

연습문제 4장

```
In [1]: # 1번
s = 'spam'
```

```
In [2]: s[100] # 인덱싱인 경우 범위를 벗어나면 IndexError 발생
```

```
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IndexError                                Traceback (most recent ca
ll last)
<ipython-input-2-4868bd16d438> in <module>()
----> 1 s[100]

IndexError: string index out of range
```

```
In [3]: s[1:100] # 슬라이싱인 경우에는 범위 내의 자료 표현
```

```
Out[3]: 'pam'
```

```
In [4]: s[4:0] # start 값 보다 end 값이 작을 경우는 자료 없음
```

```
Out[4]: ''
```

2

```
In [5]: # 2번
s = 'Somewhere on the rainbow'
s.replace('on', 'over')
```

```
Out[5]: 'Somewhere over the rainbow'
```

```
In [6]: s = 'Sometimes, I feel like a motherless child.'
s.replace('.', '')
```

```
Out[6]: 'Sometimes, I feel like a motherless child'
```

```
In [7]: import re

s = 'abcde'
re.sub('[edc]', '', s) # s문자열에서 edc 문자중 어떤 것이라도 ''로 바꾼다.
```

```
Out[7]: 'ab'
```

3

```
In [8]: # 3번

s = 'a\nb\n\nc\n'
s.count('\n')
```

Out[8]: 4

4

```
In [9]: # 4번

s = '/usr/local/bin/python'
s.split('/')
```

Out[9]: ['', 'usr', 'local', 'bin', 'python']

```
In [10]: s.strip('/').split('/')
```

Out[10]: ['usr', 'local', 'bin', 'python']

5

```
In [11]: # 5번

import os

s = '/usr/local/bin/python'
os.path.split(s)
```

Out[11]: ('/usr/local/bin', 'python')

```
In [12]: s.rsplit('/', 1)
```

Out[12]: ['/usr/local/bin', 'python']

6

```
In [13]: # 6번

s = 'spam ham'
s[-3:] + ' ' + s[:4]
```

Out[13]: 'ham spam'

```
In [14]: ' '.join(reversed(s.split()))
```

Out[14]: 'ham spam'

7

```
In [15]: # 7번  
s = 'spam'  
s[0] # 길이가 1인 문자열
```

```
Out[15]: 's'
```

```
In [16]: s[0][0] # 길이가 1인 문자열의 다시 길이가 1인 문자열..
```

```
Out[16]: 's'
```

8

```
In [17]: # 8번  
s = 'spam Spam SpAM egg eGG Egg ham hAm'  
s.lower().count('spam')
```

```
Out[17]: 3
```

9

```
In [18]: # 9번  
s = 'We propose to start by making it possible to teach programming i  
Python, an existing scripting language, and to focus on creating a ne  
development environment and teaching materials for it.'
```

```
In [19]: # 방법1
ws = s.lower().replace('.', '').replace(',', '').split()
ws.sort()
ws
```

```
Out[19]: ['a',
          'an',
          'and',
          'and',
          'by',
          'creating',
          'environment',
          'existing',
          'focus',
          'for',
          'inpython',
          'it',
          'it',
          'language',
          'making',
          'materials',
          'newdevelopment',
          'on',
          'possible',
          'programming',
          'propose',
          'scripting',
          'start',
          'teach',
          'teaching',
          'to',
          'to',
          'to',
          'we']
```

```
In [20]: # 방법2
sorted(s.lower().replace('.', '').replace(',', '').split())
```

```
Out[20]: ['a',
          'an',
          'and',
          'and',
          'by',
          'creating',
          'environment',
          'existing',
          'focus',
          'for',
          'inpython',
          'it',
          'it',
          'language',
          'making',
          'materials',
          'newdevelopment',
          'on',
          'possible',
          'programming',
          'propose',
          'scripting',
          'start',
          'teach',
          'teaching',
          'to',
          'to',
          'to',
          'we']
```

```
In [21]: # 방법3
import re

sorted(re.sub('[.,]', '', s.lower()).split())
```

```
Out[21]: ['a',
          'an',
          'and',
          'and',
          'by',
          'creating',
          'environment',
          'existing',
          'focus',
          'for',
          'inpython',
          'it',
          'it',
          'language',
          'making',
          'materials',
          'newdevelopment',
          'on',
          'possible',
          'programming',
          'propose',
          'scripting',
          'start',
          'teach',
          'teaching',
          'to',
          'to',
          'to',
          'we']
```

In [22]: # 10번

```
# 방법1
ws = sorted(re.sub('[.,]', '', s.lower()).split())
for w in set(ws):
    print(w, ws.count(w))
```

```
('and', 2)
('existing', 1)
('focus', 1)
('an', 1)
('for', 1)
('to', 3)
('environment', 1)
('start', 1)
('materials', 1)
('teaching', 1)
('we', 1)
('creating', 1)
('propose', 1)
('possible', 1)
('it', 2)
('teach', 1)
('inpython', 1)
('by', 1)
('a', 1)
('on', 1)
('language', 1)
('programming', 1)
('newdevelopment', 1)
('making', 1)
('scripting', 1)
```

```
In [23]: # 방법2
from collections import Counter

ws = sorted(re.sub('[.,]', '', s.lower()).split())
Counter(ws).items()
```

```
Out[23]: [('and', 2),
          ('existing', 1),
          ('focus', 1),
          ('an', 1),
          ('for', 1),
          ('to', 3),
          ('environment', 1),
          ('start', 1),
          ('materials', 1),
          ('teaching', 1),
          ('we', 1),
          ('creating', 1),
          ('propose', 1),
          ('possible', 1),
          ('it', 2),
          ('teach', 1),
          ('inpython', 1),
          ('by', 1),
          ('a', 1),
          ('on', 1),
          ('language', 1),
          ('programming', 1),
          ('newdevelopment', 1),
          ('making', 1),
          ('scripting', 1)]
```

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```
In [24]: # 방법1

s = 'spam'
s2 = ''
i = len(s) - 1
while i >= 0:
    s2 += s[i]
    i -= 1
s2
```

```
Out[24]: 'maps'
```

```
In [25]: # 방법2
s[::-1]
```

```
Out[25]: 'maps'
```



```
In [26]: # 방법3
         ''.join(reversed(list(s)))
```

Out[26]: 'maps'

12

```
In [27]: s2 = ''
         for c in s:
             s2 = c + s2
         s2
```

Out[27]: 'maps'

13

```
In [28]: s = '''noriko:x:524:500:유화정:/home/noriko:/bin/bash
sky1004mu:x:525:500:김청:/home/sky1004mu:/bin/bash
hyeyroung:x:526:500:이혜령:/home/hyeyroung:/bin/bash
muu20:x:527:500:이현복:/home/muu20:/bin/bash'''
```

```
In [29]: for line in s.splitlines():
         fields = line.split(':')
         print fields[4]
```

유화정
김청
이혜령
이현복

14

```
In [30]: t = ('a', 'b', 'c')
         '|'.join(t)
```

Out[30]: 'a|b|c'

15

In [31]:

```
In [32]: s = """
import re
<body bgcolor="#FFFFFF">
Click <a href="http://www.python.org/"> Here </a>
re.sub('<.*?>', ' ', s)
To connect to the most powerful tools in the world.
```

```
Out[32]: </body> Click Here \nTo connect to the most powerful tools in the wor
</html>"""
```

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```
In [33]: import urllib

s = urllib.urlopen('http://www.python.org/').read()
print(re.sub('<.*?>', ' ', s).strip())
```

Welcome to Python.org

In [34]: