

PYTHON

From Simple to Complex With Examples

AYESHA NOREEN

Bachelor's in Software Engineering,

Master's in Computer Science

from COMSATS University, Islamabad

NOTE!!!

In these notes Screenshots of practice examples and coding are added. The code files are also available in code folder that contain .ipynb files that are created on Jupyter notebook.

Chapter13

Dictionaries comprehension

Take a dictionary and print number in key and square of number in its value

Input

Output

```
#by simple method
```

```
▼ for i in range(1,10):  
    print(f"{i}:{i**2}")
```

```
#by dictionary comprehension
```

```
squares={num:num**2 for num in range(1,10)}
```

```
▼ for i,j in squares.items(): #for print  
    print(f"keys value ={i}:square of keys =:{j}")
```

```
1:1  
2:4  
3:9  
4:16  
5:25  
6:36  
7:49  
8:64  
9:81  
  
keys value =1:square of keys =:1  
keys value =2:square of keys =:4  
keys value =3:square of keys =:9  
keys value =4:square of keys =:16  
keys value =5:square of keys =:25  
keys value =6:square of keys =:36  
keys value =7:square of keys =:49  
keys value =8:square of keys =:64  
keys value =9:square of keys =:81
```

• TODO Task

Take a string and print each character in key and number of count of each character as its value by dictionary comprehension

```
▼ #take a string and print each character in key and number of count of each  
#character as its value by dictionary comprehension  
name="ayesha"  
word_counter={char:name.count(char)for char in name}  
print(word_counter)
```

```
{'a': 2, 'y': 1, 'e': 1, 's': 1, 'h': 1}
```

• TODO Task

Print number from 1 to 10 in key and its value contain even or odd according to key is even or odd and print by using list comprehension

```
▼ #print number from 1 to 10 in key and its value contain even or odd according to key is ]  
#even or odd and print by using list comprehension  
even_odd={i:('even'if i%2==0 else 'odd')for i in range(1,11)}  
print(even_odd)  
▼ #it prints {1: 'odd', 2: 'even', 3: 'odd', 4: 'even', 5: 'odd',  
#6: 'even', 7: 'odd', 8: 'even', 9: 'odd', 10: 'even'}  
  
{1: 'odd', 2: 'even', 3: 'odd', 4: 'even', 5: 'odd', 6: 'even', 7: 'odd', 8: 'even', 9: 'odd', 10: 'even'}
```