

# Python Chapter 3: Dictionaries and Sets

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# Table of contents

## Dictionary

- Dictionary Removal

- Dictionary Addition

- Dictionary Looping

## Sets

- Sets Deletion

- Sets Addition

## Exercise Two Sum

# Dictionary

Here we will discuss the most basic example of a Dictionary. They are for key value pairs. Now in python, dictionaries are ordered meaning you can iterate them easily

```
x = {"Jim": 1, "Tom": 2}
x["Jim"] # this will return a 1
x["Tom"] # this will return a 2
```

# Dictionary Removal

```
x = {"Jim": 1, "Tom": 2}
x.pop("Jim")
if "Jim" not in x:
    print("Jim has left")
```

# Dictionary Addition

```
x = {"Tom": 2}
x["Jim"] = 1
if "Jim" in x:
    print("Jim is back")
```

# Dictionary Looping

```
x = {"Jim": 1, "Tom": 2, "Kerrie": 3}
for p in x:
    print(p) # prints all keys
for v in x:
    print(v) # prints all values
```

# Sets

Sets are a lot like dictionaries, but they contain only one key!  
Great for checking when you have visited something.

```
mySet = "apple", "banana", "cherry"  
if "apple" in myset:  
    print("There is an apple in myset")
```

## Sets Deletion

```
mySet = {"apple", "banana", "cherry"}  
mySet.remove("apple")  
if "apple" not in mySet:  
    print("There are no apples in the set")
```



## Sets Addition

```
mySet = {"banana", "cherry"}  
mySet.add("apple")  
if "apple" in mySet:  
    print("Apple is back!")
```

## Exercise Two Sum

Given an array of integers and a target  $t$ , find two numbers whose sum is  $t$