Love & Hate

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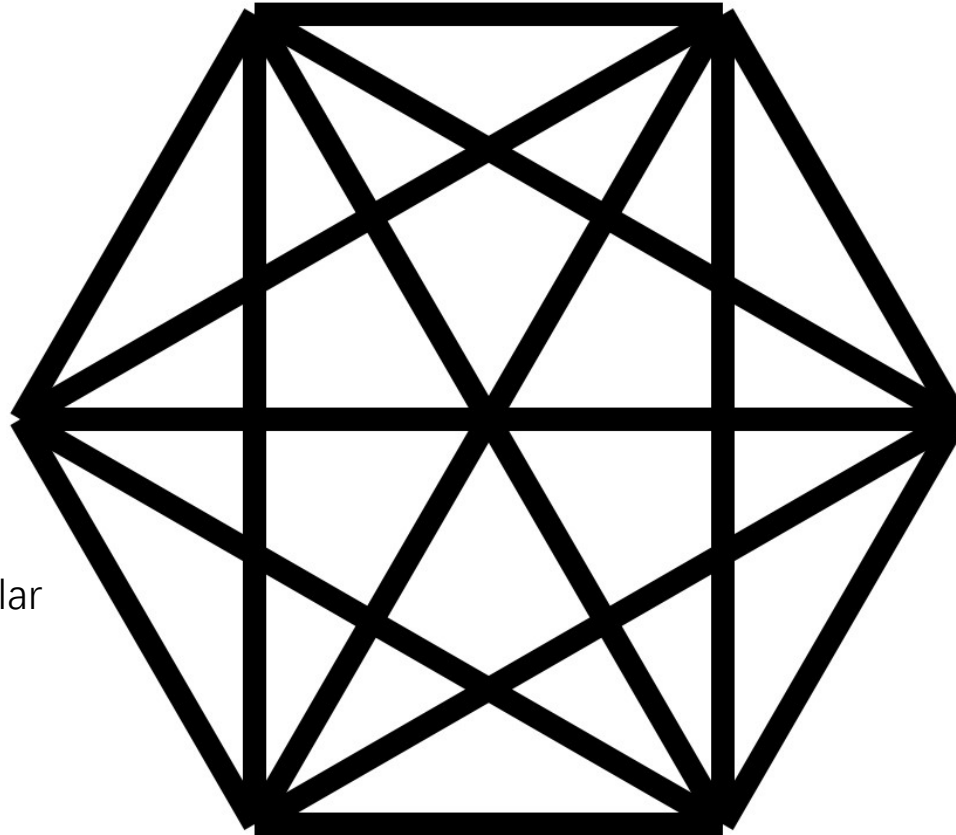
Zhang Ge: Framework, analysis, part of GUI

Wei Zicheng: GUI, testing, paper work

Language: python3
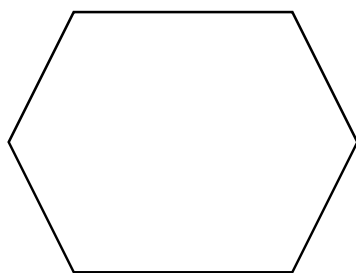
Installation: https://github.com/SaraGZ/Love-and-Hate.git

If we use a 15-digit number to represent positions, the number of positions is 3 to the power of 15.
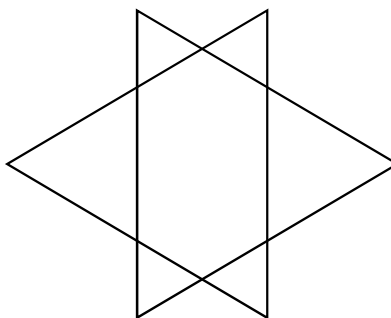
These positions make sure that everyone has as many lines as his opponent. But they contain too much symmetry.
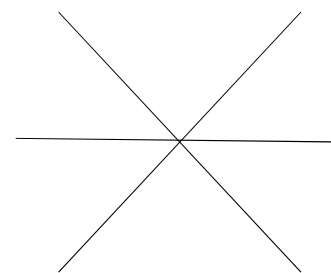
By using the hashing method similar to Tic-Tac-Toe, we reduced the upperbound to 3492116.(add up Rearrange(1,0,1) to Rearrange(15,7,8))
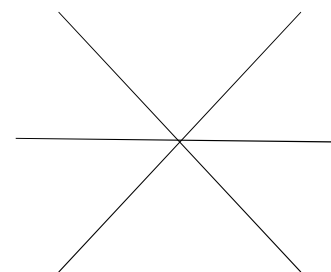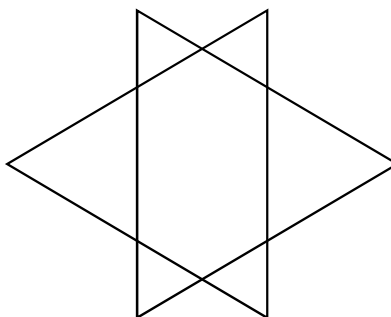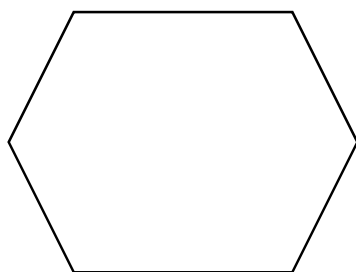
neighboring: 0-5

space: 6-11

diagonal: 12-14

neighboring: 0-5

space: 6-11

diagonal: 12-14

Group 1

0

Group 2

6

Group 3

12

For all symmetrical positions, we choose one of
them to present the group.

group 1   174935

group 2   536

group 3   3

total   175474

3^{15} =14,348,907

3,492,116

175,474

GUI Interface

- Button

- Option Menu

- Top Level Windows

- Lines—Attached to functions (Buttons)

GUI Organization