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HW7 Part 5

1. Why is there an error at the line with a comment “A” in I.java? Hint: there error messages from javac don’t really give the answer.

A java interface can only contain abstract methods and non-abstract constants, whereas A in I.java contains the constructor. This is why A in I.java is an error.

1. There is an error message at the line with comment B. Where is the “i” declared that is the source of the error message? Why is there an error if it is not declared final?

The variable “i” is declared in I.java in which public class D implements I. There is an error if it is not declared final because from I.java, ‘i’ should not be extended, and yet from class D, the variable ‘i’ is being extended and the method is being overridden. Thus, the error message appears at that point.

1. Is the “i” in Question 2 a static (class) or instance variable? Why?

The variable “i” is instance variable because the value for variable “i” that is being declared in class D will only be valid within that class. This means every class does not share the same variable “i”.

1. D.java implements the interface I, which contains a declaration of an abstract function  “void foo(short)”. Class D does not contain a definition of a “void foo(short)” method, yet there is not error for this. Why is this?

The reason there is not error for this is because the Class D inherits class B, so that it makes void foo(short) valid.