# Quiz-7

**Due** Nov 13 at 11:59pm **Points** 15 **Questions** 14
**Available** Nov 7 at 12am - Nov 13 at 11:59pm **Time Limit** 20 Minutes

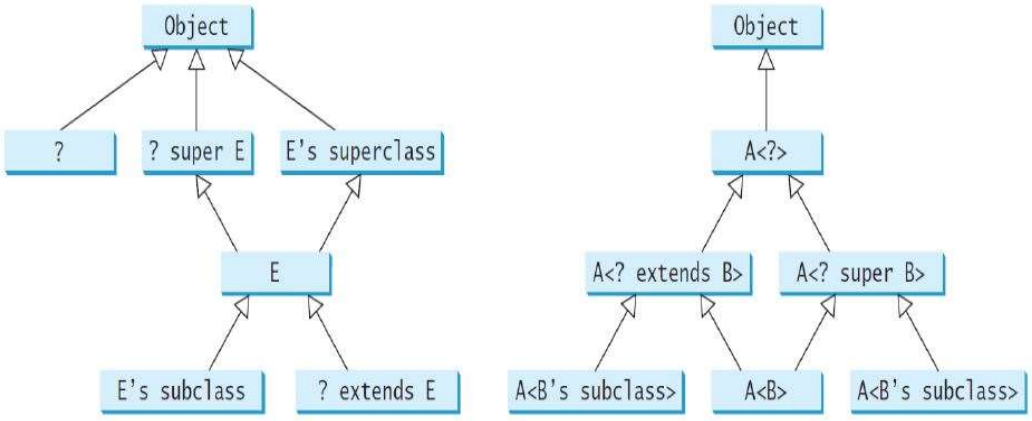
# Instructions

Topic: Chapter 19 - Generics

## Attempt History

| | Attempt | Time | Score |
|---|---|---|---|
| **LATEST** | Attempt 1 | 17 minutes | 15 out of 15 |

Score for this quiz: **15** out of 15
Submitted Nov 13 at 9:34pm
This attempt took 17 minutes.




Consequently, in Java, if class E extends another class C, then:

1. an E object is-a C object
2. an E[] object is-a C[] object
3. an X<E> object is not an X<C> object

In the following, assume that Student extends Person and that Person has a getName() method.

```
1. import java.util.ArrayList;
2. Student[] studentArray = new Student[10];
3. Person[] personArray = new Person[10];
4. ArrayList<Student> studentList = new
   ArrayList<Student>();
5. ArrayList<Person> personList = new
   ArrayList<Person>();
6. public static void printNames(Person[]
   persons) {
7.       for (Person p : persons)
8.            System.out.println(p.getName());
9. }
10. public static <T> void addAll(ArrayList<T>
    list1, ArrayList<? super T> list2) {
11.      for (int i = 0; i < list1.size(); i++)
12.           list2.add(list1.get(i));
13. }
```

## Question 1

1 / 1 pts

Is the following permitted in Java? (see code 1 above)

```
personArray = studentArray;
```

Correct!

- (●) True
- ( ) False

## Question 2

1 / 1 pts

Is the following permitted in Java? (see code 1 above)

```
personList = studentList;
```

- ○ True
- ◉ False

Correct!

## Question 3

1 / 1 pts

Is the following permitted in Java? (see code 1 above)

```
printNames(personArray):
```

- ◉ True
- ○ False

Correct!

## Question 4

1 / 1 pts

Is the following permitted in Java? (see code 1 above)

```
printNames(studentArray);
```

- ◉ True
- ○ False

Correct!

## Question 5

1 / 1 pts

Is the following permitted in Java? (see code 1 above)

```
addAll(studentList, personList);
```

Correct!

- (●) True
- ( ) False

## Question 6

1 / 1 pts

Is the following permitted in Java? (see code 1 above)

```
addAll(personList, studentList);
```

- ( ) True

Correct!

- (●) False

## Question 7

2 / 2 pts

Suppose that we want to write a *generic* **printNames** method that will work for *both* **studentList** and **personList**. (see code 1 above)

Which of the following option(s) will work for the parameter of the printNames method?

```
1. public static <T> void
   printNames( _____ ) {
2.      for (Person p : persons)
```

```
3.
   System.out.println(p.getName());
4. }
```

Correct!

- [x] ArrayList<? extends Person> persons

Correct!

- [x] ArrayList<? super Student> persons
- [ ] ArrayList<?> persons
- [ ] ArrayList<Person> persons
- [ ] ArrayList<Student> persons

For the following problems, suppose that we are writing a class:

```
1. public class
   MyGenericStack<E>
   {
2.       ... various
   members ...
3. }
```

## Question 8

1 / 1 pts

In Java, the following declaration: (see code 2 above)

```
private E e;
```

Correct!

- (•) is permitted

- will result in a type safety warning
- will result in a compile-time error

## Question 9

1 / 1 pts

In Java, the following declaration: (see code 2 above)

```
private E e = new E();
```

- is permitted
- will result in a type safety warning
- will result in a compile-time error

Correct!

## Question 10

1 / 1 pts

In Java, the following declaration: (see code 2 above)

```
private E e = (E)new Object();
```

- is permitted
- will result in a type safety warning
- will result in a compile-time error

Correct!

## Question 11

1 / 1 pts

In Java, the following declaration: (see code 2 above)

```
private java.util.ArrayList<E> list = new java.util.ArrayList<>();
```

Correct!

- (•) is permitted
- ( ) will result in a type safety warning
- ( ) will result in a compile-time error

## Question 12

1 / 1 pts

In Java, the following declaration: (see code 2 above)

```
private E[] array;
```

Correct!

- (•) is permitted
- ( ) will result in a type safety warning
- ( ) will result in a compile-time error

## Question 13

1 / 1 pts

In Java, the following declaration: (see code 2 above)

```
private E[] array = new E[10];
```

- ( ) is permitted
- ( ) will result in a type safety warning

Correct!

- will result in a compile-time error

## Question 14

1 / 1 pts

In Java, the following declaration: (see code 2 above)

```
private E[] array = (E[])new Object[10];
```

- is permitted

Correct!

- will result in a type safety warning
- will result in a compile-time error

Quiz Score: **15** out of 15