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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.
- After adjusting his capitalization to match mine, the only failures were on every one of my 100 error3 test cases (I ran 10000 valid test files, and 100 test files for each of errors 1, 2, and 3; I did not run error4 tests because all error4 test cases also trigger error3 by definition). I graphed out a selection of my test points and confirmed that they are indeed quadrilaterals with crossing lines (the points were not counterclockwise), so it appears that his classifier is not catching all crossed lines when it should be reporting error3. I gave him a few coordinates with test cases his classifier was failing, and told him that I believe the bug is in his isIntersecting() function. We used different logic here so we agreed that this would be a bug for him to investigate. I will update this when the last bug is fixed and I can re-run his code again to verify that all tests passed.
- Quincy's repository:
https://github.com/qcopeland45/SoftwareEngineering/tree/master/Quadrilateral_Classifer_Assignment5/Quadrilateral_Classifer_Assignment5
- My repository:
<https://github.com/krobinson1021/Quadrilaterals>