises  number  1,  12,  13,  and  345  are  i
import re
re.findall(r'\d{1,3}',  txt)
```

[8]: ['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’

[9]:
```
import re
text='The  quick  brown  fox  jumps  over  the  lazy  dog.'

re.findall(r'\b\wo.',text)
```

[9]: ['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’

[13]:
```
import re
pattern = 'fox'
text = 'The quick brown fox jumps over the lazy dog.'
match = re.search(pattern, text)
s = match.start()
print("the word begins at "+str(s))
```

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

[24]:
```
url1= "https://www.washingtonpost.com/news/footb
-odell-beckhams-fame-rests-on-one-stupid-little-bal
-"

import re
re.findall (r'/(\d{4})/(\d{1,2})/(\d{1,2})/', url1)
```

[24]: [('2016', '09', '02')]

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

[23]:
```
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)
```

[23]: ['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.

[32]:
```
import re
data=["example (.com)", "w3resource", "github (.com)", "stackoverflow (.com)"]
for d in data:
    print(re.sub(r" ?\([^)]+\)", "", d))
```

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.

[38]:

```
import re
s="Enter at 1 20 Kearny Street. The security des

 Please have your identification ready."
result=re.sub(r"(?<=\d)\s(?=\d)", "", s)
print(result)
```

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