

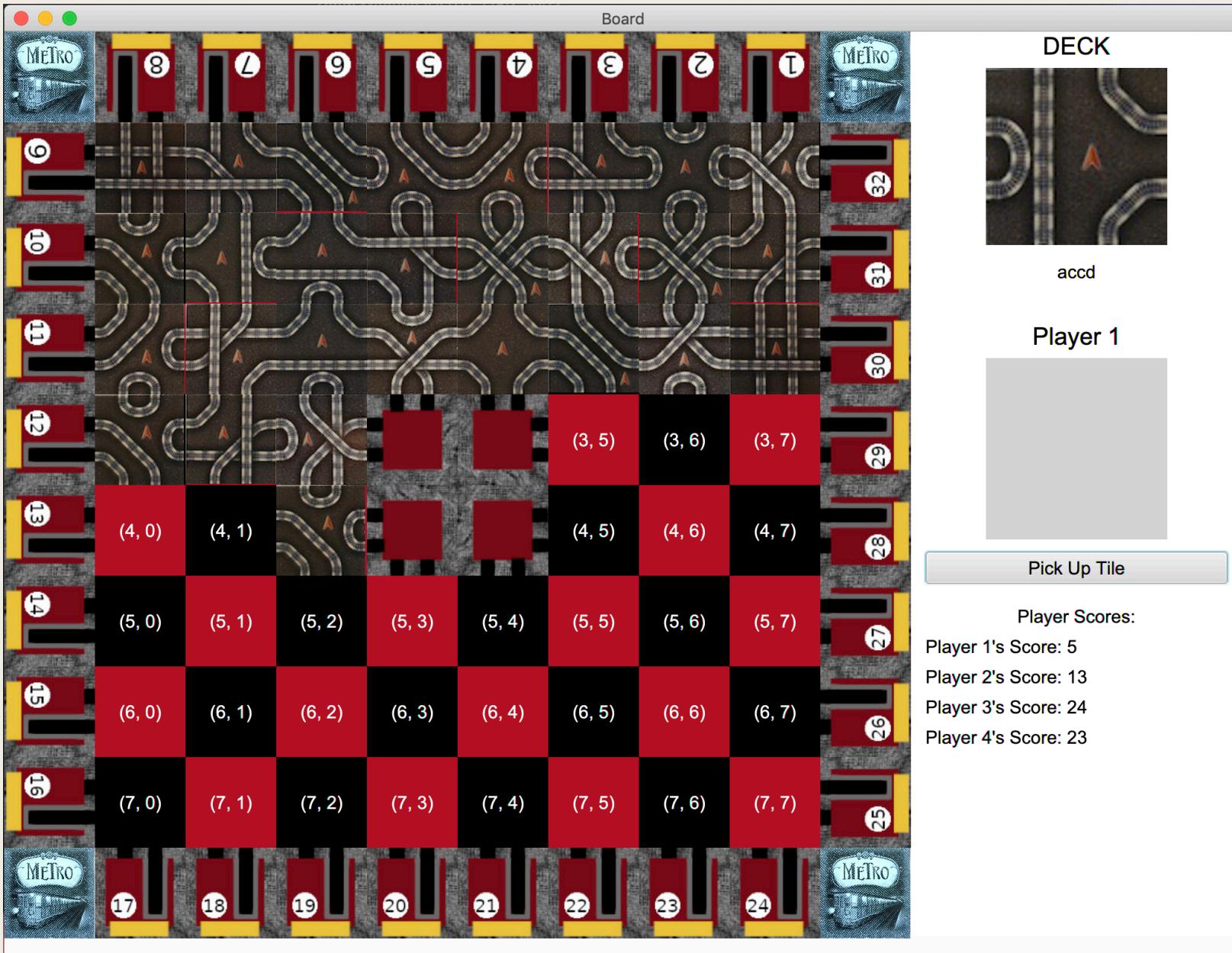
COMP1110 A2

Kaushal Sharma
Kyle Robertson
Tom Stephens

Summary

- The game allows the player to play Metro with up to 6 players, and with up to 5 computer opponents.
- The player can pick up and place tiles according to the rules outlined in the assignment specs.
- The program keeps track of the score throughout the game and presents a win message at the end for the player with the highest score.
- Our variation on the game rules was a ‘construction’ tile which blocks tracks from continuing any further.

