

Devan Joaquin Abiva
Nathan Mayeda
Simon Worku

1. Project Description

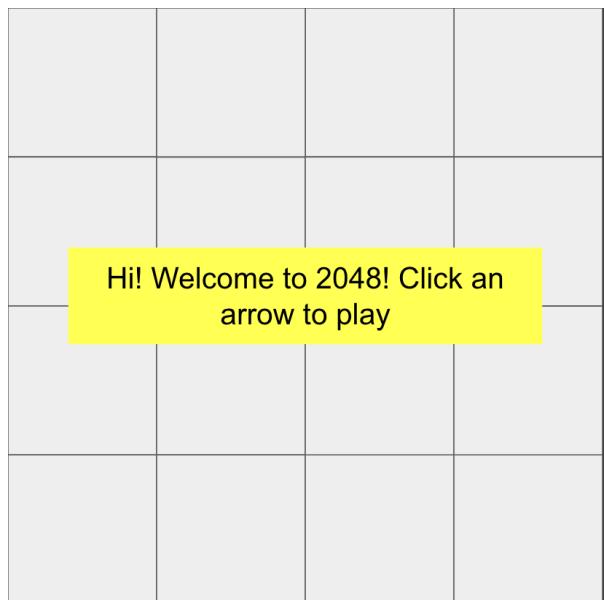
- a. For our project, we plan to recreate the 2048 game. A quick summary of how 2048 works is that the user starts with a 4x4 grid. They are given two “2” numbers. The user can use up, down, left, and right arrows to move around the number tiles. To increase the number value of a tile, two number tiles of the same value must merge due to the arrow command that pushes all the tiles in a given direction. *The goal of the game is to keep merging tiles until you get the value “2048.”* At that point, the user has either won the game, or they can keep playing to get a higher score.
- b. At a minimum, we want to have a replica of the 4x4 grid used for the game 2048. The initial user screen will have a box that says something along the lines of “click an arrow to start the game.” Once the user clicks, the game will start up, starting with two “2” tiles. At a minimum, a “2” tile will spawn in right after an arrow is pressed. However, the tiles that already take up a spot on the grid will be excluded from the random tile placement. Lastly, at minimum we will have our game go up to “2048.” Once that value is reached, a screen will appear saying something along the lines of “Congrats! You won! Click an arrow to play again.” We also plan to include a screen if the user fails, something along the lines of “Game over. Click to try again.”
- c. If we have time for extra features, an extra feature we would like to add are values that extend beyond 2048. This means that the user can choose to play again, or continue playing in hopes of getting a score higher than 2048. Additionally, if we have time we would also like to add a score counter of the highest tile value. A more ambitious goal if we have time is to make an “opposite 2048” where the arrow keys are all reversed (pressing up moves the tiles down). Lastly, if we have time for it, we would like to add different sound effects for different tile values being reached.

