

# STRINGS & BYTES - EXERCISES

---

## # STRINGS AND BYTES

```
>>> b=bytes()
```

```
>>> b
```

```
b''
```

```
>>> s=str()
```

```
>>> s
```

```
''
```

```
>>> s=str('Abcde')
```

```
>>> s
```

```
'Abcde'
```

```
>>> b=bytes('Abcde')
```

```
Traceback (most recent call last):
```

```
File "<pyshell#6>", line 1, in <module>
```

```
    b=bytes('Abcde')
```

```
TypeError: string argument without an encoding
```

```
>>> b=bytes(b'Abcde')
```

```
>>> b
```

```
b'Abcde'
```

```
>>> s
```

```
'Abcde'
```

```
>>> b
```

```
b'Abcde'
```

## #INDEXING

```
>>> s[0]
```

```
'A'
```

```
>>> b[0]
```

```
65
```

```
>>> bin(b[0])
```

```
'0b1000001'
```

```
>>>
```

# STRINGS & BYTES - EXERCISES

---

## # ESCAPE CHARACTERS

```
>>> s = 'a\nb\tc'
```

```
>>> s
'a\nb\tc'
```

```
>>> print(s)
```

```
a
b    c
```

```
>>> s = 'a\\nb\tc'
```

```
>>> s
'a\\nb\tc'
```

```
>>> print(s)
```

```
a\nb c
```

## #INDEXING

```
>>> s='Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47)'
```

```
>>> len(s)
55
```

```
>>> s[0]
'P'
```

```
>>> s[-1]
']'
```

## #SLICING FROM FRONT

```
>>> s[0:10]
'Python 3.7'
```

```
>>> s[0:10:1]
'Python 3.7'
```

```
>>> s[0:10:2]
'Pto.'
```

```
>>> s[0::4]
'Po.:90 2,:4'
```

```
>>> s[::1]
'Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47)'
```

# STRINGS & BYTES - EXERCISES

---

## # SLICE FROM REVERSE

```
>>> s[::-1]
')74:60:40 ,8102 72 nuJ ,3905cc9fb1:0.7.3v( 0.7.3 nohtyP'
```

```
>>> s[0:10:-1]
''
```

```
>>> s[20:10:-1]
':0.7.3v( 0'
```

```
>>> s[-35:-45:-1]
':0.7.3v( 0'
```

```
>>>
```

## #RAW STRING

```
>>> s='This is carol\'s car'
>>> s
"This is carol's car"
```

```
>>> s=r'This is carol\'s car'
>>> s
"This is carol\\'s car"
```

```
>>> s='D:\courses\non-sap\PYTHON\PY+DJ NOTES\1-PYTHON\10-DATA TYPES -
STRING'
>>> s
'D:\\courses\non-sap\\PYTHON\\PY+DJ NOTES\\x01-PYTHON\\x08-DATA TYPES -
STRING'
```

```
>>> print(s)
D:\courses
on-sap\PYTHON\PY+DJ NOTES-PYTHON- DATA TYPES – STRING
```

```
>>> s=r'D:\courses\non-sap\PYTHON\PY+DJ NOTES\1-PYTHON\10-DATA TYPES -
STRING'
>>> s
'D:\\courses\\non-sap\\PYTHON\\PY+DJ NOTES\\1-PYTHON\\10-DATA TYPES -
STRING'
```

```
>>> print(s)
D:\courses\non-sap\PYTHON\PY+DJ NOTES\1-PYTHON\10-DATA TYPES – STRING
```

# STRINGS & BYTES - EXERCISES

---

# STRINGS ARE IMMUTABLE – CANNOT BE CHANGED ONCE CREATED

```
>>> s='more information'
```

```
>>> s
```

```
'more information'
```

```
>>> s[0]
```

```
'm'
```

```
>>> s[0]='x'
```

Traceback (most recent call last):

File "<pyshell#7>", line 1, in <module>

s[0]='x'

TypeError: 'str' object does not support item assignment

```
>>> s[0:4]='some'
```

Traceback (most recent call last):

File "<pyshell#8>", line 1, in <module>

s[0:4]='some'

TypeError: 'str' object does not support item assignment

```
>>> # ANY OBJECT IN PYTHON THAT SUPPORTS HASHING IS IMMUTABLE
```

```
>>> # ie. CANNOT BE CHANGED IN PLACE
```

```
>>> s.__hash__
```

```
<method-wrapper '__hash__' of str object at 0x043BE2C0>
```

```
>>> s.__hash__()
```

```
1616088670
```

```
>>> s[0]
```

```
'm'
```

```
>>> s[0].__hash__()
```

```
1591145757
```

```
>>> s='abcd'
```

```
>>> s+'efgh'
```

```
'abcdefgh'
```

```
>>> s
```

```
'abcd'
```

```
>>> s*5
```

```
'abcdabcdabcdabcdabcd'
```

```
>>> s
```

```
'abcd'
```

#re-assignment is making a new object and not change in-place

```
>>> s=s+'efgh'
```

```
>>> s
```

```
'abcdefgh'
```