61 mustSolve

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1. Introduction

Our program will be written in javascript. Javascript has really good coding eco-system which is rich open-source library, algorithm implement is traditional C alike and object oriented features and easy to integrate with user interface.

2. Methodology

Our team considered we must use multiple algorithmic approaches to solve this problem.

2.1 Evaluation function

This algorithm considers each piece starting from biggest piece and tries to find the most appropriate position for the piece. There will be an evaluation function which calculates points (closer to the correct solution, more points). The piece will be fixed on the position with maximum evaluation points.

2.2 Normalization algorithm

This algorithm will normalize every edge of every piece to define its angle with OX axis. We will consider top left corner coordinates are (0, 0). Then we will draw all pieces on computer screen. Edges with same angle will have same color. That will greatly help us to combine pieces together.

3. Discussion

First algorithm may fix a piece at wrong position.

Second algorithm will not help much if many pieces are similar with each other.

When we will get the pieces we will decide which algorithm to use.

If all our algorithmic approach seems to fail or takes too much resource, we will get all 4 hints and use our bare hand to complete the puzzle.