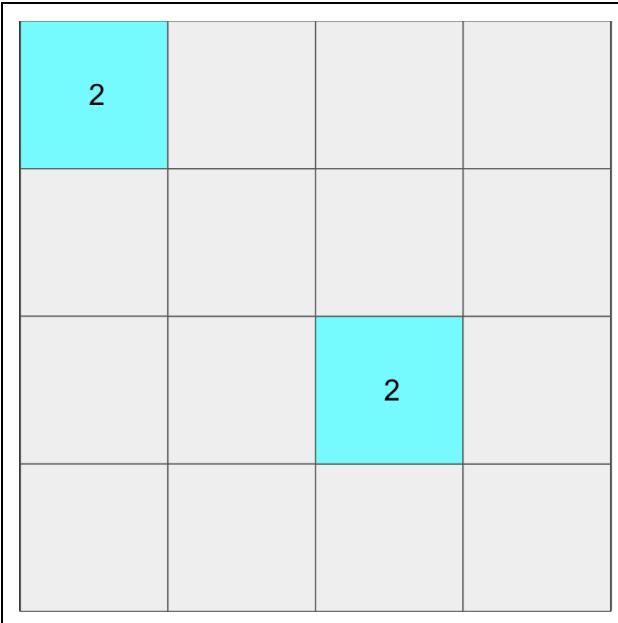
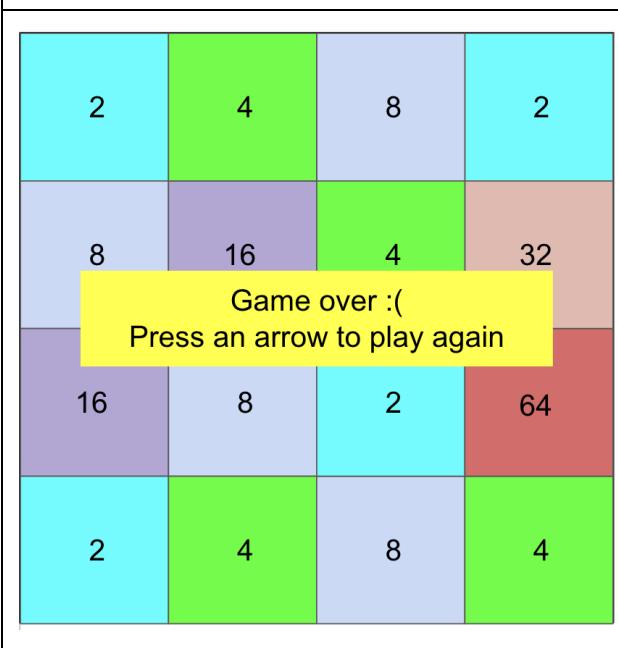
2. Project schedule

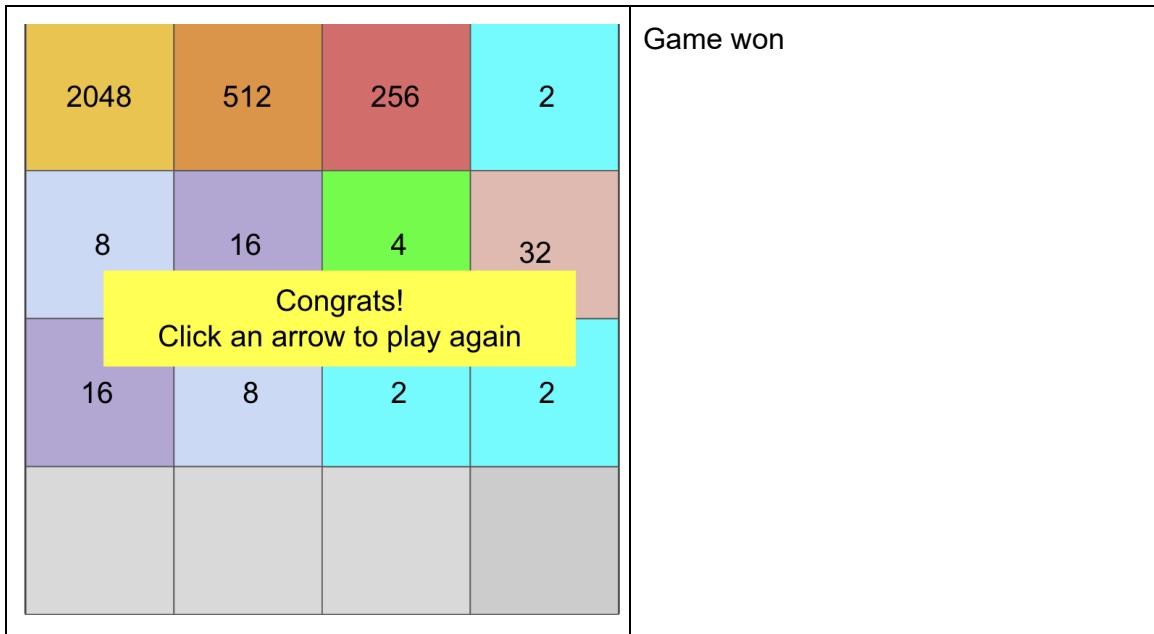
Date	Task
11/16	Project Proposal
11/21	Create a board and a single tile on that board
11/28	First Milestone Test our first function
11/30	Make the game class <ul style="list-style-type: none">• Controls

