

## Practice Task One:

```
In [6]: f = open('codepractice1.txt', 'r')

In [7]: lines = f.readlines()

In [8]: [principal, rate, time_period] = [x.strip('\n') for x in lines]

In [9]: f.close()

In [10]: principal
Out[10]: '1000'

In [11]: rate
Out[11]: '0.145'

In [12]: time_period
Out[12]: '3'

In [13]: type(principal)
Out[13]: str

In [14]: principal=float(principal)

In [15]: type(principal)
Out[15]: float

In [16]: rate=float(rate)

In [17]: time_period=float(time_period)

In [18]: type(rate)
Out[18]: float

In [19]: type(time_period)
Out[19]: float
```

```
In [23]: compounded_principal=principal*(1+rate)//time_period

In [24]: compounded_principal
Out[24]: 381.0
```

## Practice Task Two

```
(cf-python-base) → python-recipe-app git:(master) ✖ ipython
Python 3.8.16 (default, Dec  7 2022, 01:36:11)
Type 'copyright', 'credits' or 'license' for more information
IPython 8.8.0 -- An enhanced Interactive Python. Type '?' for help.

In [1]: total_population = (6789088686, 6872767093, 6956823603, 7041194301, 712
...: 5828059, 7210581976, 7295290765, 7379797139, 7464022049, 7547858925, 76
...: 31091040, 7713468100, 7794798739)

In [2]: sliced_total_population = total_population[:3]

In [3]: sliced_total_population
Out[3]: (6789088686, 7041194301, 7295290765, 7547858925, 7794798739)

In [4]: max(sliced_total_population)
Out[4]: 7794798739
```

### Practice Task Three

```
IPython: Python Specialization/python-recipe-app

(cf-python-base) → python-recipe-app git:(master) x ipython
Python 3.8.16 (default, Dec  7 2022, 01:36:11)
Type 'copyright', 'credits' or 'license' for more information
IPython 8.8.0 -- An enhanced Interactive Python. Type '?' for help.

In [1]: ford2020 = ['Fiesta', 'Focus', 'Mondeo', 'Galaxy', 'Edge', 'Kuga', 'Ecos
...: port', 'Puma', 'Ranger']

In [2]: ford2020.append('Mustang')

In [3]: ford2020.sort()

In [4]: print(ford2020)
['Ecosport', 'Edge', 'Fiesta', 'Focus', 'Galaxy', 'Kuga', 'Mondeo', 'Mustang', '
Puma', 'Ranger']

In [5]:
```

## Practice Task Four

str3 = 'hello, how are you?'

Input	Return
str3[3:]	'lo, how are you?'
str3[-3:]	'ou?'
str3[2:9:3]	'l,o'
str3[::-2]	'?o r o olh'
str3[2:8]	'llo, h'

```
In [1]: str1 = 'hello, '  
In [2]: str2 = 'how are you?'  
In [3]: str3 = str1 + str2  
In [4]: print(str3[3:])  
lo, how are you?  
In [5]: print(str3[-3:])  
ou?  
In [6]: print(str3[2:9:3])  
l,o  
In [7]: print(str3[::-2])  
?o r o olh  
In [8]: print(str3[2:8])  
llo, h
```

## Practice Task Five

```
In [1]: months_named = ['January', 'February', 'March', 'April', 'May', 'June',  
    ...: 'July', 'August', 'September', 'October', 'November', 'December']
```

```
In [2]: months_numbered = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]
```

```
In [3]: z = zip(months_named, months_numbered)
```

```
In [4]: months_dict = dict(z)
```

```
In [7]: months_named.clear()
```

```
In [8]: months_numbered.clear()
```

```
In [9]: months_dict
```

```
Out[9]:
```

```
{'January': 1,  
 'February': 2,  
 'March': 3,  
 'April': 4,  
 'May': 5,  
 'June': 6,  
 'July': 7,  
 'August': 8,  
 'September': 9,  
 'October': 10,  
 'November': 11,  
 'December': 12}
```

```
In [10]: months_extracted = list(months_dict.keys())
```

```
In [11]: months_extracted.sort()
```

```
In [13]: months_extracted
```

```
Out[13]:
```

```
['April',  
 'August',  
 'December',  
 'February',  
 'January',  
 'July',  
 'June',  
 'March',  
 'May',  
 'November',  
 'October',  
 'September']
```