Full GUI Screenshot

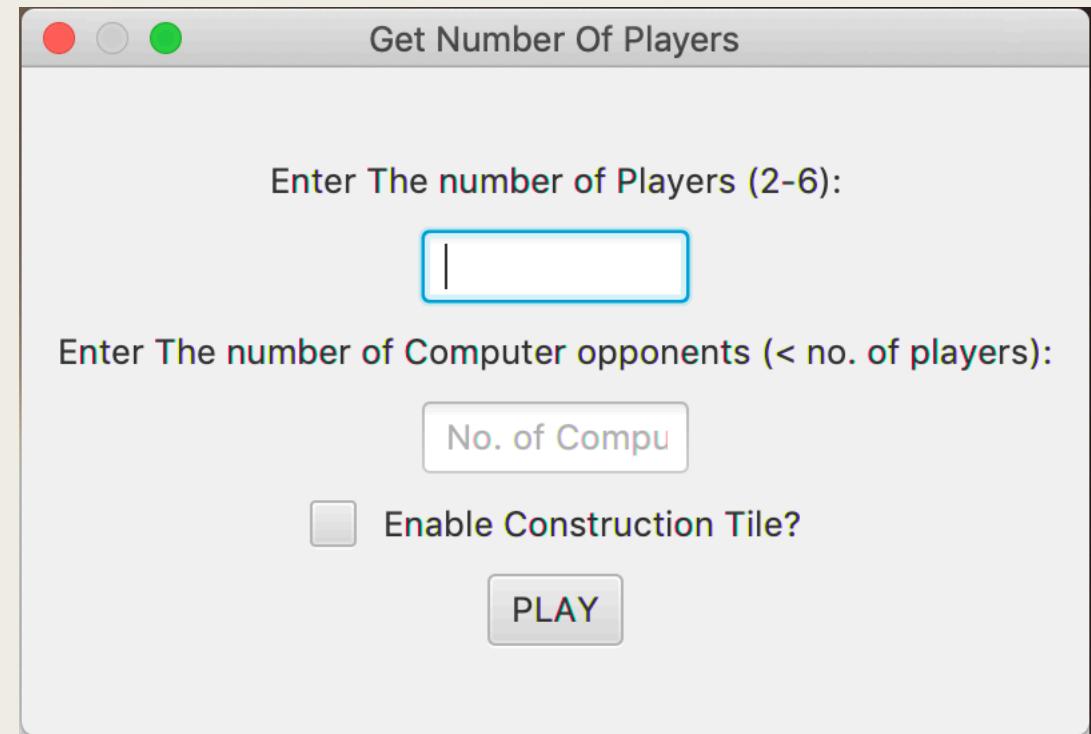


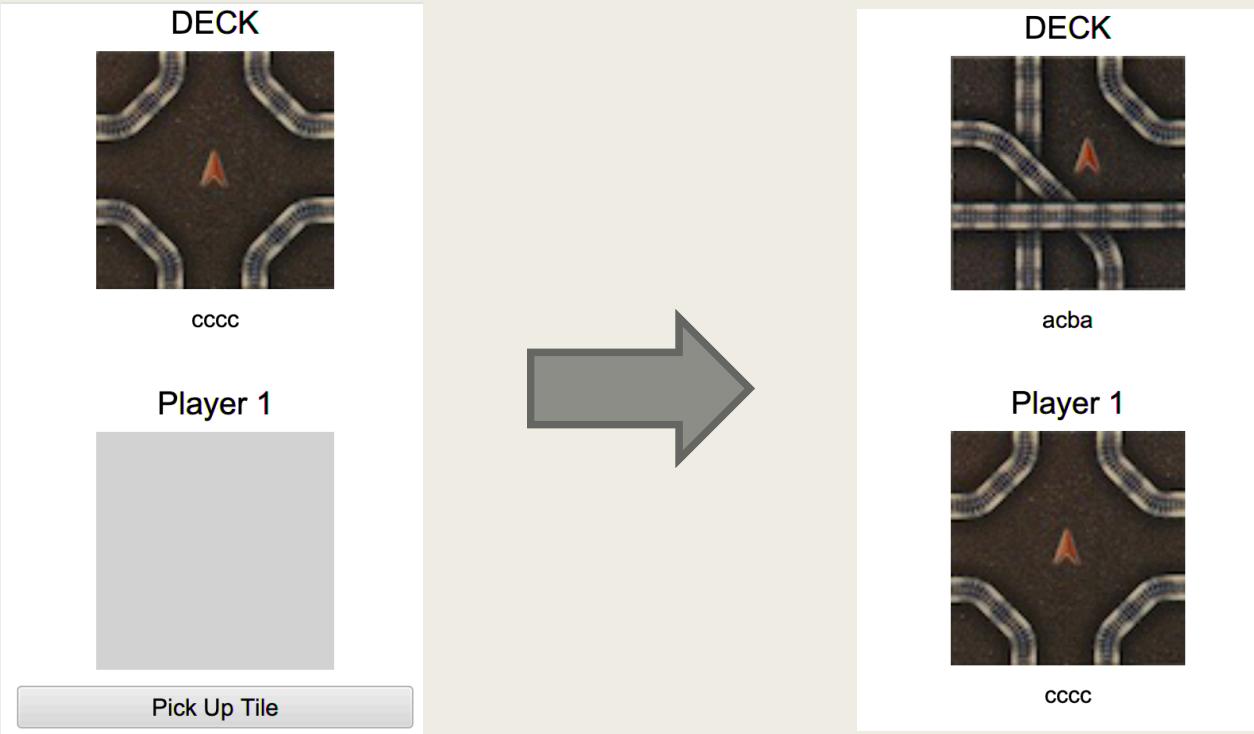
Running the Game

When the game is run, the window pictured right is opened.

The player can select number of players and number of computer opponents

The Enable Construction Tile checkbox enables the variant rules outlined later.

