

Tetris Puzzle Assignment

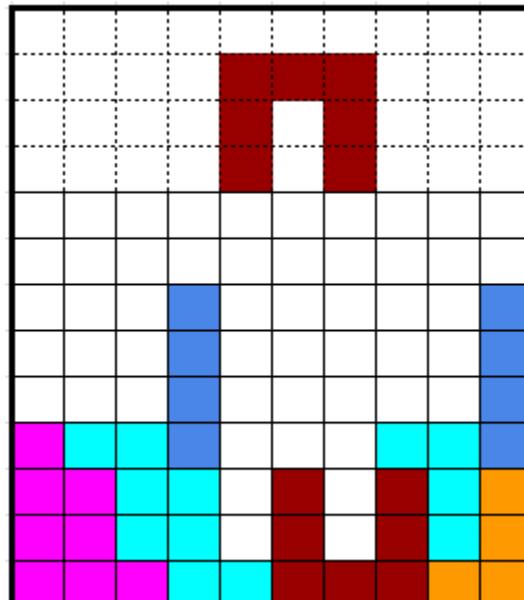
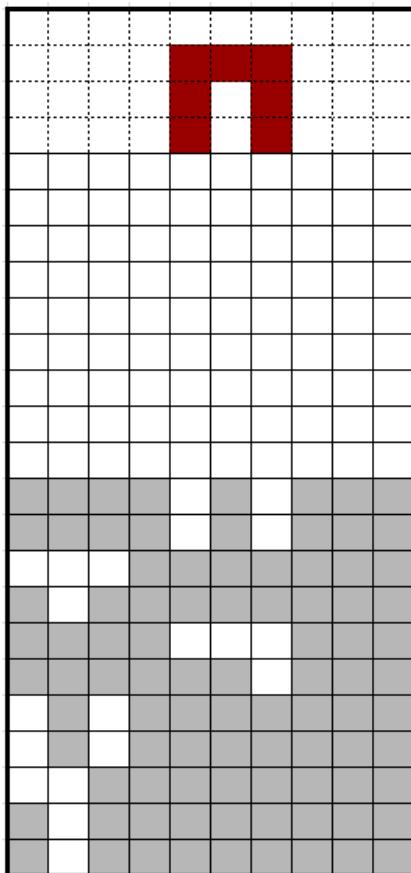
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Sys Dev A1 Video: <https://www.youtube.com/watch?v=OZY-RFmvMo4>

Design Rationale Justification

1. What interesting properties does your polyomino piece have within the systems of Tetris? Why?

The main interesting properties of my polyomino piece is the versatility in the piece itself, the shape allows players to clear two 1x2 vertical spots, whereas every other tetromino in normal tetris would require at least two pieces to accomplish the same outcome. Alongside this, my polyomino allows for 180 degree rotation to create areas where the same piece can complete. Although T-spins are not part of this assignment, it is worth noting that a player with quick enough reflexes could potentially use this polyomino to fill a sideways L or J with horizontal overhang, by rotating the piece and moving the polyomino into place, given the fall speed is not too high, creating a ceiling to the sideways usage of the polyomino. The reverse is also true, with L, J, or I pieces being able to complete the interior of my polyomino, should it be rotated sideways.



2. What interesting relationships does your piece sequence have with the board state within the envisioned play session? Why?

Within the board state that I submitted, I feel that the relationships could be explored more, as I believe that adapting the piece by removing 1 cell off of the “legs” of the piece could be more versatile, however the ability to add 3 and 6 full cells in both columns and rows is a compelling aspect. In terms of relationships with specific pieces, this “C” piece allows for opportunities to create large sections of full cells when combined with “I” tetrominos. Alongside this, completed rows that delete the horizontal row of the “T” “L” and “J” tetrominos open opportunities for the “C” piece to be utilized well. On the flip side of this, the “C” piece can also be dangerous, as if it is not planned ahead for, e.g. utilizing the piece preview window, can quickly build up large areas of the board, resulting in the necessity of strategic placement and awareness of the “C” piece.

3. How do you expect your board state to provide an interesting challenge to players?

Although I was unable to create as challenging a scenario as I would have liked, as I think that a fixed puzzle doesn’t give the infinite replayability of normal tetris. That being said I believe that my board state will successfully showcase the “C” piece’s niche positioning. If given the chance to use T spins, the polyomino would show more prowess in complicated tetris play. As for the board that I have designed, I believe that upon the first playthrough, the challenge lies in recognizing what pieces are to be placed where, however, functionally the board works as a piece by piece placement, where rotation of the given piece is necessary. I personally think that this polyomino shines when used in the random form of tetris, as the possibilities of opportune and unfortunate board and piece management allow for more engaging and challenging gameplay with a large polyomino.

Regarding relationships between objects, the previously highlighted notes on piece interaction, the “C” polyomino that I have designed integrates well with the existing “I”, “L”, and “J” piece, as well as providing opportunities for players to use the 2 stack remainders of cleared lines.