

# Pair Programming Reflection - Project 4

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In this project, pair programming was more or less natural. Since there were many decisions to make pertaining to organization and implementation, continuous discussion during coding made a lot of sense and did not result in much slowdown of development. Towards the end, when we knew more or less what our code should look like, we stopped doing pair programming and started coding independently to boost efficiency. That being said, we still coded mostly in the same room with intermittent discussion. As far as teamwork is concerned, I think we work pretty well together and, aside from some inevitable frustration and disagreements, development goes fairly smoothly.

The largest difficulty working on this project was that our schedules did not align nearly as well during this project's development- between interviews and clubs it was at first difficult to find time to work on the project. During the second week, our resolution was more or less to skip club meetings and reschedule what we could to get work done.

9/29:

- \* Wrote most of Tetris piece
- \* Mostly stuff that was determined for us by the project
- \* Switched off every 20 minutes or so
- \* Most of the work was predetermined by the project

9/30:

- \* Jonas 10 minutes
  - started rotations
  - decide to implement standardized SRS
  - trying to generalize for most pieces
  - special cases for I and O
- \* Ryan 20 minutes
  - started piece identification in PieceParser
  - probably have to hard code for all pieces
- \* Jonas 10 minutes
  - implemented shifting of the active piece
  - started working on wall kicks

10/5:

1st session:

- \* Jonas 10 minutes
  - Struggling with rotations
  - The set up by the project makes SRS hard
- \* Ryan 10 minutes
  - Still struggling
  - Got a working system where we find the center and revolve around it
- \* Jonas 10 minutes
  - Started wall kicks
  - Debating how to efficiently implement SRS kicks

- \* Ryan 10 minutes
  - Piazza post stating not to find center
  - Starts rotation system where we store an offset for the piece
- \* Jonas 10 minutes
  - Continued altered rotation system
  - Wrote some tests to help
- \* Ryan 10 minutes
  - Wrote more rotation tests to help
  - Wrote .equals for TetrisBoard and TetrisPiece

2nd session (after dinner):

- \* Jonas 20 minutes
  - Rewrote calculate skirt
  - Rewrote calculate width, height
  - Continued working on rotation and kicks
- \* Ryan 20 minutes
  - Finished rotation
  - Started SRS kicks
- \* Jonas 10 minutes
  - Finished SRS kicks
  - Rewrote some of the rotation identification to be more generalized
- \* Ryan 10 minutes
  - Rewrote more stuff to be more generalized

At this point, Ryan had a job interview, so Jonas went back to write some java docs and submit the project for early credit.

10/6:

- \* Jonas 20 minutes
  - Rewrote getGrid so that it is  $O(1)$  for n size piece, though it doesn't quite work
- \* Ryan 30 minutes
  - Finished getGrid and rewrote getRowFilled so that it also is  $O(1)$  for n size row
  - Generalized some other stuff

10/7:

At this point we felt crunched for time so we worked at the same time, though we discussed methods for testing and the brain together.

- \* Worked from about 1:30 to 4:30
  - Jonas made tests
  - Ryan began the brain

We then went to CritterFest

- \* Worked from about 8:00 to 12:00
  - Jonas made tests
  - Jonas made TetrisBoardBuilder for testing
  - Ryan continued work on the brain

10/8:

We continued doing work simultaneously, though we naturally pair programmed for periods during debugging. Jonas wrote tests

and Ryan debugged the AI. Eventually we started the report. We worked more or less continuously from 3:30 pm to 6pm, and then from midnight to 3:30 am.

10/9:

We continued testing and working on the report from noon until submitting.