



Bilkent University

Department of Computer Engineering

Object-Oriented Software Engineering Group Project

CS 319 Project: Monopoly Bidding War - Group 1D

Final Report

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1. Introduction

Our implementation is complete and working, besides there can be server related bugs. It can be played with 4 players online by entering the id given by a host or by choosing the host mode and sharing an id with the desired people. The ending of the game is changed due to the long duration, it ends when one of the players is declared bankrupt. New features are added including background music and operation sounds. Also, when a player lands on a property square, traditional music of that country is played in the background. Our game functions both with the original monopoly features and with our added features such as auctioning, veto rights, trading, etc.

2. Lessons Learnt

In the first group meeting, we discussed and decided on the general structure of the game. In the beginning, there were so many ambiguities about the game logic, and they were resolved as we shared ideas and worked in collaboration. It was not always easy to find a time slot that is convenient for all of us because of our busy schedules. However, we arranged online meetings as much as possible to keep in touch and inform each other about the progress of our parts. Splitting the workload between the members was an advantage in terms of time efficiency. In this way, different parts of the software which are the game classes, the UI part, and the database layer gain progress simultaneously. However, things didn't go well as we expected at the beginning. We faced a lot of bugs in the implementation stage.

3. User's Guide

3.1. Main Menu



Figure 1: Main Menu screen

You will encounter the Main Menu screen as you open the game. You can choose either “Settings”, “How To Play”, “Credits” or “Exit Game” option in this menu.

3.2. Settings

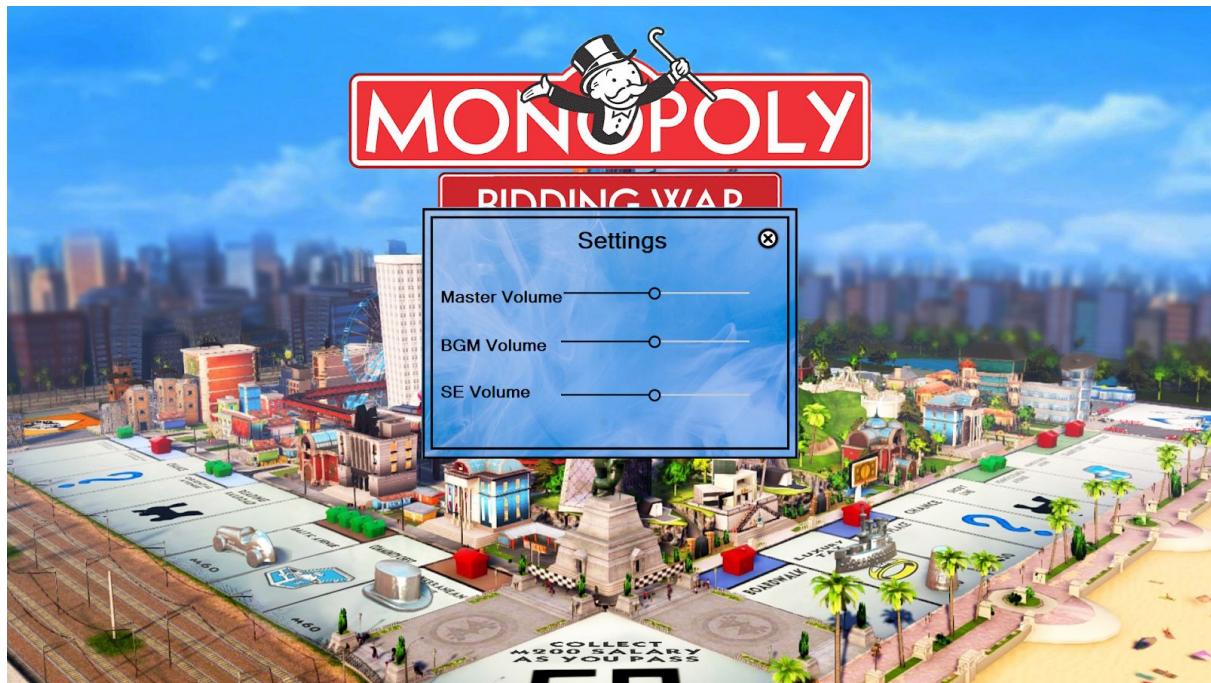


Figure 2: Settings pop-up screen

You can adjust the volume in the Settings screen.

