

## Unit 4 Test Project

Write a Java project (Applet) that has one class. This project should find and print the first Prime number larger than the number inputted by the user. Using the following command, you should also time how long it takes your program to find this number.

```
long start = System.currentTimeMillis();
```

This command returns the number of Milliseconds since midnight.

This driver class has just the `init()` method. In this method, you should allow the user to enter into an Input Dialog Box the Base number. This number could be very large so make sure your program will accept a long.

The next step is to start a timer using the command listed above.

Now, devise an algorithm to find the first Prime number larger than the Base number. Make it as efficient as you can. You must use at least one loop, but will probably need a nested loop as well.

Next, stop the timer. Subtract the start time from the ending time to determine the time spent on task.

Now, print to a `JTextArea`, the Base number, the Prime number, and the elapsed time. Paste your input and output into a Word document and turn it in with your code. This Word document should look like the one attached to this assignment.

If there is **one** person whose time is better than everyone else this person will receive 2 extra points on their Unit 4 Exam. To be eligible for the extra credit...

- 1 - The program must be run on a student computer in the Computer Science Lab.
- 2 - You may use only primitive data types and objects of the following types...
  - a - String
  - b - `JOptionPane`
  - c - `JTextArea`
  - d - `Container`
- 3 - You may use any static methods of the `Math` class.

