# Foxes and Rabbits Scavenger Hunt.

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| **Code that does...** | **Class it appears in** | **Line #** |
| 1. Pressing ‘p’ pauses and unpauses the simulation. Find the lines of code which detect the key press and tell the simulator to start and stop.  Look to see what other keys do things in that same place. |  |  |
| 2. The foxes and rabbits might be stored in the Field class or the Simulator class. Find the ArrayLists for fox and rabbit and write their names below.  List names: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Notice what other variables are in the same class. |  |  |
| 3. The simulator starts with a random distribution of foxes and rabbits. Find the code that actually **creates** new foxes and rabbits when the simulator first starts.  (hint: it **doesn’t** happen inside the simulateOneStep() method. Look for a method that’s about initializing things).  Which animal does it try and place first, FOX or RABBIT ? |  |  |
| 3. Find the **variable** that controls how many babies a fox has when it has babies. |  |  |
| 4. Find the method that makes a rabbit act (run around, try to have babies, etc.). What is the method called? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  List **all** other methods a rabbit object can execute. |  |  |
| 5. List a few methods that Fox and Rabbit have in common. |  |  |
| 6. List ALL methods (except constructors) that a Fox has which a Rabbit **doesn’t** have. |  |  |
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| 7. The Field class represents the field all the animals are on. If I want to see what kind of animal is at grid location 2, 3, how would I do it? (Hint: Look at the methods in Field). Write the method I would use. |  |  |
| 8. In the Field class, read the comments above the methods to tell me what the difference is between **randomAdjacentLocation** and **freeAdjacentLocation**. |  |  |
| 8. What variables does the Rabbit class use to store the location of the rabbit? |  |  |