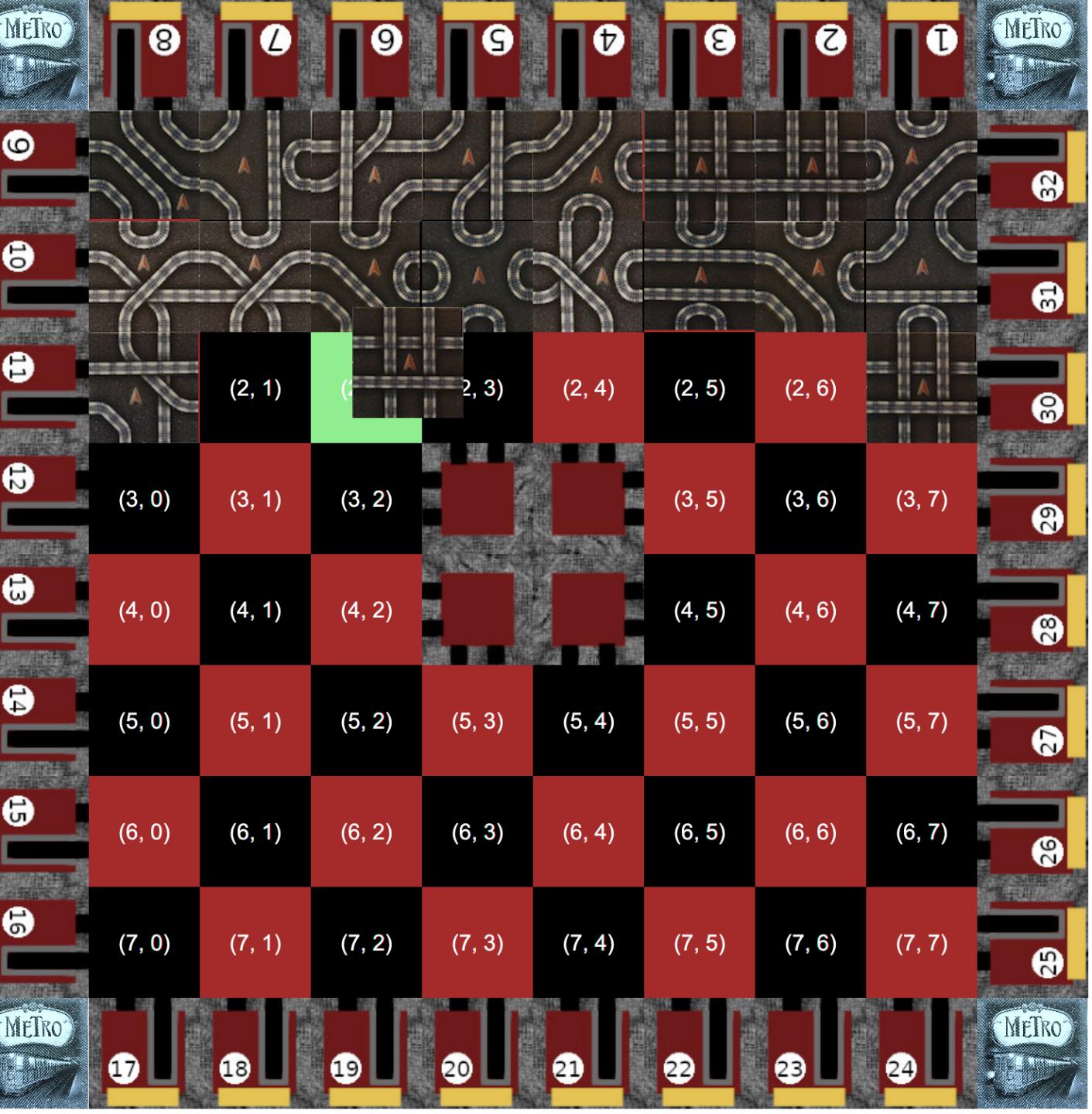




Picking up from the deck

The player automatically starts with a tile
If they want, they can pick up another using
the button

PLACING TILES USING DRAG AND DROP



SCORING THE GAME

Player Scores:

Player 1's Score: 3

Player 2's Score: 2

Player 3's Score: 0

Player 4's Score: 3

After each move the board is scores and each player's score is updated

Task 12: Variation

- As a variation on the original game we decided to substitute a random tile in the regular deck with a construction tile.
- This tile blocks any tracks that come into it from reaching a station and therefore, from scoring.
- We feel like this is an interesting game mechanic since you can strategically hold onto the tile until your opponent is going to score, and then you can block them.



Some problems:

- The Score in the GUI had to keep track of up to 6 players at once
- Having multiple computer opponents in the same game
- Our game was stopping short because we weren't removing tiles from the deck when we placed them

Our solutions:

- Updating arrays to constantly track what the scores for all of the players were
- Made the human players go first, then all the AI's moves are made at once
- Implemented a method to remove them when we placed them using the GUI

