

# project report

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## 1 Instruction and Summary

1. Which milestones were implemented? We finished Milestones 1, 2, and 3
2. How to view the game:
  - (a) The dimensions of the game covers a portion of the bitmap display, dimensions being 256 x 256 pixels wide at 8 unit widths
  - (b) The game-board itself is 30 x 13 pixels wide, not including the border
  - (c) All that is needed to play the game is to move the a, w, s, d keys for player detection

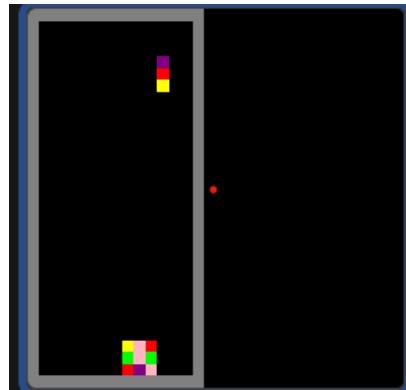


Figure 1: Columns Game Display

### 3. Game Summary:

- Columns is a falling-block puzzle game where the player controls a vertical column of three colored gems. Using W/A/S/D, the player can cycle the gem order, move left or right, or accelerate downward. When the column lands at the bottom or on another piece, it locks in place and a new column appears. Players score points by creating horizontal, vertical, or diagonal matches of three or more gems, with cascading combos possible. The game ends when stacked pieces reach the top of the board.

## 2 Attribution Table

Student 1 (Paul Yan 1010288617)	Student 2 (Dylan Ma 10113322933)
Created the initial static scene	Matching tiles in the vertical vertical direction
Debugging with regards to Module 1 and 2	Matching functionality for diagonal pattern
Game Loop functionality	Gravity Implementation
Created function to initially Spawn First 3 Tiles	Implementing Horizontal Matching Functionality
Feature 1	Feature 2
Feature 4	Feature 3
Feature 10	Feature 6
Feature 11	Feature 5

