

I was paired up with Nicole Morris for the differential aspect of this assignment! As expected, there were some discrepancies between both our programs when running the same data and comparing the outputs. The first test I ran was somewhat superficial, as it was a test to make sure we both classified the easy shapes (square, rectangle, rhombus etc) as what we would expect them to be. Unfortunately all tests failed, however after further investigation it was naming conventions that were throwing errors for the tests.

EX: I had my program print "SQUARE" where she had hers print "square", when my bash script ran the diff command there was the issue of having capitalization vs lowercase. An easy fix. I went into my project and altered any print statements to match her print statements. That fix alone brought down the total errors from 10,000 to 459.

The other errors experienced between programs was that hers for some reason (and she knows about this bug in her program) will output the name of the classified shape twice but only sometimes, thus causing other errors to persist. I spoke with her about this and she said she is currently working on fix

An Error 3 discrepancy was found when comparing the two programs on the same output. The example output used was generated with randomly plotted points at 8 10 3 9 7 1.

If you plot those points you will see they should be classified as error 3, intersecting lines, however my partners prints quadrilateral. I believe this to be the case considering how she may be taking in the input, clockwise vs counter clockwise.

Overall after debugging further, I believe most of the errors are simply predicated on the fact that her program outputs shapes twice and mine does not. Also taking into account that my program was built with the premise that all points given are in counter clockwise order could also be playing a factor. I chose NOT to alter my code as it handles most cases when fed input with the assumption of counter clockwise loading and the time spent altering the code wouldn't have been beneficial.

Since a bulk of the errors were from my partners classifier printing shapes twice, I kept track of tests that failed due to that and subtracted them from the remaining 459 errors. That brought down our total errors to 93 - 100 pretty consistently.