

Assignment 04 – Java Concepts, Chapter 03: Implementing Classes  
Due: Sept 23

Goal: practice implementing & using classes

Exercise P3.11 pg 117

Create a new project called **RoachSimulation**.

Write a class called **RoachPopulation** as described on page 117. In particular, note that the class should have one constructor and three methods: `breed()`, `spray()` and `getRoaches()`.

Write a class called **RoachSimulation** which tests the **RoachPopulation** class as described in the problem.

Notes:

Think carefully about the instance field(s) for **RoachPopulation**. Ask yourself: How many fields do you really need? What type(s) of variable(s) makes the most sense? What should the constructors initialize them?

When using the New Class button in BlueJ, BlueJ will create a class that has a lot of stuff that you don't need or want. Remove all of the unnecessary stuff before proceeding.

Since **RoachSimulation** is the tester, it should contain your **main** method.

As indicated in the rubric, this program requires full documentation commenting.

Put a copy of your **entire** source code folder into a **.zip** file named **CS125-AXX-YOURNAME.zip**, replacing **YOURNAME** with your actual first and last name.

Upload the **.zip** file to Moodle.

The following rubric will be used for grading:

Description	Points
Correct filename(s) are used	2
Source code content	3
Design: instance field(s) are properly typed	1
Source code compiles without errors	3
Program executes	2
Program output is correct	3
Classes are documented	2
Methods are documented	2
Parameters and return values are documented	2
<b>TOTAL POSSIBLE POINTS:</b>	<b>20</b>
<b>Extra credit:</b>	
<code>getRoaches()</code> returns an integer amount	1
<code>getRoaches()</code> returns an integer amount without rounding	1