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== ECE39500 Exam 1
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1.
  - 1a. To run simulation: `ruby ducksim.rb`  
OR `./ducksim.rb`
  - 1b. To run simulation: `ruby coffeeshop.rb`  
OR `./coffeeshop.rb`
2. To change one of the behaviors of a Duck, I would create another class that implemented the desired modification to the existing behavior and then wrap the Duck class by this modified decorator class.

Requires more work than creating a variant strategy and setting that new NoQuack strategy behavior as the duck's QuackBehavior.

3. To add an additional ingredient to coffee, an entirely new coffee object will need to be created with Mocha included in the recipe ingredients strategy.

Requires much more work than simply decorating the existing coffee object with a Mocha decorator.

4.
  - > Ducks have behavioral characteristics that alter slightly among different kinds (ex. Mallard + DogToy)
  - > Each behavior variant (ex. Paddle + Float) is similar and static (not dynamically changing at run-time). This makes a strategy pattern better-fitted for modeling ducks because it removes some of the complexity decorators bring into the client code.

5.
  - > Coffee is a very personal-preference-driven object. For a coffeeshop with X ingredients, that creates  $2^X$  possible coffee variants.
  - > The strategy design pattern requires a more static interface when making the coffee object. It does not easily allow for an existing coffee variant (say, a Latte) to add an additional ingredient, (say, sugar).
  - > A decorator design pattern is better suited for modeling a coffee object because additional

customizations to an existing coffee variant (say, Latte w/ extra Sugar).  
To provide this customized coffee, just decorate the coffee object with a Sugar decorator.