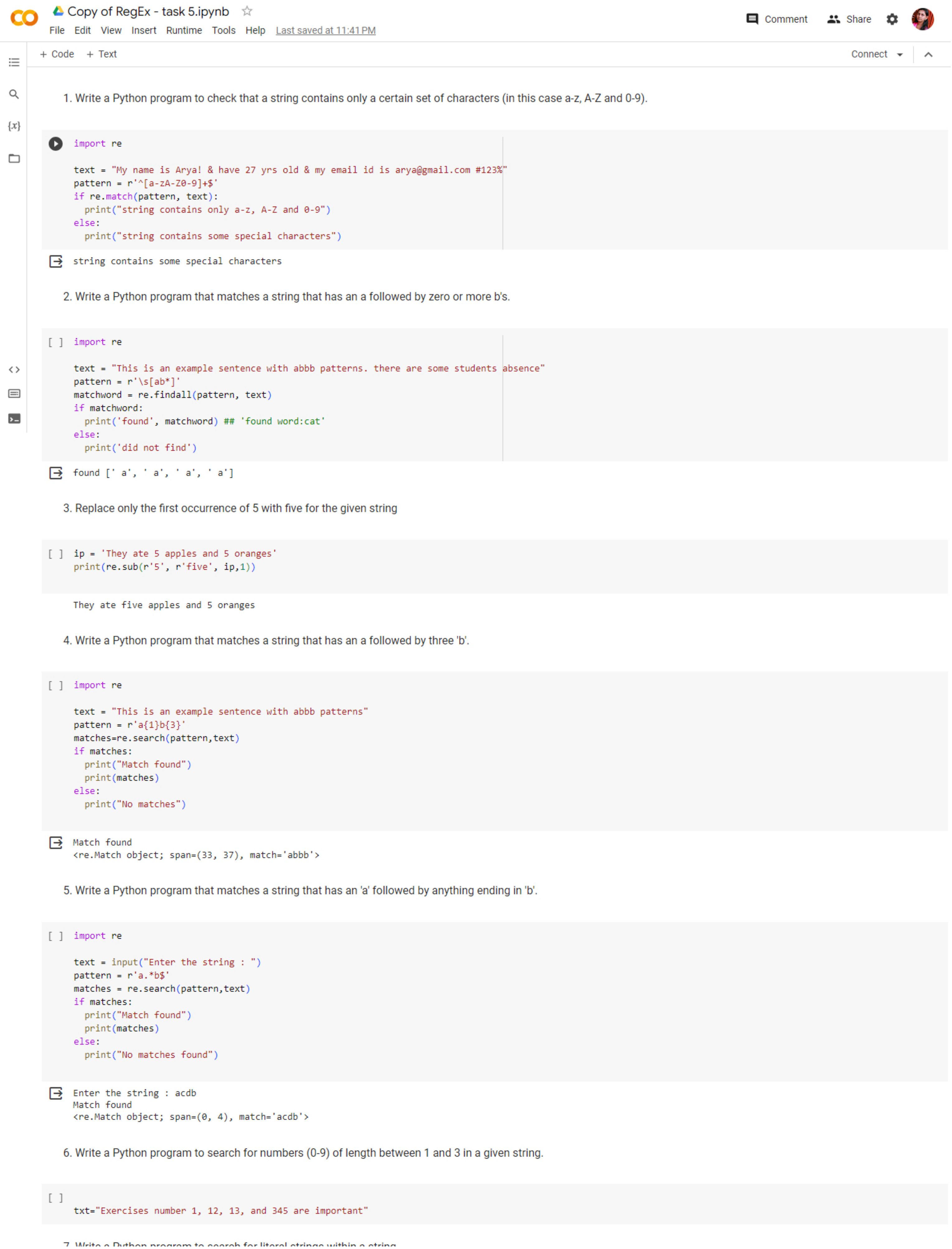
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1. Write a Python program to check that a string contains only a certain set of characters (in this case a-z, A-Z and 0-9).

```
import re

text = "My name is Arya! & have 27 yrs old & my email id is arya@gmail.com #123%"
pattern = r'^[a-zA-Z0-9]+$'
if re.match(pattern, text):
  print("string contains only a-z, A-Z and 0-9")
else:
  print("string contains some special characters")
```

```
string contains some special characters
```