3.3. How To Play

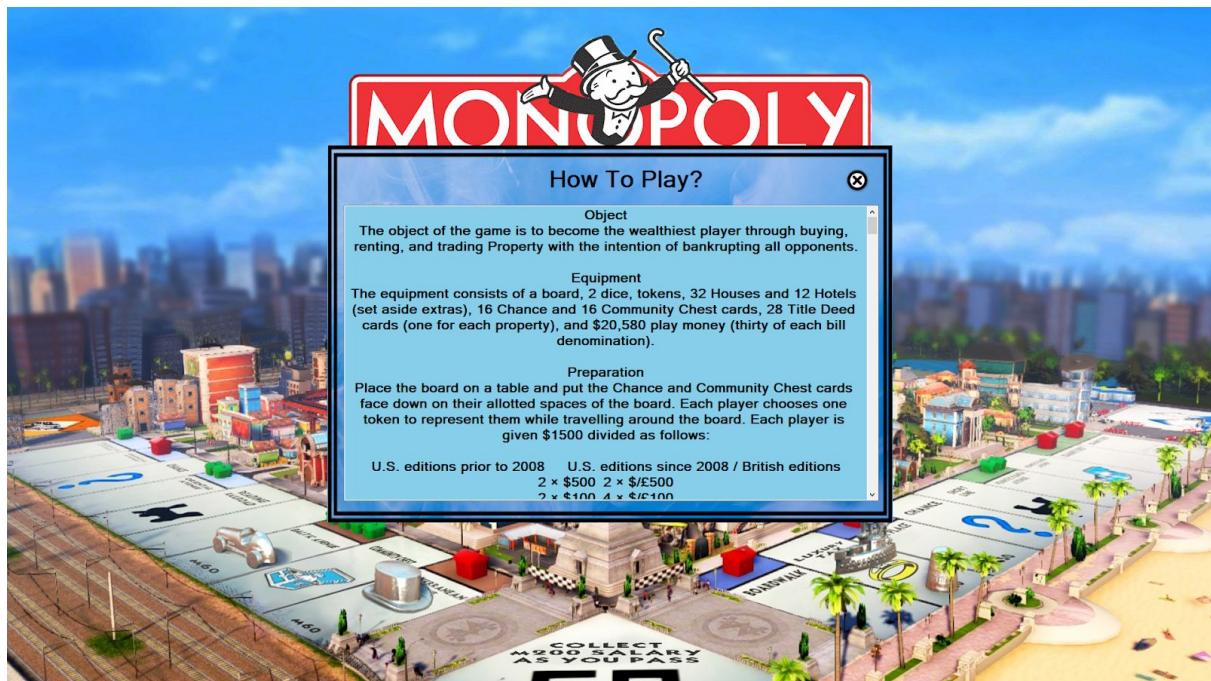


Figure 3: How to Play pop-up screen

You can learn the rules of the game on the “How to Play” screen.

