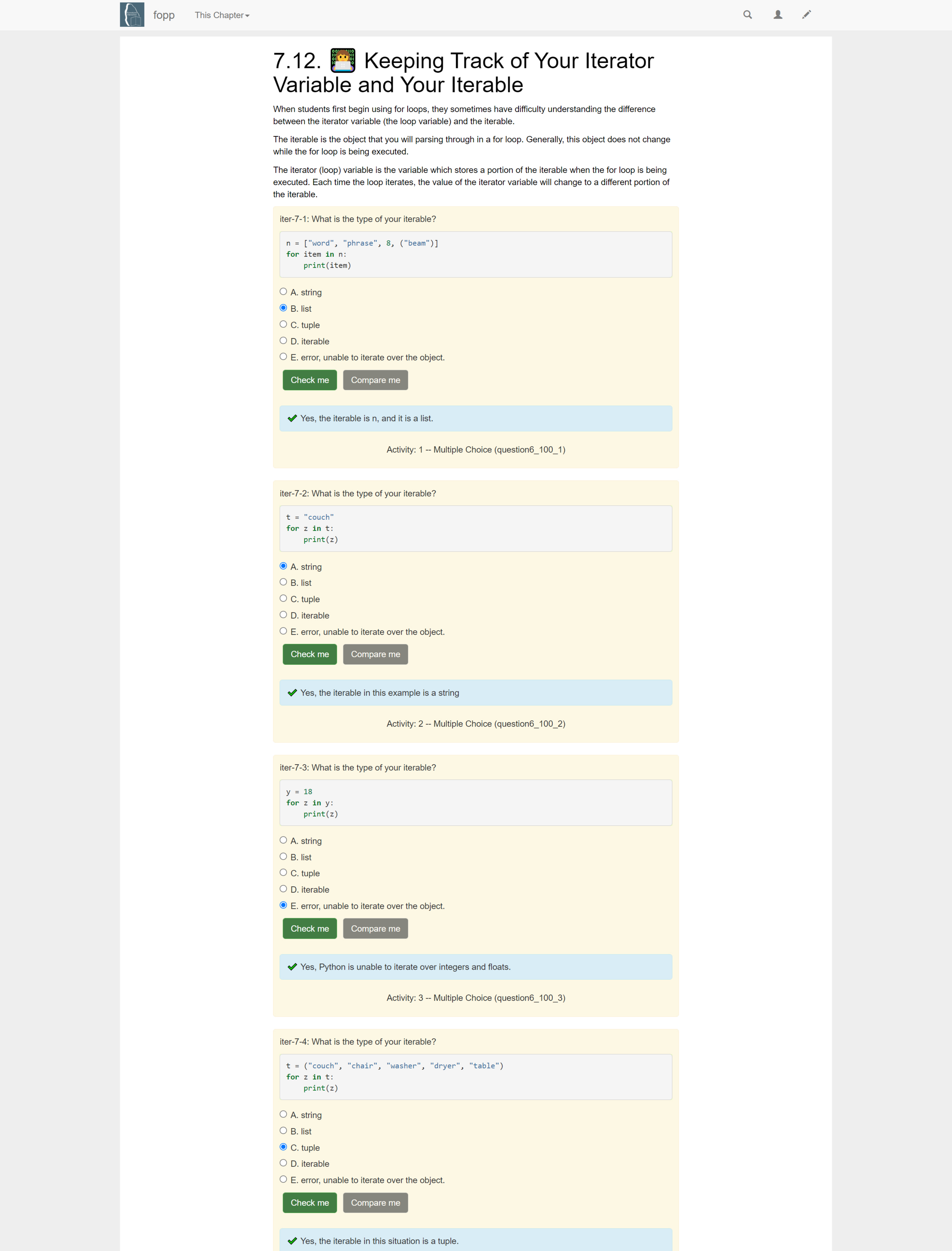


7.12. 🧑‍💻 Keeping Track of Your Iterator Variable and Your Iterable

When students first begin using for loops, they sometimes have difficulty understanding the difference between the iterator variable (the loop variable) and the iterable.

