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CSIS 2420-001

Question 2. Testing and Debugging.

What do you expect will be output by the program?

I think the program will output the same toString for each object.

What is actually output?

The same toString for each object is output.

Why is the cast assignment to c2 nessessary?

The s object is instantiated as a Shape object, which would be a superclass of the Cylinder object, the program is creating a new reference to the object C1, when the Shape object is to be assigned as a Cylinder object it must be type casted as a Cylinder object in order to be created as a concrete class because the Shape class is abstract and cannot be instantiated as a concrete object.

Why don't we need a cast for the assignment to s?

Because the Cylinder is abstracted from the Shape class thus it can be polymorphically referred to as a Shape object.