

## Assignment 04

Due: Sept-25

Goal: Practice with unit testing, building tester for A05, gaining familiarity with ADTs

## Programming Project 3.3

Read through programming project 3.3 starting on page 142. In this assignment you will implement a mock version of the class `DoubleArraySequence` (call it `MockDoubleArraySequence`) & a tester class called `DoubleArraySequenceTester` which in turn has a series of testing methods. I've provided an incomplete version of `DoubleArraySequence.java` on the course homepage to get you started. You'll need to do some work to get it to compile. Next, you'll need to implement a tester with a series of test methods.

Each test method should test some behavior `MockDoubleArraySequence` and display the results of the test. You should have at least one test for each major behavior; though some tests might actually test more than one thing (refer to the materials on testing). At a minimum, the test program should exercises all the methods of the mock class at least one time. Each test should catch exceptions as necessary & should report their results.

Please note the following:

It is expected that `MockDoubleArraySequence` will fail many, possibly all of the tests you build! This is okay, after all, the mock class doesn't really do much. The point is that it gives you a framework for testing & building the code you will work on in the next assignment.

All of the comments for `MockDoubleArraySequence` as well as the methods `trimToSize(..)` & `clone(..)` have been provided for you. You should pay particular attention to the commenting style & the implementation of `clone(..)` for future reference.

Relying solely on a tool like JUnit is by itself insufficient to collect full points on the assignment. You must have some original tests.

**Extra credit:** pick out a test method that qualifies as a unit test and one that does not. Write a brief paragraph that explains why one is a unit test & the other is not. Discuss the advantages and disadvantages of both types of tests.

Put a copy of your source code (**XXXX.java**) into a **.zip** file named **CS225-AXX-YOURNAME.zip**, replacing **YOURNAME** with your actual first and last name.

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

The following rubric will be used for grading:

<b>Description</b>	<b>Points</b>
Correct filename(s) are used	<b>1</b>
MockDoubleArraySequence is complete & compiles without errors	<b>2</b>
DoubleArraySequenceTester compiles without errors	<b>1</b>
DoubleArraySequenceTester is documented	<b>2</b>
DoubleArraySequenceTester tests all methods of MockDoubleArraySequence	<b>10</b>
Program executes	<b>1</b>
Program output is correct	<b>3</b>
<b>TOTAL POSSIBLE POINTS:</b>	<b>20</b>
Extra Credit	<b>2</b>