	<ul style="list-style-type: none"> Ability to merge two tiles when moved together (doesn't have values yet, just to test merge event) Create new tile randomly on board when moving (optional) score + highscore
12/5	<p>Project Presentation Test current functions prior to presentation</p>
12/7	<p>Make tiles have a value that changes when merge event occurs</p> <ul style="list-style-type: none"> (optional) colors change through gradient as tile number gets higher
12/12	<p>Final Project Due Test game to make sure it works</p>

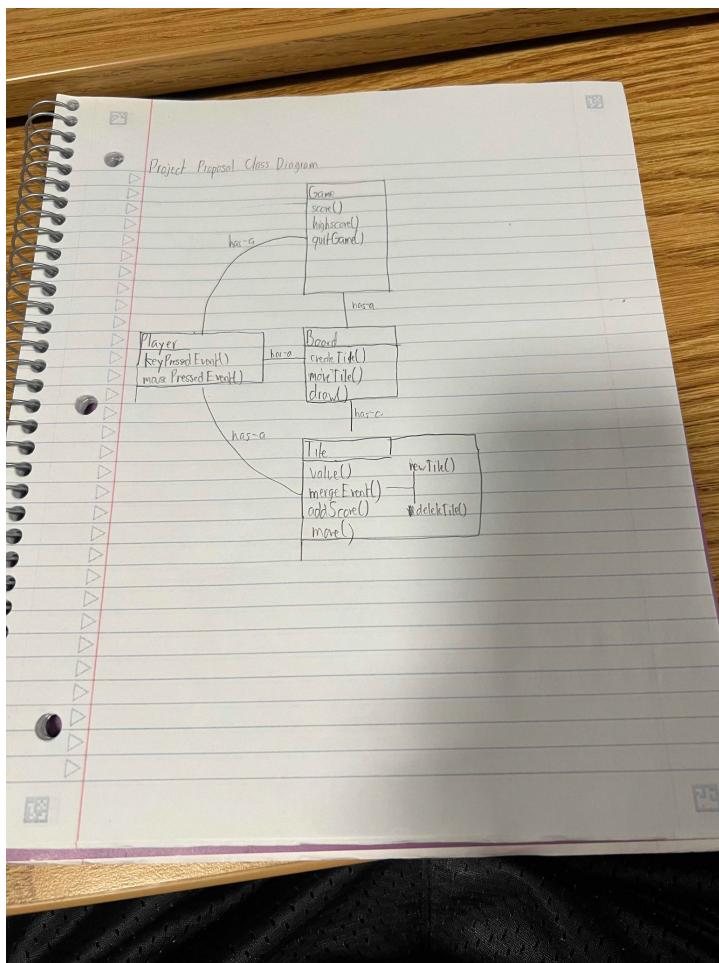
3. Interfaces in our Program

Photo	Description
 <p>A screenshot of the 2048 game homepage. It features a 4x4 grid of light gray squares. In the center of the grid, there is a yellow rectangular box containing the text "Hi! Welcome to 2048! Click an arrow to play". The rest of the grid is empty.</p>	<p>Opening screen for game, homepage</p>

	<p>Starting with two “2” tiles</p>
	<p>Game over</p>



4. Design Python Classes and Objects



5. Which Libraries We Will Use

- a. Pygame
- b. Graphics.py

Group Contract Below

CMSI 1010 FINAL PROJECT TEAM CONTRACTS

OBJECTIVE: To prepare you for teamwork in the real world, you will work in teams to complete the collaborative project. To accelerate your team's development, a team contract is generated to establish procedures and roles to move the team more quickly into the performing stage. This process of generating a team contract can help jump-start a group's collaborative efforts by immediately focusing the team members on a definite task. The group members must communicate and negotiate to identify the quality of work they all wish to achieve, and the level of group participation and individual accountability they all feel comfortable with.

