

Assignment 06 – Java Concepts, Chapter 06: Iteration  
Due: Oct 19.

Exercise P6.7 pg 243 (modified)

Read the exercise. Implement the classes as described in the exercise; the class with the void main method should be called **PrimeTester**. Be sure to include documentation commenting.

In addition, you should pay close attention to any loops in your code. Include a couple of comments around each describing its behavior (describe how it starts & how it ends).

You will also need to produce two flow charts – one for the main method of **PrimeTester** & one for the **nextPrime** method of **PrimeGenerator**. While not required, I strongly recommend drawing out the flow charts before you start programming. Make sure your flowcharts are legible and use the proper diagramming conventions as discussed in class. Your flowcharts are due at the beginning of class.

Notes: The basic idea is that after creating an instance of **PrimeGenerator** (in the **PrimeTester** class), you can repeatedly call the **nextPrime** method on it & get a sequence of prime numbers from it.

While not required, it may be helpful to write ‘extra’ methods to help simplify the work in the **nextPrime** method.

**Extra credit:** it’s possible to be more or less efficient when testing to see if a given number is prime or not. Write a brief paragraph that describes an obvious, but less efficient strategy & a more efficient variant (note: it doesn’t matter which version you used in your code). Discuss the how the two solutions compare as you check increasingly larger numbers.

Put a copy of your **entire project folder** into a **.zip** file named **CS125-AXX-YOURNAME.zip**, replacing **YOURNAME** with your actual first and last name & **XX** with the assignment number.

Upload the **.zip** file to Moodle.

The following rubric will be used for grading:

Description	Points
Correct filename(s) are used	1
Source code content – classes implemented as indicated in text	4
Source code compiles without errors	1
Program gets user input	1
Program executes	1
Program output is correct	3
Any/all classes are documented	2
Any/all methods & constructors are documented	3
Any/all parameters and return values are documented	3
Loops are briefly commented	2
Flow charts are correct	4
<b>TOTAL POSSIBLE POINTS:</b>	<b>25</b>
<b>Extra credit:</b>	<b>2</b>