Assignment 1: Tetris Puzzle

Game Systems Design - 10017

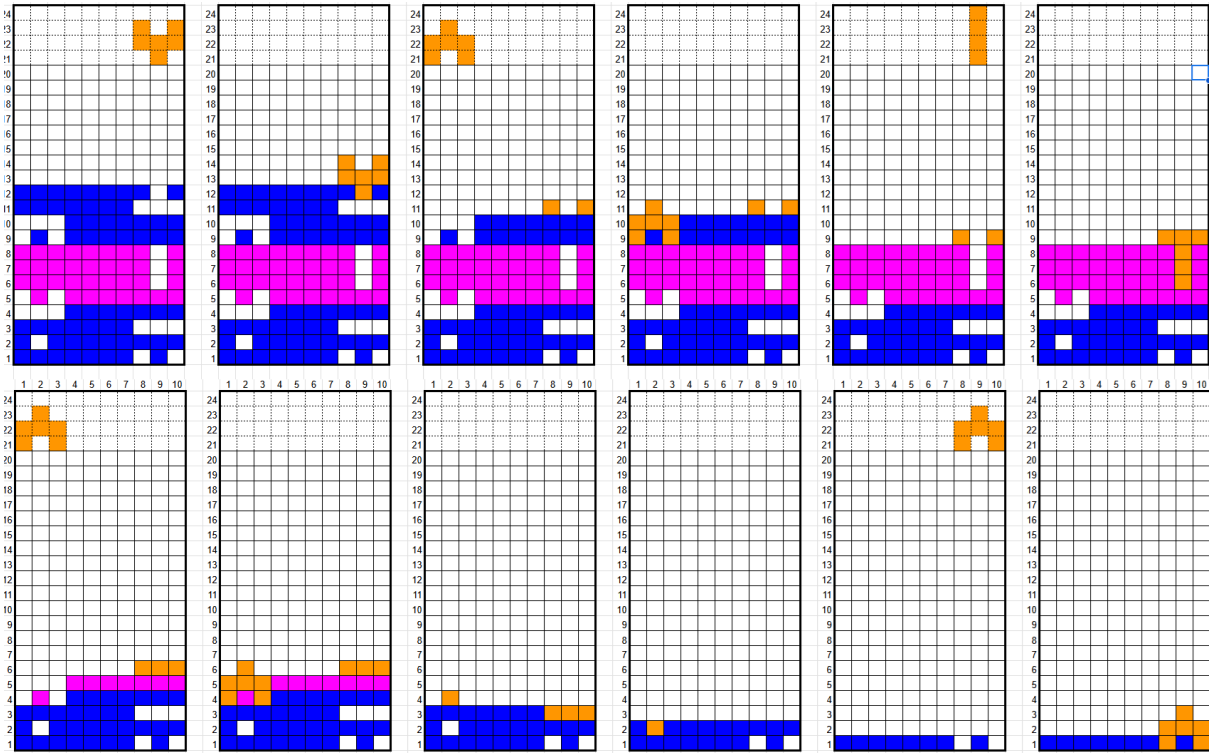
By Ethan Gapic-Kott

Custom Tetris Polyomino:

Regular

Flipped

Big-Bang Tetris Board:



Design Rationale:

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

My custom polyomino used in this puzzle is a seven block shape that takes inspiration from the T-shape in standard tetris. Unlike the T-shape, which can only fit into one or three block spaces, my piece has empty space in between which allows it to be placed in either a one block or a block gap space which gives flexibility in where it can be played. On top of this, the polyomino can be flipped horizontally to mimic the Z-shape tetronimo. This polyomino is designed to feel familiar to tetris players because it has properties of the T-shape and Z-shape which allows it to be used universally in how it can be placed within a standard tetris board. Its properties allow it to interact with the board making it a versatile piece which can mimic two existing tetromino pieces which depend on gaps created in tetris puzzles.

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

One relationship the piece sequence has with the board state is in the first placed piece of the Big-Bang tetris puzzle, which leaves two extra blocks behind after clearing two rows, which are later used to fall into place at near the end of the puzzle. The design intentionally creates pieces early on that cannot be resolved instantly, which remain on the board until rows are cleared which are carried forward until the extra pieces arrive which makes sequence order important in play sessions. By leaving blocks in place, the puzzle encourages players to think about how the board evolves and how pieces modify the environment for the next sequence of placed tetronomo pieces. This creates challenges for the board state making pieces that are independent (loose pieces) have a relationship with how the board is resolved within the play session.

How do you expect your board state to provide an interesting challenge to players? Consider objects, properties, behaviours and relationships.

The board state in this puzzle is designed to create uneven surfaces and gaps from leftover blocks which as previously stated, cannot be immediately resolved by the player. Because of the board state changes from extra pieces, this creates a challenge for players which leaves uneven surfaces, gaps and leaves players to think about where each piece will go to be resolved later on. Players need The challenge comes from understanding how the polyomino interacts with the board and overtime gets cleared with gravity, which makes placements meaningful as opposed to a standard easily readable tetris puzzle. Overall the puzzle emphasizes how lines can be cleared using gravity in tetris which gives incentive to players to balance line clearing with strategy on how they place their pieces as loose pieces are used later in the puzzle.