The iterable is the object that you will parsing through in a for loop. Generally, this object does not change while the for loop is being executed.

The iterator (loop) variable is the variable which stores a portion of the iterable when the for loop is being executed. Each time the loop iterates, the value of the iterator variable will change to a different portion of the iterable.

iter-7-1: What is the type of your iterable?

```
n = ["word", "phrase", 8, ("beam")]
for item in n:
    print(item)
```

○ A. string
● B. list
○ C. tuple
○ D. iterable
○ E. error, unable to iterate over the object.

Check me Compare me

✓ Yes, the iterable is n, and it is a list.

Activity: 1 -- Multiple Choice (question6_100_1)

iter-7-2: What is the type of your iterable?

```
t = "couch"
for z in t:
    print(z)
```

● A. string
○ B. list
○ C. tuple
○ D. iterable
○ E. error, unable to iterate over the object.

Check me Compare me

✓ Yes, the iterable in this example is a string

Activity: 2 -- Multiple Choice (question6_100_2)

iter-7-3: What is the type of your iterable?

```
y = 18
for z in y:
    print(z)
```

○ A. string
○ B. list
○ C. tuple
○ D. iterable
● E. error, unable to iterate over the object.

Check me Compare me

✓ Yes, Python is unable to iterate over integers and floats.

Activity: 3 -- Multiple Choice (question6_100_3)

iter-7-4: What is the type of your iterable?

```
t = ("couch", "chair", "washer", "dryer", "table")
for z in t:
    print(z)
```

○ A. string
○ B. list
● C. tuple
○ D. iterable
○ E. error, unable to iterate over the object.

Check me Compare me

✓ Yes, the iterable in this situation is a tuple.

Activity: 4 -- Multiple Choice (question6_100_4)

iter-7-5: What is the type of your iterable?

```
t = "couch"
for z in t:
    print(z)
```

● A. string

○ B. list

○ C. tuple

○ D. iterable

○ E. error, unable to iterate over the object.

Check me Compare me

✓ Correct! The iterable is a string.

Activity: 5 -- Multiple Choice (question6_100_5)

iter-7-6: What's the type of your iterator variable?

```
t = ["couch", "chair", "washer", "dryer", "table"]
for z in t:
    print(z)
```

● A. string

○ B. list

○ C. tuple

○ D. integer

○ E. error, unable to iterate and initialize the iterator variable

Check me Compare me

✓ Correct! Every item in the iterator variable will be a string.

Activity: 6 -- Multiple Choice (question6_100_6)

iter-7-7: What's the type of your iterator variable in the first iteration?

```
t = [9, "setter", 3, "wing spiker", 10, "middle blocker"]
for z in t:
    print(z)
```

○ A. string

○ B. list

○ C. tuple

● D. integer

○ E. error, unable to iterate and initialize the iterator variable

Check me Compare me

✓ Yes, the first item in t is an integer.

Activity: 7 -- Multiple Choice (question6_100_7)

iter-7-8: What's the type of your iterator variable in the second iteration?

```
t = [9, "setter", 3, "wing spiker", 10, "middle blocker"]
for z in t:
    print(z)
```

● A. string

○ B. list

○ C. tuple

○ D. integer

○ E. error, unable to iterate and initialize the iterator variable

Check me Compare me

✓ Yes, the second item in t is a string.

Activity: 8 -- Multiple Choice (question6_100_8)

iter-7-9: What's the type of your iterator variable in the final iteration?

```
red = "colors"
for blue in red:
    print(blue)
```

