

COMP90041
Programming and Software Development
Second Semester, 2018

Lab 8 — Programming Practice (Week 9)
Inheritance

Workshop Exercises

These are just for practice, and will not be assessed.

1. Write a java **Shoe** class. Every shoe should have a color (String), designer (String) and size (float). Your class should provide all the usual methods (i.e. constructors, accessors and mutators).
2. Write a java **DressShoe** class. In addition to the attributes listed above, a dress shoe should have a heel type that is one of: pump, heel, or flat.

Homework

These will also not be assessed.

3. Write a java **TennisShoe** class. In addition to the attributes listed for **Shoe**, tennis shoes should have a sole type and canvas type, both Strings.
4. Write a java **Boot** class. In addition to the attributes listed for **Shoe**, boots should have a heel type that is one of: pump, heel, or flat.
5. Add a **toString** and **equals** methods to each of these classes.
6. Define an enum to represent heel type, ensuring that only valid heel types are used in both the **DressShoe** and **Boot** classes. Where no heel type is known, assume it is a heel.

Hint: you can define an enum type in a separate file much as you would define a class. Just use the word **enum** in place of **class**, and list the enum constants between the braces instead of instance variables and methods.