```
import re

text = 'Python Exercises, PHP,exercises.'
print (re.sub ("[ ,.]", ":",text))
```

```
Python:Exercises::PHP:exercises:
```

```
text = ' everything is alright '
#Write a Python program to find all words starting with 'a' or 'e' in
a given string.

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

```
['everything', 'alright']
```

3- - Create a function in python to find all words that are at least 4 characters long in a string. The use of the re.compile() method is mandatory.

```
text = "The quick brown fox jumps over the lazy dog."
string_pattern = r"\b\w{4,}\b"
regex_pattern = re.compile(string_pattern)
result = regex_pattern.findall(text)
print (result)
```

```
['quick', 'brown', 'jumps', 'over', 'lazy']
```

Question 4- Create a function in python to find all three, four, and five character words in a string. The use of the re.compile() method is mandatory.

```
text = "The quick brown fox jumps over the lazy dog."
string_pattern = r"\b\w{3,5}\b"
regex_pattern = re.compile(string_pattern)
result = regex_pattern.findall(text)
print (result)
```

```
['The', 'quick', 'brown', 'fox', 'jumps', 'over', 'the', 'lazy',
'dog']
```

Question 5- Create a function in Python to remove the parenthesis in a list of strings. The use of the re.compile() method is mandatory.

```
import pandas as pd

df = pd.DataFrame["example (.com)", "hr@fliprobo (.com)", "github
(.com)", "Hello (Data Science World)", "Data (Scientist)"]
```

Write a python program to remove the parenthesis area from the text stored in the text file using Regular Expression.

```
text = " \"example (.com)\", \"hr@fliprobo (.com)\", \"github
(.com)\", \"Hello (Data Science World)\", \"Data (Scientist)\""
pattern = r'\([^)]*\)'
result = re.sub(pattern, '', text)
print(result)
```

```
 "example ", "hr@fliprobo ", "github ", "Hello ", "Data "
```

Write a regular expression in Python to split a string into uppercase letters.

```
text = 'ImportanceOfRegularExpressionsInPython'
print (re.findall ('[A-Z][^A-Z]*', text ))
```

```
['Importance', 'Of', 'Regular', 'Expressions', 'In', 'Python']
```

Create a function in python to insert spaces between words starting with numbers.

```
text = "RegularExpression1IsAn2ImportantTopic3InPython"
print (re.sub (r'(\d)([A-Za-z]+)', r'\1 \2',text))
```

```
RegularExpression1 IsAn2 ImportantTopic3 InPython
```

Question 9- Create a function in python to insert spaces between words starting with capital letters or with numbers.

```
def insert_space(text):
    pattern = r'([A-Z][a-z]*|\d+)(?=[A-Z]|\d|$)'
    output = re.sub(pattern, r' \1', text)
    return output.strip()
sample_text= "RegularExpression1IsAn2ImportantTopic3InPython"
out_put = insert_space(sample_text)
print (out_put)
```

```
Regular Expression 1 Is An 2 Important Topic 3 In Python
```

- Write a python program to extract email address from the text stored in the text file using Regular Expression.

```
text = 'Hello my name is Data Science and my email address is
xyz@domain.com and alternate email address is
xyz.abc@sdomain.domain.com. Please contact us at hr@fliprobo.com for
further information. '
pattern = re.findall('\S+@\S+', text)
print (pattern)
```

```
['xyz@domain.com', 'xyz.abc@sdomain.domain.com.', 'hr@fliprobo.com']
```

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

```
def found_match(text):
    pattern ='^[a-zA-Z0-9_]*$'
    if re.search(pattern,  text):
        return 'matched'
    else:
        return 'not matched'

print (found_match("The quick brown fox jumps over the lazy dog."))
print (found_match("Python_Exercises_1"))
```

```
not matched
matched
```

Question 12- Write a Python program where a string will start with a specific number.

