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Partner: Quincy
Quadrilaterals #7
Differential Testing

- The first time I ran my fuzzer on Quincy's code, every single one of the tests failed (1,030 tests x 10 = 10,300). This was not because of a mistake in his code but because he was outputting classifications in all caps ("RECTANGLE", "SQUARE", etc.) and I was outputting mine in lower case ("rectangle", "square", etc.). Additionally, he was outputting an error string with a description of the error, and I was outputting just "error 1", "error 2", "error 3", or "error 4". I fixed these bugs in his code by changing his print statements so that my testing was valid with his code. After making these changes, 300 of the 10,300 tests passed.

- The test case that broke his program was {(0,0), (2,3), (4,5), (6,7)}. This shape is a valid quadrilateral, which we verified by graphing. His program reported "error 3". This caused 10,000 errors because it was one of my base cases and was scaled in every single one of my valid input tests! We agreed that Quincy would troubleshoot to see why his program returns "error 3" for this point; I suggested that it may be a float precision issue. I plan to rerun his code to confirm that all tests pass once he corrects the bug.

- Quincy's repository:
https://github.com/qcopeland45/SoftwareEngnieering/tree/master/Quadrilateral_Classifer_Assignment5/Quadrilateral_Classifer_Assignment5

- My repository:
https://github.com/krobinson1021/Quadrilaterals