3.4. Credits

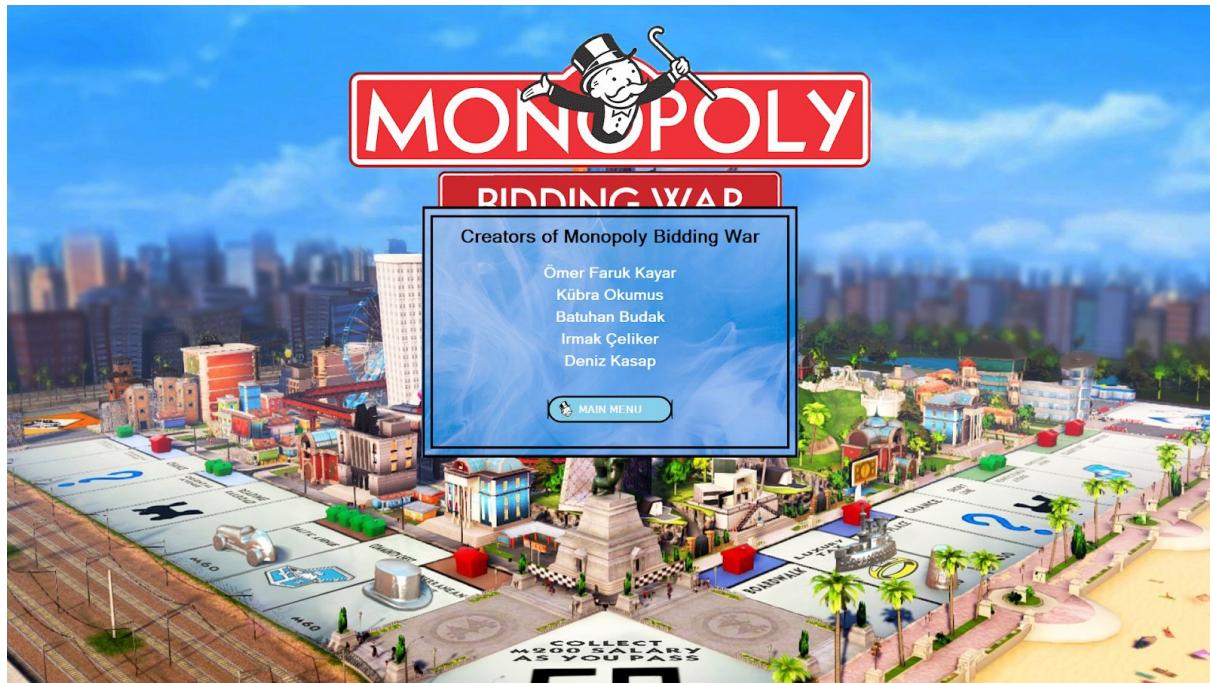


Figure 4: Credits pop-up screen

You can learn the names of the creators of the Monopoly Bidding War in the "Credits" screen.

