

## Midterm Review Sheet

The midterm will be a 50 minute test with 10 questions modeled closely after the types of questions that you have been seeing on quizzes. It will be a mix of short answer, writing code, and tracing code. You will be allowed to have the API open to use as a reference, but you won't be allowed to use Greenfoot in class code, or other references.

The test can cover any topic discussed in class prior to the exam. Below I've listed most of the topics and given you something of a hint as to the types of things I might ask you.

**Object and Classes** – Understand the object model of programming in Java. You need to understand how classes function as blueprints for objects and how the classes define what the objects can do when we make objects from a class.

**Structure of Java** – You need to know the basics of the Java syntax and what different types of statements and expressions mean.

**Methods** – Know what methods are and how we write them. Be aware of how we can use methods to break up complex problems into smaller, easier to solve pieces.

**Conditionals** – Know what conditional execution is and why we need it. Understand the syntax of an if statement, what it does, and how to write one.

**Boolean Expressions** – Know the boolean operators in Java and how to build more complex boolean statements out of simple ones.

**Keyboard Input** – Know how to get keyboard input in Greenfoot. Be able to write code that will do something based on keyboard input.

**for Loops** – Know what a for loop is, what it does, and how you write them. Know when you want to use for loops in your programs.

**Lists** – Know what lists are and how we use them in our code. Know how lists are used inside of Greenfoot and when you need to use a List to do something in Greenfoot.

**Member Data** – Understand what member data is and why you use it.

**Arrays** – Be able to use arrays in basic ways or understand code written with them.

**Study Tips:** Remember that quiz questions are meant to model the style of test questions. As such, going through the answers to the quizzes is probably helpful. You should probably make sure you understand all the in-class code as well as solutions to the interclass problems. Of course, the book is also a valid study aid.