TASK: As a team complete the team contract template below. You may add any extra sections to your contract if you feel the need for establishing team procedures, identifying expectations, and specifying the consequences for failing to follow these procedures and fulfill these expectations. To reduce the possibility for team conflict, make your contract as specific as possible.

TEAM CONTRACT TEMPLATE

GitHub Team Name: Tech Lions

TEAM PROCEDURES

1. Day, time, and platform for regular team meetings:

Any weekday, night time after classes (8:00pm-after), over call/text to communicate

2. Preferred method of communication (e.g., e-mail, text, Slack) in order to inform each other of team meetings, announcement, updates, reminders, problems and etc.:

Text, call

3. Decision-making policy (by consensus? by majority vote?):

Consensus

4. Who will be the **manager**? The manager will be responsible for setting up and following the meeting agendas. How and when will the manager notify/remind the team members? How will they keep the team on track during a meeting?

Nathan Mayeda

5. Who will be the **secretary** of the team? The secretary will be responsible for recording & disseminating minutes. How & when will the minutes be disseminated? Where will all agendas & minutes be kept?

Simon Worku

6. Who will be the team **checker**? The checker will ensure the team is in compliance with all the assignment requirements and tests the code before accepting pull requests. When and how will they submit the deliverables and notify the team of the submission status. How and when will they notify the team (who gets notified?) if there are issues with the pushed code?

Devan Joaquin Abiva

TEAM EXPECTATIONS

Work Quality

1. Project standards (What is a realistic level of quality for team presentations, collaborative writing, individual coding, preparation of drafts, and etc.?):

All code will be functional, presentations will show everything we are thinking/trying to accomplish.

While our code may not be perfect we will strive for an almost professional quality.

2. Strategies to fulfill these standards. Some resources may include, LMU ARC writing center, ChatGPT feedback on coding style and/or bugs, peer reviews and etc.:

For code, consult online resources for debugging (Stack Overflow) as well as the Keck Lab.

In our presentations we will use peer review to review each other's work and contributions

TEAM PARTICIPATION

1. Strategies to ensure cooperation and equal distribution of tasks:

Constantly check up through text to make sure we are all on the same page

2. Strategies for encouraging/including ideas from all team members (team maintenance):

Will always talk/text as a group whenever one of us has an idea

3. Strategies for keeping on task (task maintenance):

Constant check-ups to make sure that each one of us is doing our part that we agreed to.

4. Preferences for leadership (informal, formal, individual, shared):

Informal

PERSONAL ACCOUNTABILITY

1. We agree to attendance, punctuality, and participation at all team meetings.
2. We agree to the responsibility for fulfilling team assignments, timelines, and deadlines.
3. We agree to open and transparent communication with other team members.
4. We agree to commit to team decisions and tasks.

CONSEQUENCES FOR FAILING TO FOLLOW PROCEDURES AND FULFILL EXPECTATIONS

1. Describe, as a group, how you would handle infractions of any of the obligations of this team contract:

Confront whoever is doing the infraction and make sure they do what they have to.

2. Describe what your team will do if the infractions continue:

Reach out to you to receive input on what to do.

I have read, understood, and agreed to the terms and conditions stated in this contract. I understand that if I do not abide by these terms and conditions, I will accept the consequences as stated in this contract.

a) I participated in formulating the standards, roles, and procedures as stated in this contract.

b) I understand that I am obligated to abide by these terms and conditions.

c) I understand that if I do not abide by these terms and conditions, I will accept the consequences as stated in this contract.

Team Member's Name	Team Member's Signature
Devan Joaquin Abiva	<i>Devan</i>
Nathan Mayeda	<i>Nathan Mayeda</i>
Simon Worku	<i>SW</i>