3.5. Play

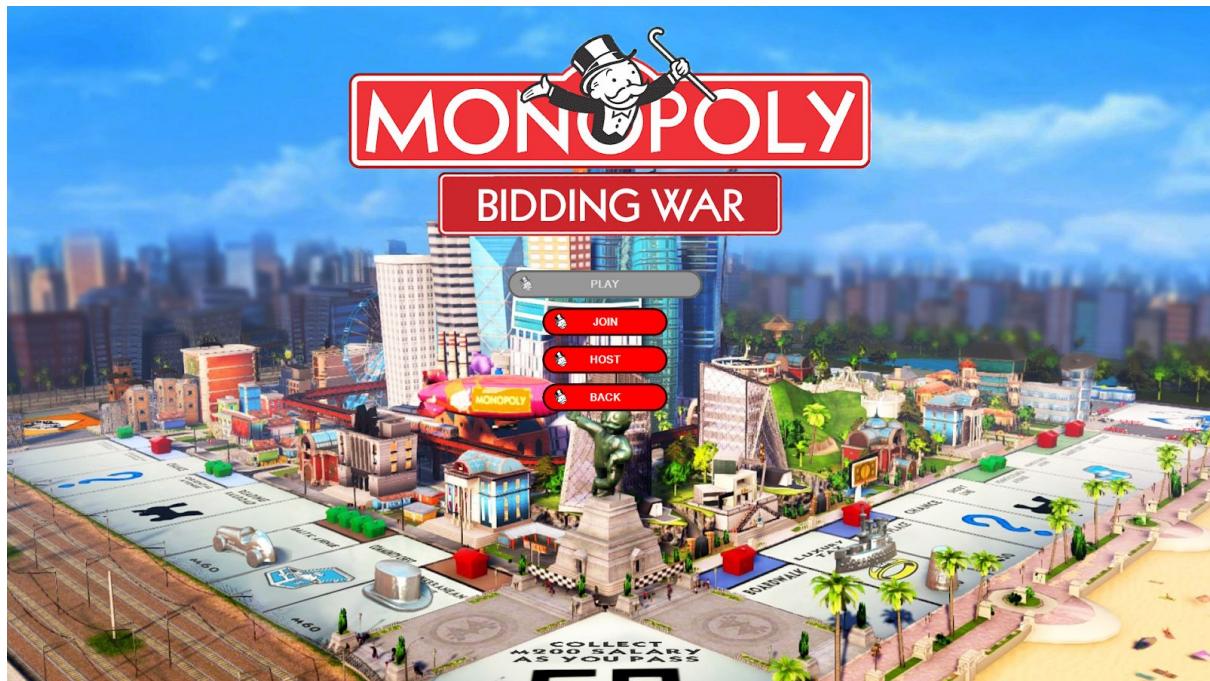


Figure 5: Play screen

In the “Play” screen, there are two options to start playing; being a host or joining a game which is opened by a host player. You can go back to the Main Menu by clicking the “Back” button.

3.6. Host Game

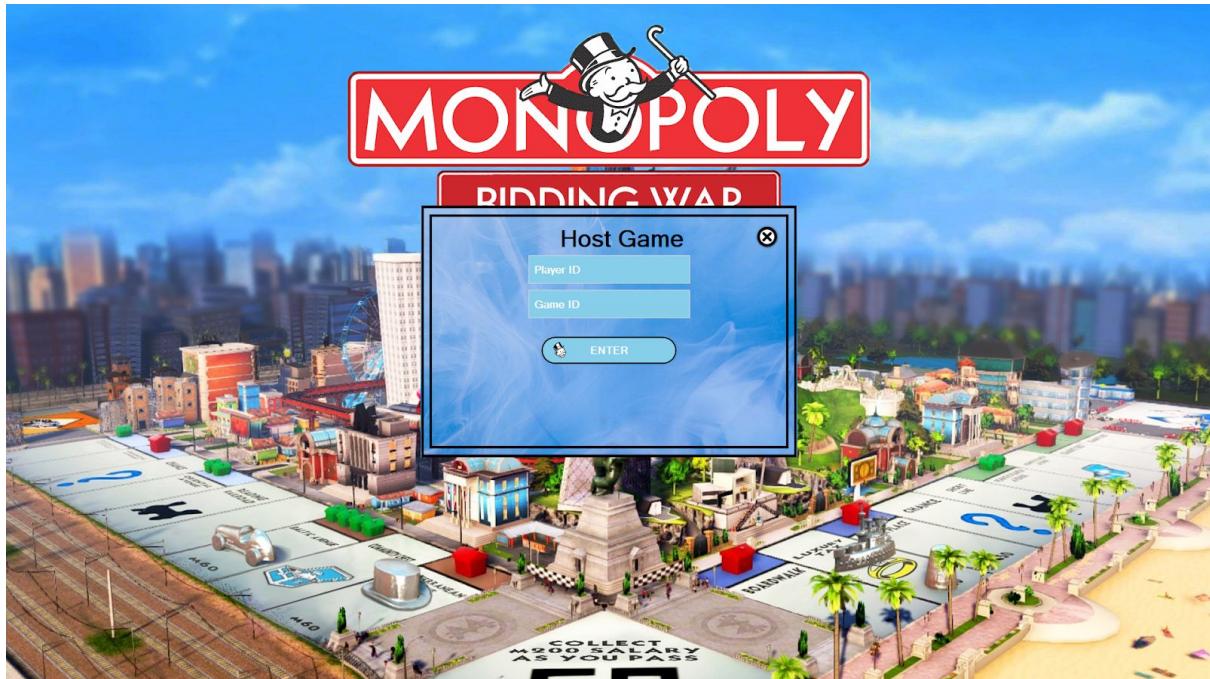


Figure 6: Host Game pop-up screen

To create a new game, you should write a player id and a game id of your choice. If the game id you wrote is unique, then the “Enter” button will be enabled. You need to share that game id with your friends to play with them.