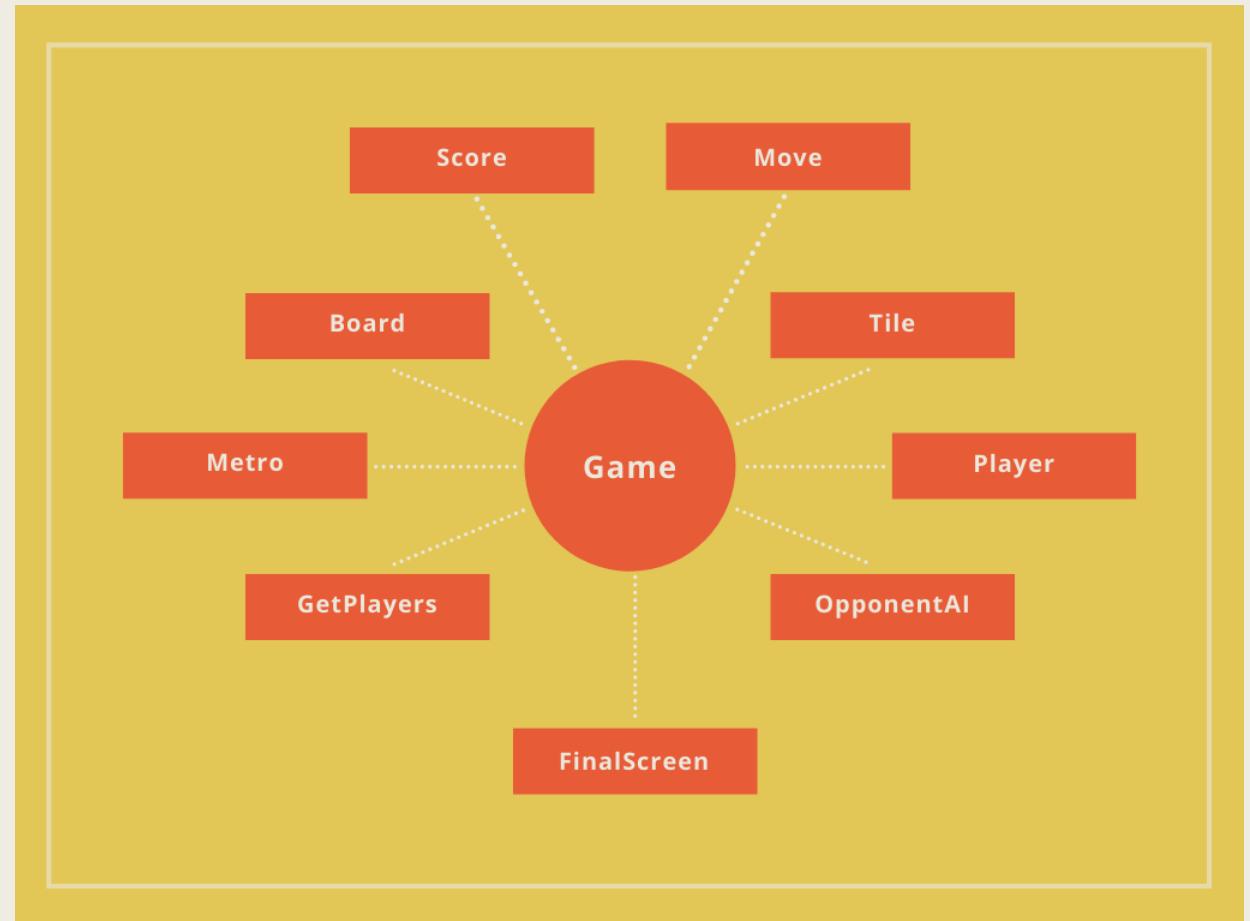
Design Approach

We separated our game into GUI and ‘back-end’ classes.

The 3 GUI classes: Game, GetPlayers and FinalScreen all implement a different window that is part of our program.

Board, Score, Move, Tile and Player all implement different parts of the game’s rules functions.

OpponentAI is the class for the computer opponents



Some interesting aspects of our game

- The construction tile variation
- You have the ability to play multiple computer opponents at the same time
- You can also play a mixture of computer and human opponents
- To score the board the scoring function has to follow paths using one tile to get to the next and so on.