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

```
[ ] import re

text = "This is an example sentence with abbb patterns. there are some students absence"
pattern = r'\s[ab*]'
matchword = re.findall(pattern, text)
if matchword:
  print('found', matchword) ## 'found word:cat'
else:
  print('did not find')
```

```
found [' a', ' a', ' a', ' a']
```

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

```
[ ] ip = 'They ate 5 apples and 5 oranges'
print(re.sub(r'5', r'five', ip,1))
```

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

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

```
[ ] import re

text = "This is an example sentence with abbb patterns"
pattern = r'a{1}b{3}'
matches=re.search(pattern,text)
if matches:
  print("Match found")
  print(matches)
else:
  print("No matches")
```

```
Match found
<re.Match object; span=(33, 37), match='abbb'>
```

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

```
[ ] import re

text = input("Enter the string : ")
pattern = r'a.*b$'
matches = re.search(pattern,text)
if matches:
  print("Match found")
  print(matches)
else:
  print("No matches found")
```

```
Enter the string : acdb
Match found
<re.Match object; span=(0, 4), match='acdb'>
```

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"
```

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

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'

```
[ ] import re

    sample_text = 'The quick brown fox jumps over the lazy dog.'
    searched_words = ['fox', 'dog', 'horse']

    for word in searched_words:
        pattern = re.escape(word)  # Escape special characters in the word
        if re.search(pattern, sample_text):
            print(f"'{word}' found in the sample text.")
        else:
            print(f"'{word}' not found in the sample text.")
```

```
'fox' found in the sample text.
'dog' found in the sample text.
'horse' not found in the sample text.
```

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'

```
[ ] import re
    sample_text = 'The quick brown fox jumps over the lazy dog.'
    search_word = 'fox'

    position = sample_text.find(search_word)

    if position != -1:
        print(f"'{search_word}' found at position {position} in the text.")
    else:
        print(f"'{search_word}' not found in the text.")
```

```
'fox' found at position 16 in the text.
```

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

```
[ ] import re
    url1= "https://www.washingtonpost.com/news/football-insider/wp/2016/09/02/odell-beckhams-fame-rests-on-one-stupid-little-ball-josh-norman-tells-author/"

    date_pattern = r'(\d{4})/(\d{2})/(\d{2})/'
    match = re.search(date_pattern, url1)

    if match:
        year = match.group(1)
        month = match.group(2)
        day = match.group(3)
        print(f"Year: {year}")
        print(f"Month: {month}")
        print(f"Day: {day}")
    else:
        print("Date not found in the URL")
```

```
Year: 2016
Month: 09
Day: 02
```

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

```
[ ] import re
    text = '<p>Contents :</p><a href="https://w3resource.com">Python Examples</a><a href="http://github.com">Even More Examples</a>'


    url_pattern = r'https?://[^\s<>"]+|www\.[^\s<>"]+'
    urls = re.findall(url_pattern, text)

    for url in urls:
        print(url)
```

```
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.

```
import re

sample_data = ["example (.com)", "w3resource", "github (.com)", "stackoverflow (.com)"]

for data in sample_data:
    cleaned_data = re.sub(r'\s*\([^)]*\)', '', data)
    print(cleaned_data)
```

```
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.

```
import re

original_string = "Enter at 1 20 Kearny Street. The security desk can direct you to floor 1 6. Please have your identification ready."
pattern = r'(\d+)\s+(\d+)'

modified_string = re.sub(pattern, r'\1\2', original_string)

print("After concatenating the consecutive numbers in the said string:")
print(modified_string)
```

```
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.
```

Double-click (or enter) to edit