Python Dictionary

In [2]:
```
# zip()
```

In [17]:
```
x = ['x', 'y', 'z']
y = [1, 2, [2, 7, 1]]
```

In [20]:
```
# z = dict(zip(x, y))
```

In [21]:
```
# z
```

In [ ]:
```

```

In [29]:
```
d1 = {
    'k1': 50,
    'k2': 30,
    'k3': 40
}
```

In [30]:
```
d2 = {
    'k4': 60,
    'k5': 90
}
```

In [28]:
```
# d1.update(d2)
```

In [31]:
```
d3 = {**d1, **d2}
```

In [32]:
```
d3
```

Out[32]:
```
{'k1': 50, 'k2': 30, 'k3': 90, 'k4': 60}
```

In [36]:
```
# from collections import ChainMap
```

In [37]:
```
# ch = ChainMap(d1, d2)
```

In [ ]:
```

```

In [38]:
```
d1 = {
    'k1': 50,
    'k2': 30,
    'k3': 40
}
```

In [40]:
```
# dict --- dict.pop()
```

In [43]:
```
x = d1.pop('k2')
```

In [45]:
```
d1
```

Out[45]:
```
{'k1': 50, 'k3': 40}
```

In [46]:
```
d1
```

Out[46]:
```
{'k1': 50, 'k3': 40}
```

In [47]:
```
d1['k2'] = 20  # update or add
```

In [48]:
```
d1
```

Out[48]:
```
{'k1': 50, 'k3': 40, 'k2': 20}
```

In [ ]:
```

```

In [49]:
```
d1 = {
    'k1': 50,
    'k2': 30,
    'k3': 40
}
```

In [50]:
```
y = d1.popitem()
```

In [51]:
```
y
```

Out[51]:
```
('k3', 40)
```

In [52]:
```
d1
```

Out[52]:
```
{'k1': 50, 'k2': 30}
```

In [ ]:
```

```

In [54]:
```
d1 = {
    0: '001',
    1: '002',
    2: '003'
}
```

In [ ]:
```

```

In [59]:
```
keys = ['a', 'b', 'c']
```

In [60]:
```
value = 0
```

In [61]:
```
data = dict.fromkeys(keys, value)
```

In [62]:
```
data
```

Out[62]:
```
{'a': 0, 'b': 0, 'c': 0}
```

In [ ]:
```

```

In [75]:
```
d1 = {
    'a': '001',
    'b': '002',
    'c': '003'
}
```

In [76]:
```
x = d1.setdefault('c', '004')
```

In [78]:
```
d1
```

Out[78]:
```
{'a': '001', 'b': '002', 'c': '003'}
```

In [ ]:
```

```

Python Operators

In [82]:
```
print(5 and None)
```

```
None
```

In [84]:
```
0 and [2] and 'a' and () and 8
```

Out[84]:
```
()
```

In [85]:
```
0 and [2] and 'a' or () and 8
```

Out[85]:
```
'a'
```

In [86]:
```
0 or [2] and "a" or () and 8
```

Out[86]:
```
8
```

In [87]:
```
1>50 and 4.5 and True and 8) and not("abc" or None)  #
```

Out[87]:
```
False
```

In [89]:
```
x = 3.141
```

In [91]:
```
# 3.14 < x < 3.142
```

In [92]:
```
3.14 < x and x < 3.142
```

Out[92]:
```
True
```

In [ ]:
```

```

Python Compound if Statement

In [8]:
```
if None:
    print("Some output")
```

In [75]:
```
if 1>50 and 4.5 and True and 8) and not("" or None):
    print("Okay")
```

```
Okay
```

In [13]:
```
if None == None:
    print('Output 1')
elif 5 != 4:
    print('Output 2')
elif 5 in [3, 7, 8, 1]:
    print('Output 3')
else:
    print('Ouput 4')
```

```
Output 1
```

In [14]:
```
# Nested if statements
```

In [15]:
```
if None:
    print('Output 1')
elif 5 == 4:
    print('Output 2')
elif 5 in [3, 7, 8, 1]:
    if 'abc' == 'ABC'.lower():
        print('Output 3 - A')
    elif 'ii3'.isdigit():
        print('Output 3 - B')
    else:
        print('Output 3 - C')
else:
    print('Ouput 4')
```

```
Output 3 - B
```

In [ ]:
```

```

In [ ]:
```

```

In [24]:
```
from getpass import getpass
from IPython.display import clear_output
```

In [28]:
```
# if True:
#   pass
```

In [25]:
```
username = input('Enter name: ')
password = getpass('Enter password: ')

if username.lower() == "umair" and password == '123':
    clear_output()
    print('Welcome {username.title()}')
elif username == "admin" and password == "admin":
    pass
else:
    print('invalid user')
```

```
Welcome Umair
```

In [ ]:
```

```

In [ ]:
```
#
```

In [32]:
```
marks = int(input("Enter Your Marks: "))

if marks < 0 or marks > 100:
    print('Invalid Marks')
elif marks>=90 and marks<= 100:
    print(" Your Grade is A")
elif marks>=80 and marks<= 89:
    print(" Your Grade is B")
elif marks>=70 and marks<= 79:
    print("Your Grade is C")
elif marks>=60 and marks<= 69:
    print("Your Grade is D")
else:
    print("Your are Fail")
```

```
Invalid Marks
```

In [ ]:
```

```

Python Compound while Statement

In [35]:
```
x = 6
while x:
    print(x)
    if x == 3:
        break
    x = x - 1
else:
    print('Loop done')
```

```
6
5
4
3
```

In [36]:
```
name = "Qaim"
while name:
    print(name)
    name = name[1:]

# qaim
# aim
# im
# m
```

```
qaim
aim
im
m
```

In [ ]:
```

```

In [49]:
```
users = ['umair', 'fareed', 'adnan', 'ahmad']  # database
user = input('Enter username')
i = 0
temp = 1
while i < len(users):
    if user == users[i]:
        temp = 0
        print(f'Welcome {user}')
        break
    i += 1
if temp:
    print('Invalid Login')
```

```
Welcome ahmad
```

In [ ]:
```

```

In [50]:
```
users = ['umair', 'fareed', 'adnan', 'ahmad']  # database
user = input('Enter username')
i = 0
while i < len(users):
    if user == users[i]:
        print(f'Welcome {user}')
        break
    i += 1
else:
    print('Invalid Login')
```

```
Welcome adnan
```

In [ ]:
```

```

In [51]:
```
users = ['umair', 'fareed', 'adnan', 'ahmad']  # database
user = input('Enter username')

if user in users:
    print(f'Welcome {user}')
else:
    print('Invalid Login')
```

```
Welcome ahmad
```

In [ ]:
```

```

Happy Learning :)