```
def number(text):
    pattern = re.compile(r'^[4]')
    if pattern.match(text):
        return 'matched'
    else:
        return 'not matched'

print (number ('456'))
print (number ('555'))
```

```
matched
not matched
```

Question 13- Write a Python program to remove leading zeros from an IP address

```
ip = "216.08.094.196"
string = re.sub('\.[0]*', '.', ip)
print(string)
```

```
216.8.94.196
```

```
Question 14- Write a regular expression in python to match a date
string in the form of Month name followed by day number and year
stored in a text file.


text = "On August 15th 1947 that India was declared independent from
British colonialism, and the reins of control were handed over to the
leaders of the Country."

pattern = r'\b(?:January|February|March|April|May|June|July|August|
September|October|November|December)\s\d{1,2}(?:st|nd|rd|th)?\s\d{4}\
```

```
b'

matches = re.findall(pattern, text)
for match in matches:
    print(match)


August 15th 1947

Write a Python program to search some literals strings in a string.

patterns = 'fox', 'dog', 'horse'
text = 'The quick brown fox jumps over the lazy dog.'
for pattern in patterns:
    print(' "%s" in "%s" -' % (pattern, text),) #% used for string
formatting
    if re.search(pattern,  text):
        print('Matched!')
    else:
        print('Not Matched!')

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

Write a Python program to search a literals string in a string and
also find the location within the original string where the pattern
occurs

import re
pattern = 'fox'
text = 'The quick brown fox jumps over the lazy dog.'
match = re.search(pattern, text)
s = match.start()
e = match.end()
print('Found "%s" in "%s" from %d to %d ' % \
    (match.re.pattern, match.string, s, e))

Found "fox" in "The quick brown fox jumps over the lazy dog." from 16
to 19
```

- Write a Python program to find the substrings within a string. Sample text : 'Python exercises, PHP exercises, C# exercises' Pattern : 'exercises'.

```
import re
text = 'Python exercises, PHP exercises, C# exercises'
pattern = 'exercises'
```

```
for matches in re.findall(pattern, text):
    print(' "%s"' % matches)
```

```
 "exercises"
 "exercises"
 "exercises"
```

```
text = 'LIFE IS GOOD, GOOD DAY , GOOD MOOD'
pattern = 'GOOD'
for solution in re.finditer(pattern,text):
    s = solution.start()
    e = solution.end()
    print ('solution "%s" at %d:%d' %(text[s:e],s,e))
```

```
solution "GOOD" at 8:12
solution "GOOD" at 14:18
solution "GOOD" at 25:29
```

19- Write a Python program to convert a date of yyyy-mm-dd format to dd-mm-yyyy format.

def date_format(dt): return re.sub(r'(\d{4})-(\d{1,2})-(\d{1,2})', '\3-\2-\1', dt) dt1 = "2026-01-02" print("original:-",dt1) print("new:-",date_format(dt1))

```
text = "2026-01-02"
pattern = re.sub(r'(\d{4})-(\d{1,2})-(\d{1,2})', '\\3-\\2-\\1', text)
print (pattern)
```

```
02-01-2026
```

Question 20- Create a function in python to find all decimal numbers with a precision of 1 or 2 in a string. The use of the re.compile() method is mandatory.

```
text = "01.12 0132.123 2.31875 145.8 3.01 27.25 0.25"
pattern = re.compile(r'\b\d+\.\d{1,2}\b')
output = pattern.findall(text)
print (output)
```

```
['01.12', '145.8', '3.01', '27.25', '0.25']
```

Write a Python program to separate and print the numbers and their position of a given string.

```
text = "Ten 10, Twenty 20, Thirty 30"
pattern = re.findall("\d+", text)

print (pattern)
```

```
['10', '20', '30']
```

Write a regular expression in python program to extract maximum/largest numeric value from a string.

```
text = 'My marks in each semester are: 947, 896, 926, 524, 734, 950,
642'
output = re.findall(r'\d+',text)
Maximum_number = max(map(int,output))
print(Maximum_number)
```

```
950
```

Create a function in python to insert spaces between words starting with capital letters.