● A. string

○ B. list

○ C. tuple

○ D. integer

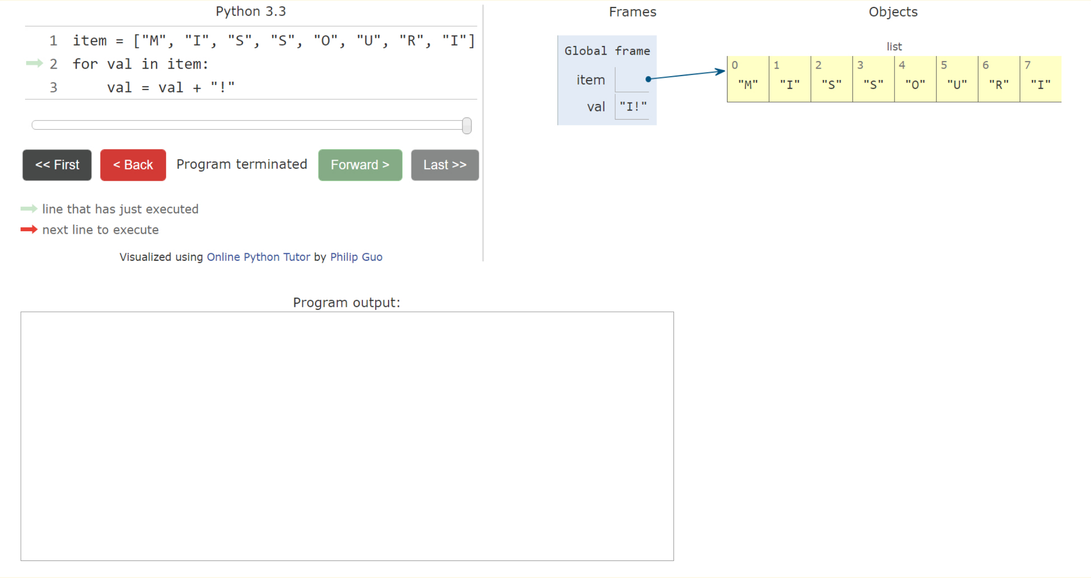
○ E. error, unable to iterate and initialize the iterator variable

Check me   Compare me

✓ Yes, the last value stored in the iterator variable is a string.

Activity: 9 -- Multiple Choice (question6_100_9)

As you go through the codelens window, you will be asked a set of questions.

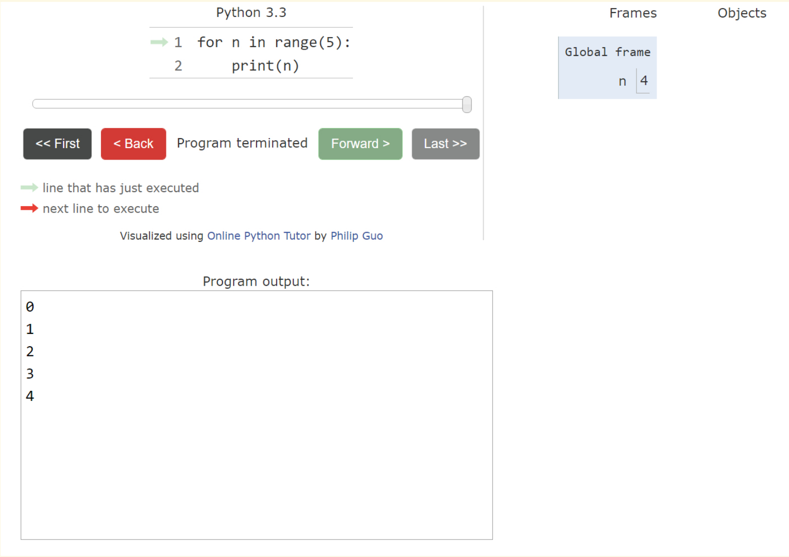


```
item = ["M", "I", "S", "S", "O", "U", "R", "I"]
for val in item:
    val = val + "!"
```

Global frame	
item	●
val	"I!"

0	1	2	3	4	5	6	7
"M"	"I"	"S"	"S"	"O"	"U"	"R"	"I"

Activity: 10 -- CodeLens: (clensQuestion6_100_10)



```
for n in range(5):
    print(n)
```

Global frame	
n	4

```
0
1
2
3
4
```

Activity: 11 -- CodeLens: (clensQuestion6_100_11)

You have attempted 12 of 11 activities on this page

7.11. The Gory Details: Iterables">

e Gory Details: Iterables">

7.13. Glossary">

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✔ Completed. Well Done!

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