

## Example Problems

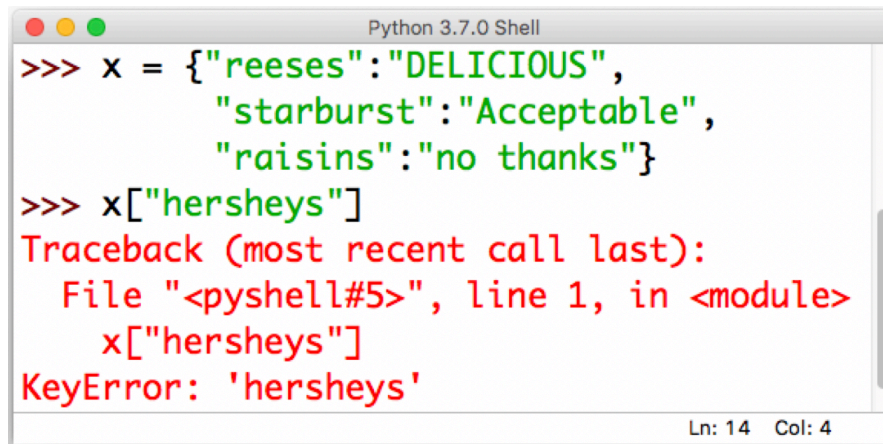
What data type is x in each of the follow expression?

- A. `x = 3`
- B. `x = "Boo!"`
- C. `x = ["ghost", "bat", "pumpkin"]`

What is the result the following expression?

- A. `9 + 3`
- B. `9 + 3.0`
- C. `9 / 3`
- D. `9 // 3`
- E. `9 % 3`

Describe what the following Exception is telling you about the mistake in the corresponding code.



```
Python 3.7.0 Shell
>>> x = {"reeses": "DELICIOUS",
         "starburst": "Acceptable",
         "raisins": "no thanks"}
>>> x["hersheys"]
Traceback (most recent call last):
  File "<pyshell#5>", line 1, in <module>
    x["hersheys"]
KeyError: 'hersheys'
Ln: 14 Col: 4
```

Describe the output of the following script:

```
hs = {"ghost":3, "bat":10, "pumpkin":5}
for item, num in hs.items():
    if num < 6:
        print(num * item)
    else:
        print("Too many", item + "s")
```

Consider the following script:

```
from random import choice
num_houses = int(input("How many stops? "))
for n in range(num_houses):
    print("House", n, "-", choice(["Yellow", "Red", "Blue"]))
```

- A. What happens when the user enters the value 3?
- B. What happens when the user enters the value 3.0?
- C. What happens when the user enters the value "three"?

## Question 4. String Manipulation

Recall from class that each character is represented by an ASCII number (A=65, Z=90, a=97, z=122). Write a Python program that takes as user input a phrase as a string and prints out the sum of all the ASCII values associated with each character in the phrase.

Suppose the user inputs the phrase "AaZ", then the program will print 252.

```
sum = 0
phrase = input("Please input a phrase")
for i in phrase:
    sum = sum + ord(i)
print(sum)
```

Define a function called `printInfo(...)` that takes in a value, prints out its data type, and then prints the following:

- if the value was a string, prints out the length
  - if the value was a list or dictionary, prints out the number of items
  - if the value was a dictionary, prints out the keys
- a. Explain in sentence or give example outputs.

Writing in your own word what the question is asking.

b. PseudoCode

```
#define a function with parameter called value
store and print the type of the value passed in
#if it is a string
    #find length of string, maybe use len. string.lenth()
    #print the length
#if it is a list
    #find length of string, maybe use len. string.lenth()
    #print the length
#
#if it is a dictionary

    #a set counter to 0, loop over each item, increase counter, print counter
    #or
    # get size of dictionary
    # get keys
    # print keys
```

c. Python-ish

You have a list, you are trying to make each item in the list upper case.  
What kind of loop do you need?

What lingering questions do you have?