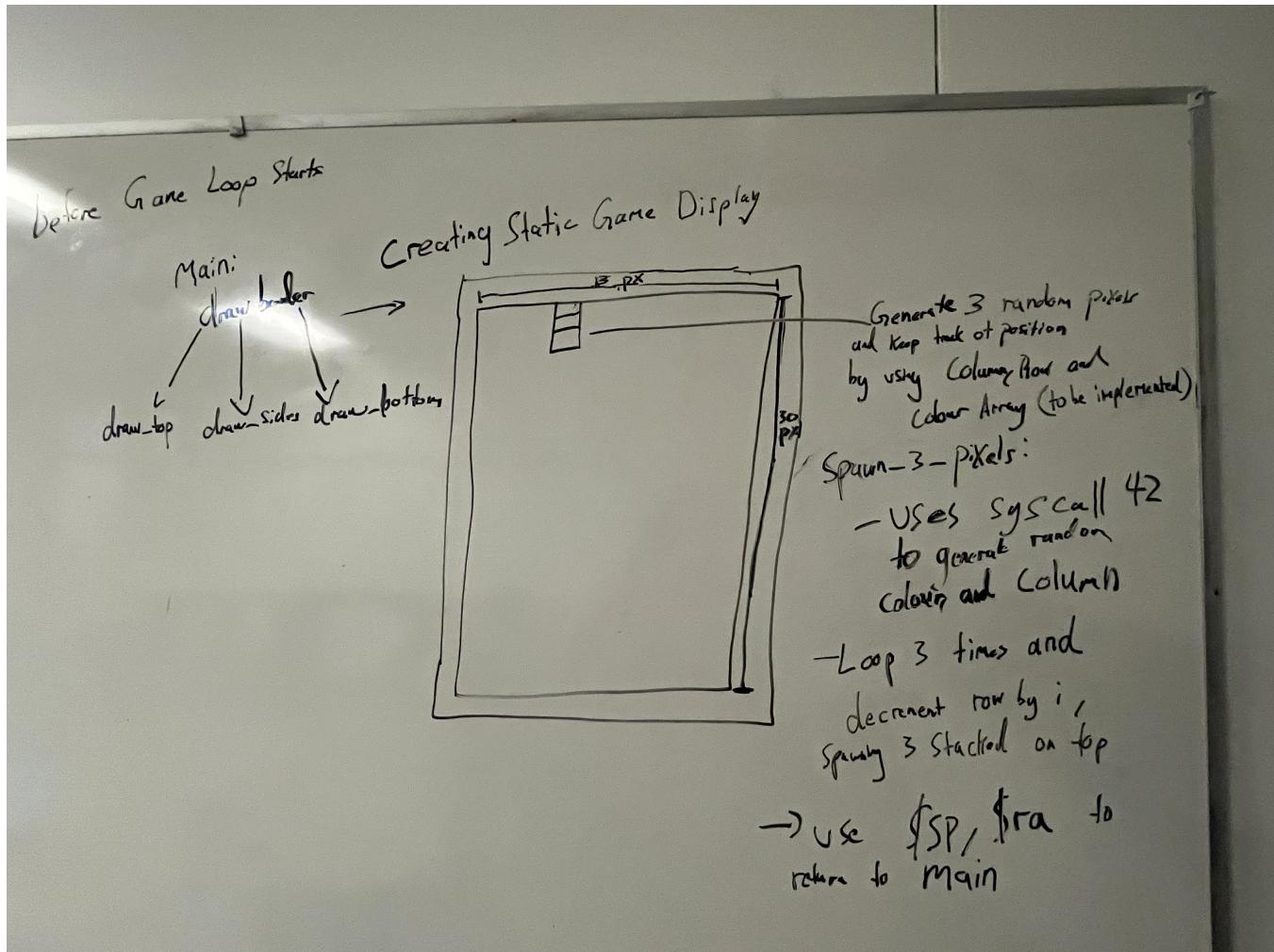


Figure 2: Initial Diagram Describing Logic of Milestone 1: Static Display

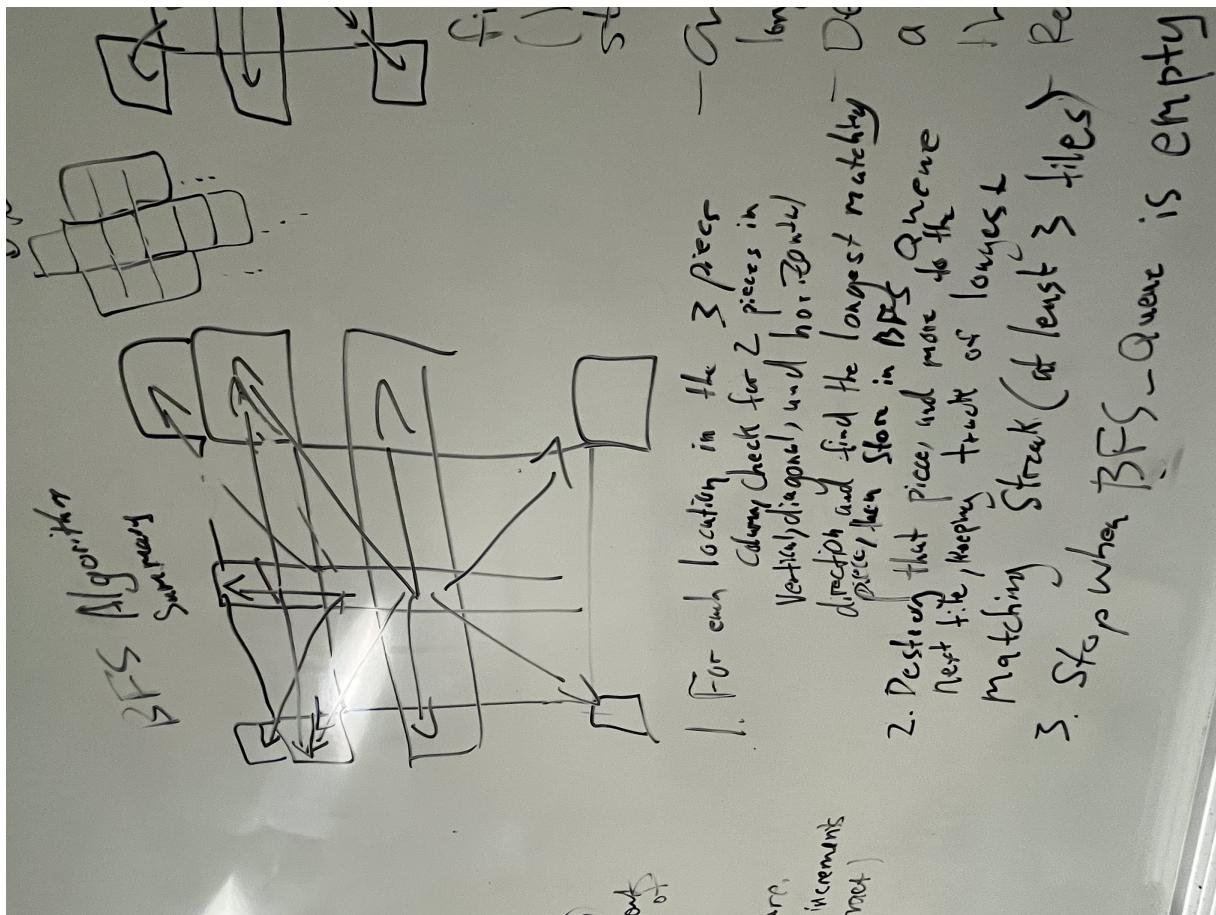


