SE2811 Quiz 6 Name:

1. Suppose you initially have a single concrete plain **ColoredEgg** class, shown below. You decide to apply the Decorator pattern to spruce things up: you want to decorate the **ColoredEgg’s** with **SpottedEgg** and **StripedEgg** decorators. Each decorator also has a *color* attribute (set via it’s constructor) such that you might have a blue egg with white spots and orange stripes.  
   In the space below, complete the class diagram showing the essential relationships between all classes and interfaces needed to implement the pattern. Introduce any new classes, abstract classes, or interfaces as appropriate. Add *stereotypes* to the classes (e.g. <<concrete decorator>>). Note: you may move the *color* attribute out of **ColoredEgg** if you think that is appropriate.



1. Write the Java code (that would appear in a client application using the egg classes from problem 1) that creates the following types of eggs. Program to *interfaces* as appropriate.
   1. A green egg.
   2. A blue-striped yellow egg.
   3. An orange-spotted blue egg.
   4. A blue-striped, yellow-spotted white egg.
   5. A double-spotted (blue and green), yellow-striped orange egg.