```
In [1]:    import re
```

```
In [12]:   #Answer 1

           string='Python Exercises, PHP exercises.'
           pattern=r'[ .,:]'
           repl=':'
           match=re.sub(pattern,repl,string)
           print(match)
```

Python:Exercises::PHP:exercises:

```
In [98]:   #Answer 2

           string='Python Exercises, PHP exercises.'
           pattern=r'[ae]\w+'
           match=re.findall(pattern,string)
           print(match)
```

['ercises', 'exercises']

```
In [26]:   #Answer 3

           string='Python Exercises, PHP exercises.'
           pattern=r'\b\w{4,}\b'
           match=re.compile(pattern)
           result=match.findall(string)
           print(result)
```

['Python', 'Exercises', 'exercises']

```
In [112…   #Answer 4

           string='Python Exercises, PHP exercises.'
           pattern=r'\b\w{3,}\b'
           match=re.findall(pattern,string)
           print(match)
```

['Python', 'Exercises', 'PHP', 'exercises']

```
In [23]:   #Answer 5

           string=["example (.com)", "hr@fliprobo (.com)", "github (.com)", "Hello (Data Scien
           pattern=r'\(([^)]+\)'
           repl=''
           match=[re.sub(pattern,repl,s)for s in string]
           print(match)
```

['example ', 'hr@fliprobo ', 'github ', 'Hello ', 'Data ']

```
In [120…   #Answer 6

           string=["example (.com)", "hr@fliprobo (.com)", "github (.com)", "Hello (Data Scien
           pattern=r'\(([^)]+\)'
           repl=''
           match=[re.sub(pattern,repl,s)for s in string]
           print(match)
```

['example ', 'hr@fliprobo ', 'github ', 'Hello ', 'Data ']

```
In [123…   #Answer 7

           string='ImportanceOfRegularExpressionsInPython'
           pattern=r'[A-Z][a-z]*'
```

```
match=re.findall(pattern,string)
print(match)
```

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

In [128...
```
#Answer 8

string='RegularExpression1IsAn2ImportantTopic3InPython'
pattern=r'[0-9][^0-9]*'
match=re.findall(pattern,string)
print(match)
```

['1IsAn', '2ImportantTopic', '3InPython']

In [133...
```
#Answer 9

string='RegularExpression1IsAn2ImportantTopic3InPython'
pattern=r'[0-9]|[A-Z][^0-9]*'
match=re.findall(pattern,string)
sentence = ' '.join(match)
print(sentence)
```

RegularExpression 1 IsAn 2 ImportantTopic 3 InPython

In [137...
```
#Answer 10

string='Hello my name is Data Science and my email address is xyz@domain.com and al
pattern=r'[a-z0-9\.\-+_]+@[a-z0-9\.\-+_]+\.[a-z]+'
match=re.findall(pattern,string)
print(match)
```

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

In [144...
```
#Answer 11

string='Hello my name is Data Science and my email address is xyz@domain.com and al
pattern='\w+'
match=re.findall(pattern,string)
print(match)
```

['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', 'fliprob
o', 'com', 'for', 'further', 'information']

In [148...
```
#Answer 12

string='Hello my name is Data Science and my email address is xyz@domain.com and al
pattern='\d+'
match=re.findall(pattern,string)
print(match)
```

['123456']

In [154...
```
#Answer 13

string='192.168.0.1', '10.0.0.1'
pattern=r'\.[0]*'
repl='.'
matches = [re.sub(pattern, repl, s) for s in string]
print(matches)
```

['192.168..1', '10...1']

In [160...
```
#Answer 14
```

```python
string = 'On August 15th 1947 that India was declared independent from British colo
pattern = r'August \d{1,2}(?:st|nd|rd|th) \d{4}'
match = re.findall(pattern, string)

print(match)
```

```
['August 15th 1947']
```

In [163…
```python
#Answer 15

string= 'The quick brown fox jumps over the lazy dog.'
pattern = r'fox|horse|dog'
match = re.findall(pattern, string)

print(match)
```

```
['fox', 'dog']
```

