

Dictionaries and Lists Expanded

By Mark Luu, for CMPT 141

Exercise 1: Basic dictionary tools

```
random_assets = {'milk_enjoyers': 0,  
                 'hotel': 'trivago',  
                 5318008: "pepsiman"}  
  
print(random_assets[5318008])  
random_assets[96] = 204  
  
for content in random_assets:  
    print(content)  
  
for access in random_assets.keys():  
    print(access)
```

Exercise 2: Dictionary manipulation

Create a dictionary named “letter_to_num” that maps every integer to a number in this pattern: ‘a’ = 1, ‘b’ = 2..., up to h.

Add the key-val pair of ‘It sure is nice driving my 2020 Chevy Silverado’ : ‘Hi, Squidward!’ to the dictionary.

Print every value of the dictionary.

Print every key of the dictionary.

Exercise 3: Nested dictionaries and lists

```
ssbu_ken_data = {'jab': {'startup': 2, 'damage': 1.5},
                 'shoryuken': {'startup': 6, 'damage': 24}}

ssbu_ken_data['hadoken'] = {'startup': 13, 'damage': 5}
ssbu_ken_data[6] = ['Tatsumaki', 'Senpukyaku']

del ssbu_ken_data['jab']

if 'damage' in ssbu_ken_data['shoryuken']:
    print('SHORYUKEN!!!!!!1111')

if 'Tatsumaki' in ssbu_ken_data[6]:
    print('HUAAAAAAAAAH!')
ssbu_ken_data.clear()

print(ssbu_ken_data['shoryuken']['damage'])
print(ssbu_ken_data['hadoken'])
print(ssbu_ken_data[6][0])
```

Exercise 4: Nested dictionary and list manipulation

Create a variable named “students” with the value {}.

Give the key ‘Grug’ the value {'NSID': ggg666, 'SN': 999999999} for students.

Give the key ‘Jerry’ the value ['NSID', jjj111, 'SN', 11111111] for students.

Use the .insert(index, value) method to insert “Ditchable” at index 2 in the Jerry list.

Transfer the contents of index 0 in the Jerry list to a variable named “key_text” with the .pop(index) method.

Print students.

Print key_text.

Exercise 5: List Comprehension

```
milks = ["milk", "milk", "milk", "milk", ["milk", "milk", "milk", "milk", [None], "milk", "milk",  
      , "milk", "milk"], "milk", "milk", "milk", "milk"]  
  
|  
print([milk for milk in milks if milk == "milk"])  
print([milk for milk in milks])
```

Exercise 6: Common list tools

```
1 milk2 = ["milk", "milk", "milk", "milk",["milk", "milk", "milk", "milk",[None], "milk",
2     "milk", "milk", "milk"], "milk", "milk", "milk","milk"]
3
4
5 orange_juice = ["orange juice", "orange juice", "orange juice", "orange juice", "orange
6     juice"]
7
8
9 number_salad = [7, 3, 5]
10 number_salad.sort()
11 print(number_salad)
12 milk2 = milk2 + orange_juice + number_salad
13 milk2.append("soda")
14 milk2.remove("milk")
15
16
17 milk2[0] = "sauce"
18 del milk2[3][4]
19 print(milk2)
```

Exercise 7: Tuples

```
family = (("brother", 16), ("sister", 16), ("mom", 42),  
          ("dad", 42))  
  
print(family[2][1])
```


Exercise 8: Nested list work

Create a variable named “student” with the value [].

Append the list [“Grug”, “ggg666”, 99999999] to student.

Remove 99999999 from the Grug list.

Delete the value at index 1 from the Grug list.

Append the list [“Jerry”, “jjj111”, 11111111] to student.

Use a list comprehension to print every value of student.

Create a variable named “even_numbers” with the tuple (2, 4, 6, 8, 10).

Try to apply the .sort() method on it.

Exercise 9: Mutability

Is a list a mutable object? Is a tuple?