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CS 1632 – DELIVERABLE 4

PROPERTY-BASED TESTING

//why you chose this project

I chose the JUnit-based property-based testing option for this deliverable in order to become even more comfortable with JUnit testing, as well as to practice identifying properties for testing. Since we worked with JUnit testing for the past couple of deliverables, I was familiar with the format and syntax, but felt I needed to practice writing tests more in order to master at least what we’ve covered in this course so far. I finally feel as though I could easily produce JUnit tests in the future, whether it be for this course, or another Computer Science course, or for Quality Assurance in the workplace.

//how you went about doing it

In order to test the properties of Java’s Arrays.sort(int[] arr) method, I began by thinking of the properties of arrays. I came up with a list that led me to test four properties: that an unsorted array maintains its length after being sorted, that every element in a sorted array is greater than or equal to each element before it, that sorting an already-sorted array results in the same, sorted array (idempotency), and that each value in an unsorted array still exists after that array is sorted.

//any issues you faced

//what you learned

//screenshot of executed Junit tests (to show they passed)