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Questions

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collection interfaces & implementations

5/5 points (graded)

Assume the following lines of code are run in sequence, and that any lines of code that don't compile are simply commented out so that the rest of the code can compile.

The code uses two methods from java.util.Collections, so you might need to consult the documentation.

Choose the **most specific answer** to each question.

```
Set<String> set = new HashSet<String>();
```
The `set` variable now points to:

[a HashSet object ▾]   ✔ **Answer:** a HashSet object

Explanation
The HashSet constructor creates a HashSet object, which is then assigned to the set variable.

```
set = Collections.unmodifiableSet(set);
```
The `set` variable now points to:

[an object that implements the Set interface ▾]   ✔ **Answer:** an object that implements the Set interface

Explanation
The unmodifiableSet() method returns a wrapper object that belongs to some class that we don't know, and don't need to know. It almost certainly is not a HashSet object, because unlike HashSet, all of its mutator methods fail.

```
set = Collections.singleton("glorp");
```
The `set` variable now points to:

[an object that implements the Set interface ▾]   ✔ **Answer:** an object that implements the Set interface

Explanation
The singleton() method returns an object that belongs to some hidden class. We can't say for sure whether it's a HashSet (and most likely it isn't). All we know is that it implements Set.

```
set = new Set<String>();
```
The `set` variable now points to:

[this line won't compile ▾]   ✔ **Answer:** this line won't compile

Explanation
Interfaces like Set don't have constructors in Java, so you can't use new on them.

```
List<String> list = set;
```
The `set` variable now points to:

[this line won't compile ▾]   ✔ **Answer:** this line won't compile

Explanation
A Set doesn't implement the List interface, so Java won't allow a Set object to be assigned to a List.

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Show Answer

🛈 Answers are displayed within the problem

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