Think Python:
Chapter 11

A Python dictionary consists of a group of _____-_____ pairs.

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`key-value`

Two ways to create a new, empty dictionary named *counter* are:

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```
counter = {}

counter = dict()
```

What does the interactive Python session below output?

```
>>> movies = {'1950':'All About Eve',
'1935':'Dangerous','1964':'Dead Ringer'}
>>> len(movies)
```

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```
>>> movies = {'1950':'All About Eve',
'1935':'Dangerous','1964':'Dead Ringer'}
>>> len(movies)
```

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What does the interactive Python session below output?

```
>>> movies = {'1950':'All About Eve',
'1935':'Dangerous','1964':'Dead Ringer'}
>>> movies['1955']
```

What does the interactive Python session below output?

```
>>> movies = {'1950':'All About Eve',
'1935':'Dangerous','1964':'Dead Ringer'}
>>> movies['1955']
```

```
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
KeyError: '1955'
>>>
```

What does the interactive Python session below output?

```
>>> movies = {'1950':'All About Eve',
'1935':'Dangerous','1964':'Dead Ringer'}
>>> '1955' in movies
```

What does the interactive Python session below output?

```
>>> movies = {'1950':'All About Eve',
'1935':'Dangerous','1964':'Dead Ringer'}
>>> '1955' in movies
```

False

What does the interactive Python session below output?

```
>>> movies = {'1950':'All About Eve',
'1935':'Dangerous','1964':'Dead Ringer'}
>>> 'Hush Hush Sweet Charlotte' in movies.values()
```

What does the interactive Python session below output?

```
>>> movies = {'1950':'All About Eve',
'1935':'Dangerous','1964':'Dead Ringer'}
>>> 'Hush Hush Sweet Charlotte' in movies.values()
```

False

What Python statement can be used to cause an exception?

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raise

What order are the key-values stored in a dictionary?

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No defined order!

What is the term for a one-item list?

What is the term for a one-item list?

singleton

True or False? Lists can be values but not keys in a dictionary.

True or False? Lists can be values but not keys in a dictionary.

True

Dictionaries are implemented via _____ _____.

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hash tables

Variables assigned outside any function are known as _____ variables.

Variables assigned outside any function are known as
_____ variables.

global

```python
def mystery(a):
    global b
    a=10
    b=15
    c=20


a=2
b=4
c=6
mystery(a)
print(a,b,c)
```

```python
def mystery(a):
    global b
    a=10 # changing parameter same as modifying local var
    b=15 # changing global var here
    c=20 # creating and assigning a value to a local var

a=2
b=4
c=6
mystery(a)
print(a,b,c)
```

2 15 6

Rewrite the count_vowels program (midterm #14)
using a dictionary as your frequency-counter
instead of five accumulator variables

Rewrite the count_vowels program (midterm #14) using a dictionary as your frequency-counter instead of five accumulator variables

```
fd = open("words.txt")

counter = {}

for word in fd:
    for letter in word:
        if (letter in ['a','e','i','o','u']):
            if (letter in counter):
                counter[letter] += 1
            else:
                counter[letter] = 1


for vowel in ['a','e','i','o','u']:
    print("Total", vowel, "'s :", counter[vowel])
```