CS 357 Functional Tetris - Project Proposal
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Project Group 16

1. **Objective**
    a. Deliver a polished, fully-playable clone of the classic video game Tetris written in Haskell. The game will show functional programming design patterns, clean graphics, and responsive controls while remaining concise and well-documented.
2. **Current Progress**
    a. We have completed the core gameplay loop already.
        i. You can play with increasing speed as the levels go up.
            1. The speed meter is displayed in the GUI.
        ii. Lines are cleared, and basic scoring works.
        iii. Tetrominos have different colors and react to other blocks/the walls of the board.
    b. Tetromino.hs
        i. Shape definitions, rotations, and the random generator.
    c. Board.hs
        i. 10x20 grid, has collision checks, and line-clearing logic.
    d. Game.hs
        i. Main loop with gravity, score tracking, keyboard controls, and graphical rendering with Gloss.
3. **Remaining Scope**
    a. Quality of Life
        i. Next piece preview, holding queue, quick drop, and a ghost of the block on the bottom of the board.
    b. UX Polish
        i. Title screen, pause/resume abilities, and animated line-clearing.
    c. Audio
        i. Maybe add sound effects or a music loop
    d. Persistence:
        i. Add a high score file.
    e. Testing
        i. Ensure everything works through multiple play-throughs by us and family/friends.
4. **Workload Breakdown**
    a. We plan on working through problems together for both of us to understand the function of the program as a whole.
    b. Should be able to finish all possible goals by May 12th.