Oracle Choices For QuadrilateralClassifier Program

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1 Null Space Transformation

For testing the quadrilateral shapes, the null space transformation test oracle is performed. For the same data input, the order of input is changed from anti-clockwise to clockwise, but the behavior will remain the same. what's more, specifically for square shape check, the input is slightly changed with the behavior that the coordinate values are expanded proportionally, and the result still stays same.

2 Exception Handling

There are several edge cases to check, such as coincidence points, lateral crossing, etc. In my test cases, there are several sections are for checking those exceptions. For example, some input file has less or more than 6 data, some input file has invalid characters, and some inputs has data points in the same line.

3 Assertions

For all test cases, we assert the real result equals to the correct result with some random input file and the program would report error if the consistency is violated.