In [10]:
```python
#Answer 16

string='The quick brown fox jumps over the lazy dog.'
pattern = r'fox'
match = re.search(pattern, string)
print(match)
```

```
<re.Match object; span=(16, 19), match='fox'>
```

In [13]:
```python
#Answer 17

string= 'Python exercises, PHP exercises, C# exercises'
pattern = r'exercises'
match = re.findall(pattern, string)

print(match)
```

```
['exercises', 'exercises', 'exercises']
```

In [20]:
```python
#Answer 18

string= 'Python exercises, PHP exercises, C# exercises'
pattern ='exercises'
for match in re.finditer(pattern,string):
    print("found:",match.start(0),match.group(0))
```

```
found: 7 exercises
found: 22 exercises
found: 36 exercises
```

In [18]:
```python
#Answer 19

string= ' 2026-01-02  '
pattern =r'(\d{4})-(\d{1,2})-(\d{1,2})'
repl='\\3-\\2-\\1'
match = re.sub(pattern, repl,string)

print(match)
```

```
 02-01-2026
```

In [6]:
```python
#Answer 20

string='123.11,,123.2,123,0.21,3.124'
pattern='[0-9]+(\.[0-9]{1,2})?'
match=re.compile(pattern)
result=match.findall(string)
print(result)
```

```
['.11', '.2', '', '.21', '.12', '']
```

In [12]:
```python
#Answer 21

string= 'Python exercises, PHP 26 exercises, C 25 # exercises'
pattern =r'\d+'
for match in re.finditer(pattern,string):
    print("index position",match.start(0),match.group(0))
```

```
index position 22 26
index position 38 25
```

In [60]:
```python
#Answer 22

string= 'My marks in each semester are: 947, 896, 926, 524, 734, 950, 642'
pattern =r'\d+'
match = re.findall(pattern, string)

print(max(match))
```

```
950
```

In [61]:
```python
#Answer 23

string='RegularExpressionIsAnImportantTopicInPython'
pattern =r"(\w)([A-Z])"
repl=r"\1 \2"
match = re.sub(pattern,repl, string)

print(match)
```

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

In [64]:
```python
#Answer 24

string='RegularExpressionIsAnImportantTopicInPython'
pattern ='[A-Z]+[a-z]+$'
match = re.search(pattern,string)

print(match)
```

```
<re.Match object; span=(37, 43), match='Python'>
```

In [67]:
```python
#Answer 25

string='Hello hello world world'
pattern ="\\b(\\w+)(?:\\W+\\1\\b)+"
repl=r'\1'
match = re.sub(pattern,repl,string)

print(match)
```

```
Hello hello world
```

In [2]:
```python
#Answer 26

string= 'RegularExpressionIsAnImportantTopicInPython'
pattern =r'[a-zA-z0-9]$'
match = re.search(pattern, string)

print(match)
```

```
<re.Match object; span=(42, 43), match='n'>
```

```
In [13]:  #Answer 27

          string= 'RT @kapil_kausik: #Doltiwal I mean #xyzabc is "hurt" by #Demonetization a
          pattern =r'#\w+'
          match = re.findall(pattern, string)

          print(match)
```

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

```
In [14]:  #Answer 28

          string='@Jags123456 Bharat band on 28??<ed><U+00A0><U+00BD><ed><U+00B8><U+0082>Thos
          pattern = r'<U\+[0-9A-Fa-f]{4}>'
          repl=''
          match=re.sub(pattern,repl,string)
          print(match)
```

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

```
In [19]:  #Answer 29

          string='Ron was born on 12-09-1992 and he was admitted to school 15-12-1999.'
          pattern=r'\d+-\d+-\d+'
          match=re.findall(pattern,string)
          print(match)
```

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

```
In [21]:  #Answer 30

          string='The following example creates an ArrayList with a capacity of 50 elements.
          pattern = r'\b\w{2,4}\b'
          repl=''
          match=re.compile(pattern)
          result=match.sub(repl,string)
          print(result)
```

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

```
In [ ]:  #END
```