Ideas:

4x4 Tic Tac Toe with custom win conditions

- Separate menu for adding win conditions
- Win screen
- Main GUI
- Score tracking
- Minimax???? (Maybe)

Math game (Fill in a grid given operations)

2048

Wordle

Chosen Game: 512
Method of making the game followed by: https://www.youtube.com/watch?v=gYAc7yl2KY8

GUI Layout:
- 4x4 Grid (2D array or 1D array)
- Methods?: Compress & Merge of numbers, random placement of new numbers
- Main menu

Day One (April 18)

TO DO:
- Create GUI, plan methods and test various cases
- Decide on array format to use
- Create main menu, instructions, decide input method (Buttons v Keeb)

Methods to make:

Random generation method:
- Pick random row until a row with an empty slot gets chosen.
- Pick a random cell in the row until an empty slot gets chosen
- Insert 2 90% of the time, insert 4 10% of the time.

Compress method:
For each number scanning from the side selected to the opposite side selected, move each number in said order towards the direction until adjacent to another number

Merge method:
Dunno yet.
FINISHED:
- Random number insertion generation method.

- Main menu jFrame created
- Instructions jFrame created
- Game jFrame created

Day Two (April 19)

Lesson day, didnt work on project

Day Three (April 20th)
TO DO:
- Continue prototyping and experimenting with various layouts
- Programming simple algorithms to test
- Fix and refine menu in netbeans

Notes:
[Ryan Zhu] Start compress method creation
[Puneet Singh] Fixed menu, Refined GUI formatting

FINISHED:
Added functionality to some buttons, resolved GUI formatting issues, fixed menu logic
Finished compress_up(), compress_down() methods

Day 4(April 21st)

TO DO:
- Finish compress_left, compress_right()
- Work on layout of actual game and instructions

FINISHED:
- Compress left, right
- Improved GUI layout

Day 5 (April 24th)

TO DO:
- Create game board on GUI
- Make first merge algorithm

Considering: Making a display for smooth tile animations
Considering: Moving board into a separate class

Day 7 (April 27th)

Boardjava.txt

Day 8 (May 1st)

[V2.txt](V2.txt)

Check_legal.txt

Day 9 - Day 12 (May 2nd - May 5th)

- Worked on final touches with GUI and making sure game doesn't have any flaws
- Thoughts about adding animation to tiles

Day 13 - Day (May 8th - May 10th)

- Working on fixing GUI error where it doesnt update the GUI during sleep(). Trying to find a workaround using timer delay since it doesnt stop the GUI from updating

Review day:
    Received feedback from peers
- Add end screen (already have one)
- Originality
- Overall reports were good, no errors or game breaking issues
Testing game:
    - Works well
    - Tests were done throughout the building of the game
Issues we had:
- Blocks would spawn in even if no valid move was available (fixed)
- Game breaks when no more valid moves or game was won (fixed with win and end screen and check if lost functions)
- Issue where sleep breaks gui updating (not fixed, something that can be fixed in next iteration, nothing game breaking)
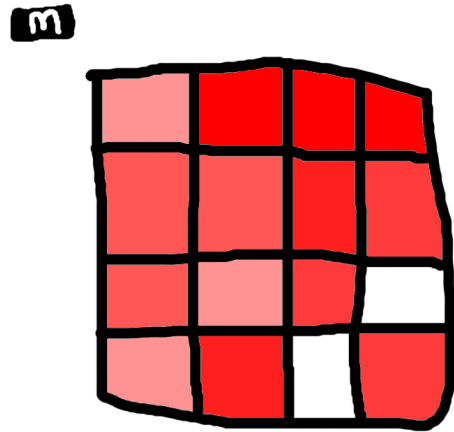
Things to do in the future:
- Animation
- Adding custom made tiles using gradients and making artwork look much better by using images
- Fix GUI updating after sleep()

📄 Mini Game Pseudocode

512

?

Play

Scrap Menu

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Scrap Main Game