NLP Experiment 3

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BE CMPN A

```
import re
```

```
# 1.Write a Python program that matches a string that has an a followed by zero or more bs.
```

```
txt = "abbbbbb"
```

```
re.search("ab*",txt)
```

```
    <re.Match object; span=(0, 8), match='aaabbbbb'>
```

```
# 2.Write a Python program that matches a string that has an a followed by one or more bs.
```

```
txt = "a"
txt1 = "abbb"
print(re.search("ab+",txt))
print(re.search("ab+",txt1))
```

```
    None
    <re.Match object; span=(0, 4), match='abbb'>
```

```
# 3.Write a Python program to find sequences of lowercase letters joined with a underscore.
```

```
txt = "abcd_ab"
txt1 = "Abcd_cd"
print(re.search("^[a-z]+_[a-z]+",txt))
print(re.search("^[a-z]*_[a-z]+",txt1))
```

```
    <re.Match object; span=(0, 7), match='abcd_ab'>
    None
```

```
# 4.Write a Python program to find sequences of one upper case letter followed by lower case letters
```

```
txt = "Abcd"
txt1 = "AbcdEd"
print(re.search("^[A-Z][a-z]+$",txt))
print(re.search("^[A-Z][a-z]+$",txt1))
```

```
    <re.Match object; span=(0, 4), match='Abcd'>
```

```
        None

# 5.Write a Python program that matches a word containing z.

txt = "chinezze"
print(re.search("\w*z\w*",txt))

        <re.Match object; span=(0, 8), match='chinezze'>


# 6.Write a Python program that matches a word containing z, not start or end of the word

txt = "lazy"
txt1 = "zebra"
print(re.search("\Bz\B",txt))
print(re.search("\Bz\B",txt1))

        <re.Match object; span=(2, 3), match='z'>
        None


# 7.Write a Python program to match a string that contains only upper and lowercase letters, numbers, and und

txt = "Aabcd_helo123"
txt1 ="abdD12$ds"
print(re.search("^[a-zA-Z0-9_]*$",txt))
print(re.search("^[a-zA-Z0-9_]*$",txt1))

        <re.Match object; span=(0, 13), match='Aabcd_helo123'>
        None


# 8.Write a Python program to search the numbers (0-9) of length between 1 to 3 in a given string.

txt = "012"
txt1 = "1234"
print(re.search(r"^[0-9]{1,3}$",txt))
print(re.search("^[0-9]{1,3}$",txt1))

        <re.Match object; span=(0, 3), match='012'>
        None


# 9.Write a Python program to search some literals strings in a string. Sample text : The quick brown fox jum
# Searched words : fox, dog, horse

patterns = [ 'fox', 'dog', 'horse' ]
text = 'The quick brown fox jumps over the lazy dog.'
for pattern in patterns:
    print('Searching for " {} " in " {} "'.format(pattern, text))
    if re.search(pattern,  text):
        print('Matched!')
    else:
        print('Not Matched!')

        Searching for " fox " in " The quick brown fox jumps over the lazy dog. "
        Matched!
```

```
        Searching for " dog " in " The quick brown fox jumps over the lazy dog. "
        Matched!
        Searching for " horse " in " The quick brown fox jumps over the lazy dog. "
        Not Matched!
```

```python
# 10.Write a Python program to replace whitespaces with an underscore and vice versa.

txt = "My name is tanmay"
s = re.sub(r"\s+", '_', txt)
print(s)


x = re.sub(r"_+", ' ', s)
print(x)
```

```
        My_name_is_tanmay
        My name is tanmay
```

```python
# 11.Write a Python program to separate and print the numbers of a given string.

text = "My roll no is 17 and yours is 18"
result = re.split("\D+", text)
for element in result:
    print(element)
```

```
        17
        18
```

```python
# 12. Write a Python program to find all words starting with a or e in a given string.

txt = "The following example creates an ArrayList with a capacity of 50 elements. Four elements are then adde

res = re.findall("[ae]\w+",txt)
print(res)
```

```
        ['example', 'eates', 'an', 'ayList', 'apacity', 'elements', 'elements', 'are', 'en', 'ad
```

```python
#13. Write a Python program to abbreviate Road as Rd in a given string.

txt = "The Road is very bad"
s = re.sub(r"Road", 'Rd', txt)
print(s)
```

```
        The Rd is very bad
```

```python
# 14.Write a Python program to remove multiple spaces in a string.

text1 = 'Python      Exercises'
print("Original string:",text1)
print("Without extra spaces:",re.sub(' +',' ',text1))
```

```
Original string: Python      Exercises
Without extra spaces: Python Exercises
```

15.Write a Python program to remove everything except alphanumeric characters from a string.

```
txt = '**//Python Exercises// - 12. '
pattern = re.compile('[\W_]+')
print(pattern.sub('', txt))
```

```
PythonExercises12
```