Figure 3: Diagram of Matching Algorithm for Columns Game

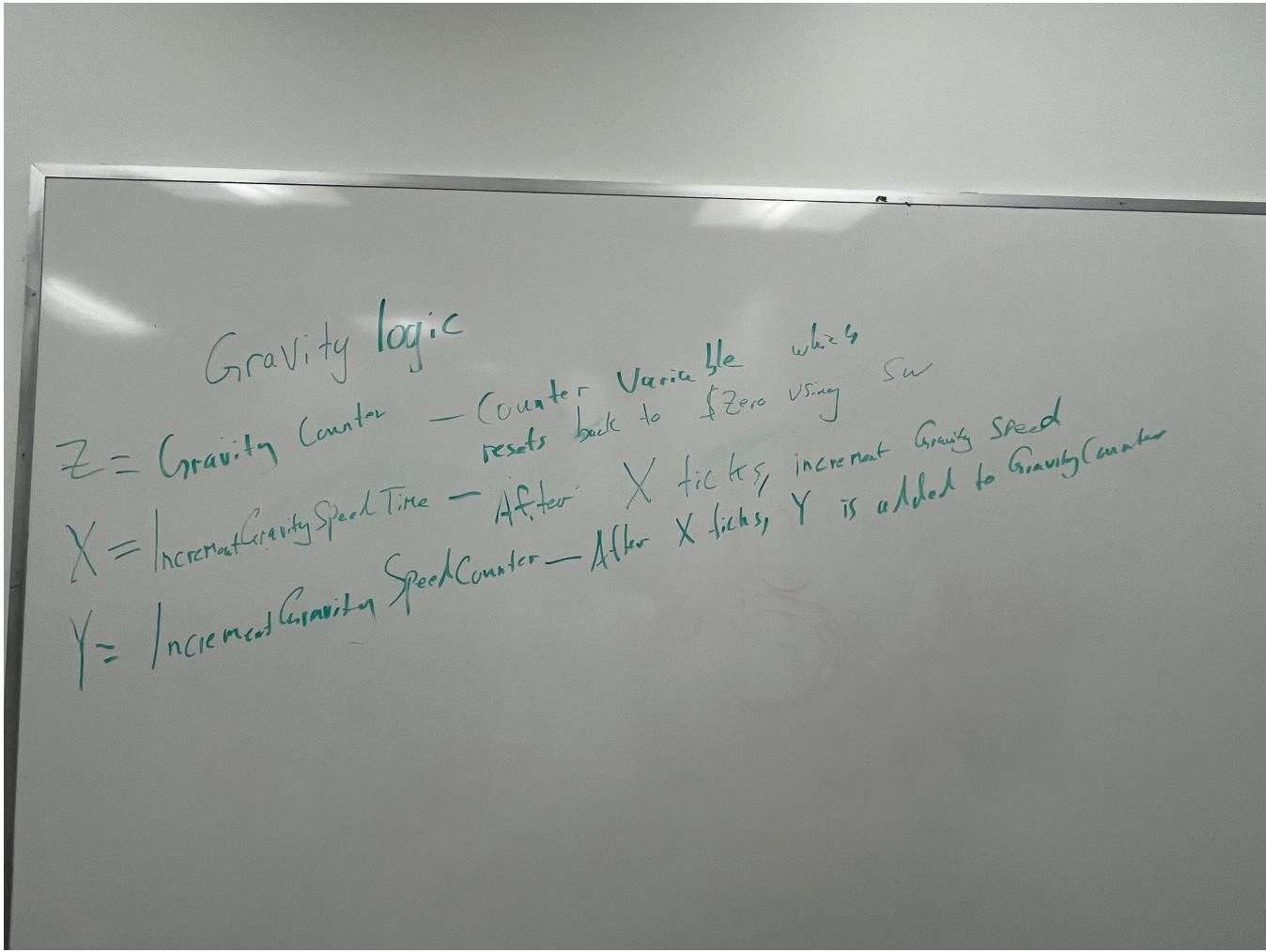


Figure 4: Initial Diagram Describing Logic of Gravity Functionality