Dictionaries and Lists Expanded

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Exercise 1: Basic dictionary tools

```python
random_assets = {'milk_enjoyers': 0,
        'hotel': 'trivago',
        5318008: "pepsiman"}

print(random_assets[5318008])
random_assets[96] = 204

for content in random_assets:
    print(random_assets[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

```python
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': 99999999} 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

```python
milk2 = ["milk", "milk", "milk", "milk",["milk", "milk", "milk", "milk",[None], "milk", "milk"
    , "milk", "milk"], "milk", "milk", "milk","milk"]


print([milk for milk in milk2 if milk == "milk"])
print([milk for milk in milk2])
```

Exercise 6: Common list tools

```python
milk2 = ["milk", "milk", "milk", "milk",["milk", "milk", "milk", "milk",[None], "milk",
    "milk", "milk", "milk"], "milk", "milk", "milk","milk"]

orange_juice = ["orange juice", "orange juice", "orange juice", "orange juice", "orange
    juice"]

number_salad = [7, 3, 5]
number_salad.sort()
print(number_salad)
milk2 = milk2 + orange_juice + number_salad
milk2.append("soda")
milk2.remove("milk")

milk2[0] = "sauce"
del milk2[3][4]
print(milk2)
```

Exercise 7: Tuples

```python
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?