

# **PRINCETON** UNIVERSITY Algorithms, Part I

Instructions

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## **Programming Assignment 1: Percolation — Instructions**

Assignment Name	Programming Assignment 1: Percolation	
Due Date	Sat 25 Aug 2012 8:59:00 PM PDT	
Hard Deadline	Sun 30 Sep 2012 8:59:00 PM PDT	
Submission	Go to Assignments List page to submit your solutions.	

## **Specification**

Here is the programming assignment specification that describes the assignment requirements.

#### Checklist

Here is the checklist that contains frequently asked questions and hints. If you're not sure where to start, see the section at the end of the checklist.

#### Web Submission

Submit a zip file named percolation.zip that contains only the two source files Percolation.java and PercolationStats.java. To zip up your source files, use one of the following three approaches:

#### • Mac OS X Finder.

- 1. Select the required files in the Finder.
- 2. Right-click and select Compress 2 Items.
- 3. Rename the resulting file to percolation.zip.

#### · Windows.

- 1. Select the required files in Windows Explorer.
- 2. Right-click and select Send to -> Compressed (zipped) folder.
- 3. Rename the resulting file to percolation (the .zip extension is automatic).

#### . Command line (Linux or Mac OS X).

- 1. Change to the directory containing the required .java files.
- 2. Execute the command zip percolation.zip Percolation.java PercolationStats.java

You will not receive a score or grade report unless you submit the zip file in this specified format and the source files conform to the prescribed APIs.

### **Assessment Report**

Here is some information to help you interpret the assessment report. See the Assessment Guide for more details.

- Compilation: we compile your .java files using a Java 6 compiler.
  Any error or warning messages are displayed and usually signify a major defect in your code.
- Style: we run checkstyle to automatically checks the style of your Java programs. Here is a list of available Checkstyle checks, which

you can use to help decode any warning messages.

- Bugs: we run findbugs to check for common bug patterns in Java programs. A warning message strongly suggests a bug in your code but occasionally there are false positives. Here is a summary of bug descriptions, which you can use to help decode warning messages.
- API: we check that your code exactly matches the prescribed API (no extra methods and no missing methods). If it does not, no further tests are performed.
- Correctness: we perform a battery of unit tests to check that your code meets the specifications.
- Memory: we determine the amount of memory according to the 64bit memory cost model from lecture.
- Timing: we measure the running time and count the number of elementary operations.