Initial Software System Description:

A 'Same Game' style game, where the game is started with a random board, filled with different colored blocks. Clicking on a group of at least two same colored blocks will clear said blocks, the blocks above falling down to fill empty spaces below them. If a column of blocks is completely cleared, the blocks will be shifted together to form one contiguous chunk of blocks again.

Features to be included will be the base game mechanic, score system, levels, board size adjustment, difficulty levels to be implemented via more colors of blocks.

The finished project's graphics should look presentable, not just simple blocks of color, but still not complex enough to confuse the end-user.

The game should preferably be able to run on most computers, working at lower resolutions without problems.

Initial User Stories:

Base Game Mechanic

The main mechanic of the video game is clearing blocks in same color groups of at least two blocks. The goal is to clear the entire board. If the entire board is cleared, then the player wins.

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This is the basic mechanic, though several variations exist, such as adding more blocks over time, making it a continuous game, making the player lose when the board overflows with blocks. This is something to ask about.

Scoring System

Most implementations of Same Game use a score of (n – 1)^2 or (n – 2)^2 for each group of n blocks cleared. Some will offer a bonus for clearing the board or coming close. Multiple level implementations will take you to the next level if the board is cleared or comes within a few blocks of doing so.

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As we can see, there are several ways to score this game. We know the client wants multiple levels, but what way do we want to go about this?

Difficulty Adjustment

A Same Game implementation can be adjusted in difficulty in two different ways. Adjusting the board size and the number of colors. Increases in both make the game harder.

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Not much to question on this, typical board sizes start at 10x20 and 3 or 4 colors, and can

increase from there, typically not over 6 different colors.

User Interface Design

If there is a theme to pursue, the board, numbers, and pieces should follow this. If not, the game still needs some graphical polish besides flat colors.

Estimations/Iteration Plan:

Base Game Mechanic: 14-21 days

Since implementing the gameplay mechanics will necessarily involve making a graphical point-and-click interface, something I don't have that much experience in, this step might actually take a while. This is actually a large chunk of the project. The other user stories are basically tweaking this base step.

Scoring System: 5-7 days

While the basic scoring system should be rather easy, making the game advance to, and therefore generate, another level without starting the game over might be a little tricky. Also, high scores, and maybe number of boards cleared, should be kept.

Difficulty Adjustment: 3-7 days

Making the default parameters of board size and number of colors easily adjustable by the user is the main component of this step. This could be more complex if separate high scores are kept for each setting.

User Interface Design: 2-3 days

In this case, nothing too complex will probably be going on, especially since it's supposed to work on lower resolutions. Making the blocks look decent while providing an easy-to-read score along the top, bottom, or a side of the screen.

Assumptions:

Assuming this is a simpler variation of Same Game that doesn't constantly add new blocks. Considering they ask for multiple levels, this seems to be a safe assumption (constantly adding new blocks is typically an 'endless' variation of Same Game, not a level-based one).

Assuming a simple (n – k)^2 scoring system is used. There have been a few that have used n(n – k) and one that even used n^2 – 3n + 4 for each group cleared. The former is the most common, though.