SquarePuzz(TP3 Update)

Description

My project is an image-based puzzle game that allows users to assemble pieces of an image on a 6x6, 3x3 or 8x8 board. The game has a free mode that allows the player to upload their own images and form a new jigsaw puzzle accordingly. Free assemble mode has features like nailing nearby pieces together if, on the original image, the two pieces are next to each other. A learn mode, where the player can see, step by step, how a puzzle is solved. Other minor features include a timer on the side, a sidebar that allows the user to grab pieces of the puzzle, and drag to the mainboard. The game allows the user to choose from 8 different skins, each with different background and button colors.

Evaluating Competitors

#1 Sudoku
#2 Similar element matching games like Sugar Rush
#3 Logic Puzzle

Identify Comparison Dimensions

#1 Use of color.
Among the three competitors listed above, it is evident that those that used color as an important element of the game aspect won more audiences. Sudoku and logic puzzle both used minimal colors, although this is not quite a design choice, but rather, based on whether the game itself requires the use of color.

#2 Open to All Ages
This is indeed a tricky question, as people's ability to solve sudoku and logic puzzle differs. For example, an adult may have trouble figuring out Logic puzzles but some kid could be talented and found the game fun and easy. Generally speaking, younger children may still need more practise on logical and mathematical thinking abilities.

#3 Help/Items
Similar element matching games like Sugar Rush are score based, with more elements in gameplay such as bonus points, as well as purchasable items to boost the player's success. This help feature exist in puzzle game, in the form of hints.

#4 Single Solution
Games like Sukodu and logic puzzles have a single, definite solution, where as Sugar Rush is open to more possibilities - countless way to achieve the goal score. Having a multiple solution game could potentially lower the game's difficulty.

#5 Single Player
Although multiplayer become the new standard for popular games, single player games still have its charisma.

Comparison Table

Fill out the table shown below with the features you identified in the section above.

	Use of color	Open to all age	Help/Items	Single solution.	Single Player
Sudoku	no	Maybe	yes	yes	yes
Sugar Rush	yes	yes	yes	No	Not really
Logic Puzzle	no	Maybe	yes	yes	yes

Summary

In Conclusion, It seems that the single-player game format itself isn't the problem. However, to allow people with and without prior knowledge of Jigsaw to be able to enjoy the game, I will need to implement different difficulty levels, and if necessary, balance the difficulty using a limited amount of hints. Images, as guaranteed by the nature of Jigsaw puzzles, will fit with the single player mode well.
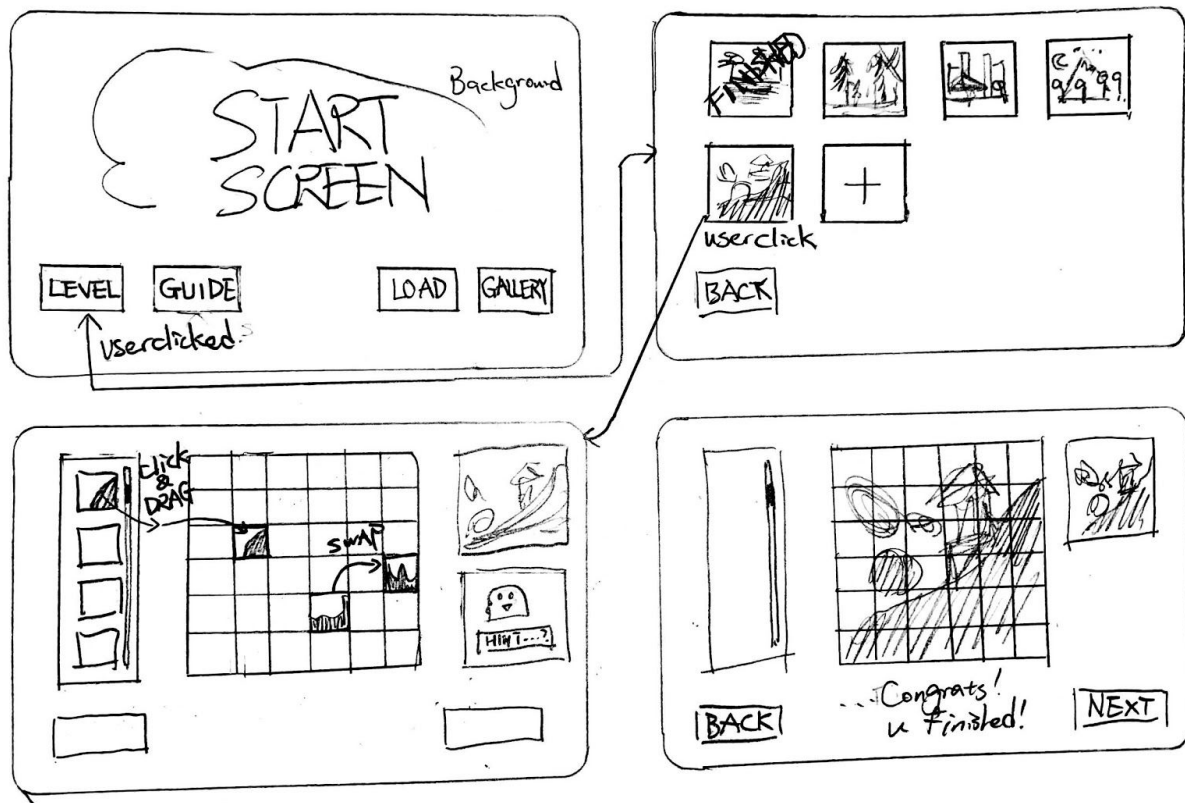
(Rough Sketch)

TP2-Updated Timeline Plan

Sun - Image slicing+drag and swap to correct positions
Mon - sidebar+bugfix
Tue - game modes+buttons+user import image+bugfix
Wed - nearby neighbors nailed together+bugfix
Thur - FreeMode bugfix(no grid)+LearnMode(Autodolve)
Fri - End

Version Control Plan

Main python files uploaded to google drive per 3 hours.

TP 2 Update

Learn mode (Autosolving algorithm with grid system) - with Looping algorism

Play Mode- Updated sidebar, can now flip back and forth
Implemented neighbor(nearby pieces) nailing system.
Level mode features developed, player can now upload their own image, and click on image to open that level.
Timer within learn mode.

TP 3 Update

Play Mode- Major bug fixed with a completely updated neighbor system, neighbouring system detects nearby neighbors as soon as the player dropped a piece on multiple nailed pieces, or dropping multiple nailed pieces on other multiple nailed pieces.PlayMode now functions properly.

Level mode now allows renaming by pressing "e" level mode display bug fixed.

Main Page Updated, all button functioning.

Added theme system and 8 different themes, once clicked, color of all modes changes.

Recursive Backtracking to solve swapping puzzle in learn mode.