Python Dictionary Comprehension

prompt	command	result
Concept	`dictionary = { key: value for vars in iterable}`	
Create dict	`dict1 = {'a': 1, 'b': 2, 'c': 3, 'd': 4, 'e': 5}` `dict_variable = { key : value for (key, value) in dict1.items()}`	`>>> print(dict_variable)` {'a': 1, ' b': 2, 'c': 3, 'd': 4, 'e': 5}

Create dict from two lists	`a = ['a', 'b', 'c', 'd', 'e']`
	`b = [1, 2, 3, 4, 5]`
	`new_dict = {a[i]: b[i] for i in range(len(a))}`
		`>>> print(new_dict)`
		{'a': 1, 'b': 2, 'c': 3, 'd': 4, 'e': 5}

Create dict	`old_stock = {'water': 1.42, 'cheese': 2.5, 'milk': 2.0}`
	`price = 0.76`
	`correction = {item: value*price for (item, value) in old_stock.items()}`
		`>>> print(correction)`
		{'water': 1.0792, 'cheese': 1.9, 'milk': 1.52}

Create dict with condition	`names = {'mike': 10, 'jack': 32, 'rachel': 55}` `new_dict = {k: v for (k, v) in names.items() if v % 2 == 0}`	`>>> print(new_dict)` {'mike': 10, 'jack': 32}
Create dict with multiple conditions	`names = {'mike': 10, 'jack': 32, 'rachel': 55}` `new_dict = {k: v for (k, v) in names.items() if v % 2 == 0 if v > 20}`	`>>> print(new_dict)` {'jack': 32}
Conditional comprehension	`names = {'jack': 38, 'tina': 48, 'ron': 57, 'john': 33}` `new_dict = {x: ('old' if y > 40 else 'young') for (x, y) in names.items()}`	`>>> print(new_dict)` {'jack': 'young', 'tina': 'old', 'Ron': 'old', 'john': 'young'}

Conditional comprehension #2	`names = ['alice', 'bob', 'kate', 'kimber']`
	`size = [1, 2, 3, 4, 5, 6, 7]`
	`view = {names[i].capitalize(): (f' {size[i]} nice' if i >= 2 else f' {size[i]} small') for i in range(len(names))}`
		{'Alice': ' 1 small', 'Bob': ' 2 small', 'Kate': ' 3 nice', 'Kimber': ' 4 nice'}

Nested dictionary comprehension	`dictionary = {k1: {k2: k1 * k2 for k2 in range(1, 6)} for k1 in range(2, 5)}`	{2: {1: 2, 2: 4, 3: 6, 4: 8, 5: 10}, 3: {1: 3, 2: 6, 3: 9, 4: 12, 5: 15}, 4: {1: 4, 2: 8, 3: 12, 4: 16, 5: 20}}
Find length of variable	`names = ['Alex', 'Tom', 'Johnson', 'Bi', 'Foobar']` `counted = {x.lower : len(x) for x in names if x}`	{'alex': 4, 'tom': 3, 'johnson': 7, 'bi': 2, 'foobar': 6}

Conditional value	`names = ['alice', 'bob', 'kate', 'kimber']`
	`size = [1, 2, 3, 4, 5, 6, 7]`
	`view = {names[i].capitalize(): (f' {size[i]} nice' if i >= 2 else f' {size[i]} small') for i in range(len(names))}`
		{'Alice': ' 1 small', 'Bob': ' 2 small', 'Kate': ' 3 nice', 'Kimber': ' 4 nice'}