

## Assignment 05

Due: Oct 12th

Goal: gaining familiarity with ADTs & design by contract, build a sequence data type

## Programming Project 3.3

Reread through programming project 3.3 starting on page 142. In A04 you worked on a mock version of `DoubleArraySequence`. In this assignment you'll actually implement & document the class as described in the text.

Start with a copy of `MockDoubleArraySequence` and rename it (**and its constructors!**) to `DoubleArraySequence` ( in Netbeans you can use the refactor->rename option). Make a copy of `DoubleArraySequenceTester` and change it to use the new `DoubleArraySequence` instead of `MockDoubleArraySequence`. Make sure it compiles & runs before proceeding.

Next pick a test (it's usually better to start with simple tests – ones that use only one or two methods would be best). Select a method or constructor used in the test. Replace the mock implementation of the method/constructor with working code.

Run the tester. Does the selected test pass? If not, you'll need to determine why. It could be that you haven't implemented all of the methods used in the test or it could be that you have implemented all of the methods, but one or more of them have programming errors. Work on the code until the test passes.

Check the other tests. Was there a test that used to pass, but now fails? If so, you should work on the related methods.

Assuming the test now passes & no other tests are failing unexpectedly, select a new test & repeat the process.

A couple of notes:

If you're really stuck on a given test case, you might also want to double check the test itself – make sure the expected result you're looking for makes sense. For instance, if a test that adds items to a list but expects no change in the list size doesn't make sense. However, this is the only reason you should change a test – do not change a test just so you can claim you've passed it.

Did you lose points for not having sufficient tests in A04? If so, you should add some test cases (and pass them) before turning in your work. Alternatively, if you think of a situation that you forgot to check for you could add a new test to cover that situation, but try not to go overboard.

**Extra credit:** implement & document the `equals(..)` method for `DoubleArraySequence`. It should return `true` if & only if two `DoubleArraySequences` have the same sequence of numbers.

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 and **XX** with the actual assignment number.

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	
Source code has author & description comments	
Source code compiles without errors	
Program executes	
Program takes input from user	
Program output is correct	
<b>TOTAL POSSIBLE POINTS:</b>	
Extra credit	