

Week 11 Pre-reading Quiz

Test your knowledge for Week 11!

Question 1 *Submitted Jun 10th 2022 at 12:04:59 pm*

Which of the following would cause a syntax error?

- ☐ A sub class reference variable referencing an object of the sub class type
- ☒ A sub class reference variable referencing an object of the type of the sub class's super class
- ☐ A super class reference variable referencing an object of the super class type
- ☐ A super class reference variable referencing an object of the type of one of its sub classes
- ☐ If you think none of the above will cause a syntax error, select this option

Question 2 *Submitted Jun 10th 2022 at 12:05:56 pm*

Which of the following is not true about a set of methods that are usefully polymorphic?

This question only considers inheritance-based polymorphism i.e. it does not consider Interfaces.

- ☐ They must have identical signatures and therefore belong to separate classes
- ☐ Their classes share a common ancestor class from which they are ultimately inherited
- ☐ Each should produce a specialised effect appropriate to their class and therefore different to each other
- ☐ To be invoked polymorphically, an object of their class's type must be referenced by a variable of an ancestor's type common to all of them

- ☒ If you think all of the above are true, select this option

Question 3 Submitted Jun 10th 2022 at 12:06:14 pm

Which of the following is false with respect to downcasting.

- ☐ It can be done without declaring a new variable
- ☐ It's necessary when you want to invoke a method available in the object's class but not in its reference variable's class
- ☒ The downcast must always be to the object's class
- ☐ You can only downcast between classes and/or interfaces connected in a class/Interface hierarchy
- ☐ Select this option if you think none of the above are false

Question 4 Submitted Jun 10th 2022 at 12:06:31 pm

Which of the following are required for method **overriding**?

(**sub/super** means the methods are in two classes that are in an inheritance relationship)

- ☐ Same name, same signature, same class
- ☐ Same name, different signature, same class
- ☒ Same name, same signature, **sub/super** class
- ☐ Same name, different signature, **sub/super** class
- ☐ Select this option if you think none of the above are required.