Welcome to Day 12 of the Software 1 Eight Week Challenge, and the fifth day of your second week.

1. There are a lot of questions that hinge on your understanding of superclass references to subclass objects.  Modify your code from last week’s Coding Exercise so it demonstrates:
   1. Instance variables are determined at compile time by the object reference
   2. Instance methods are determined at run time by the object type polymorphically
   3. When using a superclass reference, you can only reach the members that exist in the superclass
   4. Static methods don’t override, they shadow.  So static methods are determined by the reference type
2. Program in the initializer block problem in Sierra and Bates Chapter 2 problem 5. Now change it so Hawk doesn’t extend Raptor. How does it change? Now create a Raptor in the new class Hawk. Demonstrate what happens when you move the main method to each of the different classes.
3. Send your mentor your code. Book an appointment to meet with a course mentor tomorrow for a half an hour to review your progress, and ask any questions about this week’s material that you didn’t understand.

Here’s the contact information for the mentors who support this course:

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Cynthia Lang [cynthia.lang@wgu.edu](mailto:cynthia.lang@wgu.edu) [book time with Cynthia](https://timetrade.com/app/wgu-mentoring/workflows/WGU100/schedule/appointment-type?wfsid=b07a7e16-baba97f6-b07a7e14-baba97f6-00000002-8nohtikhm9k68q54o1gmml6pm25cji0e&locationId=course_mentoring&appointmentTypeGroupId=CM&resourceId=00530000006spSrAAI&fs=1)

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