COS 485: Program #6 – Mode

Objectives: Designing a randomized algorithm.

The mode is the most common value in a list of values.

Design an **average case** linear time, **randomized** algorithm for finding the **mode** from an array of integers. Note: your algorithm should always find the correct answer.

Setting up the project in Eclipse:
Create a new project similar to how you set up program 1:

- It will use ModeTester.jar, the same Scaffold jar, and starting code Mode.java
- In the run configuration set **Main class** to: tester/ModeTester

What to turn in:
Written Report turned in through Brightspace

1. A brief description of your algorithm
2. A screen shot of the report tab
3. Analyze the execution time of your algorithm. On a listing of your code. Label every method call and every loop with its execution time and at the bottom explain the total execution time of your algorithm.

Electronic Submit
From a Unix machine in the lab run the program "submit" to submit your files.
Submit your source code (.java files) and compiled code (.class files) to the directory: **prog6**

Grading:

- 10 points – Your algorithm description
- 40 points – Finding the modes
- 20 points – Execution time analysis
- 30 points – Meeting the execution time goal