```
text = "RegularExpressionIsAnImportantTopicInPython"
pattern = re.sub(r"(\w)([A-Z])", r"\1 \2", text)

print (pattern)
```

```
Regular Expression Is An Important Topic In Python
```

Python regex to find sequences of one upper case letter followed by lower case letters

```
def match(text):
    pattern = '[A-Z]+[a-z]+$'
    if re.search(pattern,text):
        return ("found")
    else:
        return ("not_found")

print (match("AbCdEf"))
print (match("bow"))
```

```
found
not_found
```

Write a Python program to remove continuous duplicate words from Sentence using Regular Expression.

```
Text=  "Hello hello world world"
pattern = r'\b(\w+)\s+\1\b'
output = re.sub(pattern,r'\1',Text)
print (output)
```

```
Hello hello world
```

Write a python program using RegEx to accept string ending with alphanumeric character.

```
def alphanumeric(text):
    pattern = r'[a-zA-z0-9]$'
    if (re.search(pattern,text)):
        return ("yes")
    else:
```

```
        return ("false")

print(alphanumeric("ankitrai326"))
print(alphanumeric("ankit"))
```

```
yes
yes
```

```
regex = '[a-zA-z0-9]$'
def check(string):
    if(re.search(regex, string)):
        print("Accept")
    else:
        print("Discard")

string = "ankirai@"
check(string)
string = "ankitrai326"
check(string)
```

```
Discard
Accept
```

```
pattern = '[a-zA-z0-9]$'


def alpha_num(text):

    if (re.search(pattern, text)):
        print ("accept")
    else:
        return ("false")

text = "shinchan123"
alpha_num(text)
text= "shinchan@"
alpha_num(text)
```

```
accept

'false'
```

Write a python program using RegEx to extract the hashtags. Sample Text: """RT @kapil_kausik: #Doltiwal I mean #xyzabc is "hurt" by #Demonetization as the same has rendered USELESS <U+00A0><U+00BD><U+00B1><U+0089> "acquired funds" No wo""" Expected Output: ['#Doltiwal', '#xyzabc', '#Demonetization']

```
text =  """RT @kapil_kausik: #Doltiwal I mean #xyzabc is "hurt" by
#Demonetization as the same has rendered USELESS
<ed><U+00A0><U+00BD><ed><U+00B1><U+0089> "acquired funds" No wo"""
```

```
pattern = re.findall(r'#\w+',text)
print (pattern)
```

```
['#Doltiwal', '#xyzabc', '#Demonetization']
```

Question 28- Write a python program using RegEx to remove <U+..> like symbols

```
text = "@Jags123456 Bharat band on 28??
<ed><U+00A0><U+00BD><ed><U+00B8><U+0082>Those who  are protesting
#demonetization  are all different party leaders"
pattern = r'<U\+[0-9A-Fa-f]+>'
output = re.sub(pattern,'',text)
print (output)
```

```
@Jags123456 Bharat band on 28??<ed><ed>Those who  are protesting
#demonetization  are all different party leaders
```

Write a python program to extract dates from the text stored in the text file. Sample Text: Ron was born on 12-09-1992 and he was admitted to school 15-12-1999.

```
Text = "Ron was born on 12-09-1992 and he was admitted to school 15-
12-1999."
pattern = r"\d{2}-\d{2}-\d{4}"
output = re.findall(pattern,Text)
print (output)
```

```
['12-09-1992', '15-12-1999']
```

Create a function in python to remove all words from a string of length between 2 and 4.

```
Text = "The following example creates an ArrayList with a capacity of
50 elements. 4 elements are then added to the ArrayList and the
ArrayList is trimmed accordingly."
pattern = re.compile(r'\W*\b\w{2,4}\b')
output = pattern.sub('', Text)
print (output)
```

```
 following example creates ArrayList a capacity elements. 4 elements
added ArrayList ArrayList trimmed accordingly.
```