3.7. Join Game

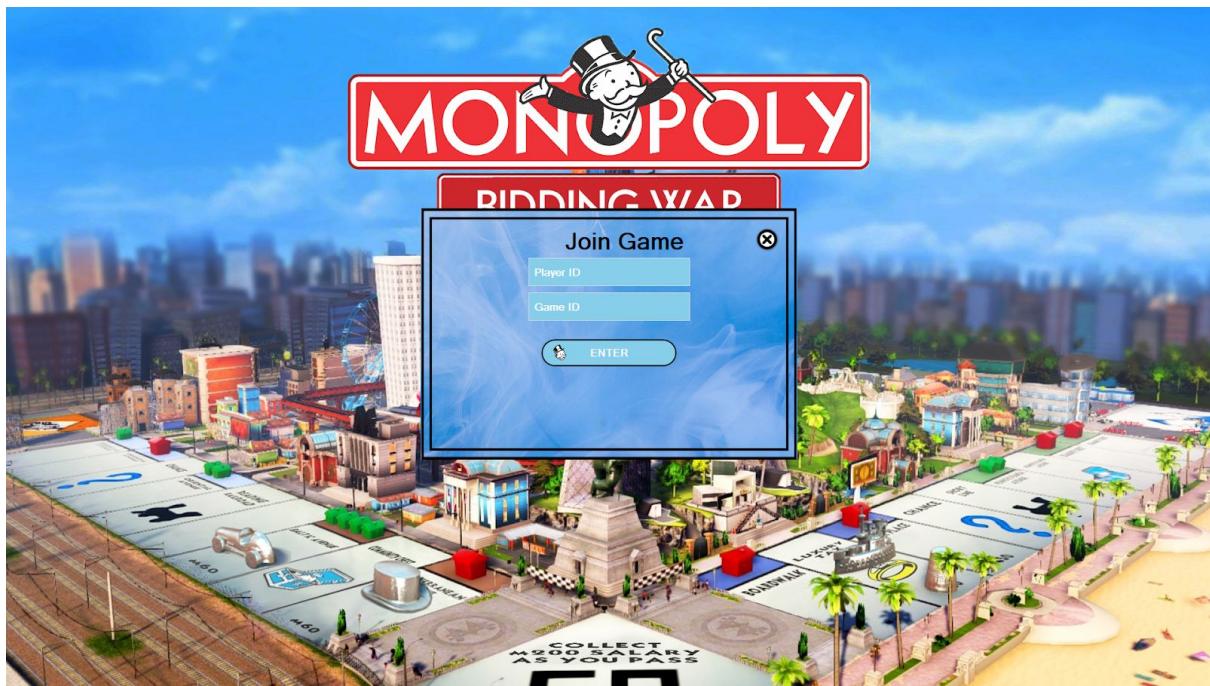


Figure 7: Join Game pop-up screen

You can choose a player id as you want. To join a game, you need to know a specific game id which is opened by another player. After writing the right game id, you can enter the game.

3.8. Choose Pawn



Figure 8: Choose Pawn screen

After entering the game, you need to choose one of the six different pawns.

The ones the other players choose can not be selected. You can also see, which player selects which pawn on your screen. After everybody chooses their pawns, the game starts.

3.9. Property Cards



Figure 9: Property card

If you land on a property, the corresponding card is displayed on the screen.

You can either buy that property on its price or start the auction by clicking the “Start Bidding War” button.

3.10. Auction



Figure 10: Bidding screen

On the bidding screen, you can make a bid you want. After every player makes their offers, the player who made the highest bid gets that asset.

3.11. Trading

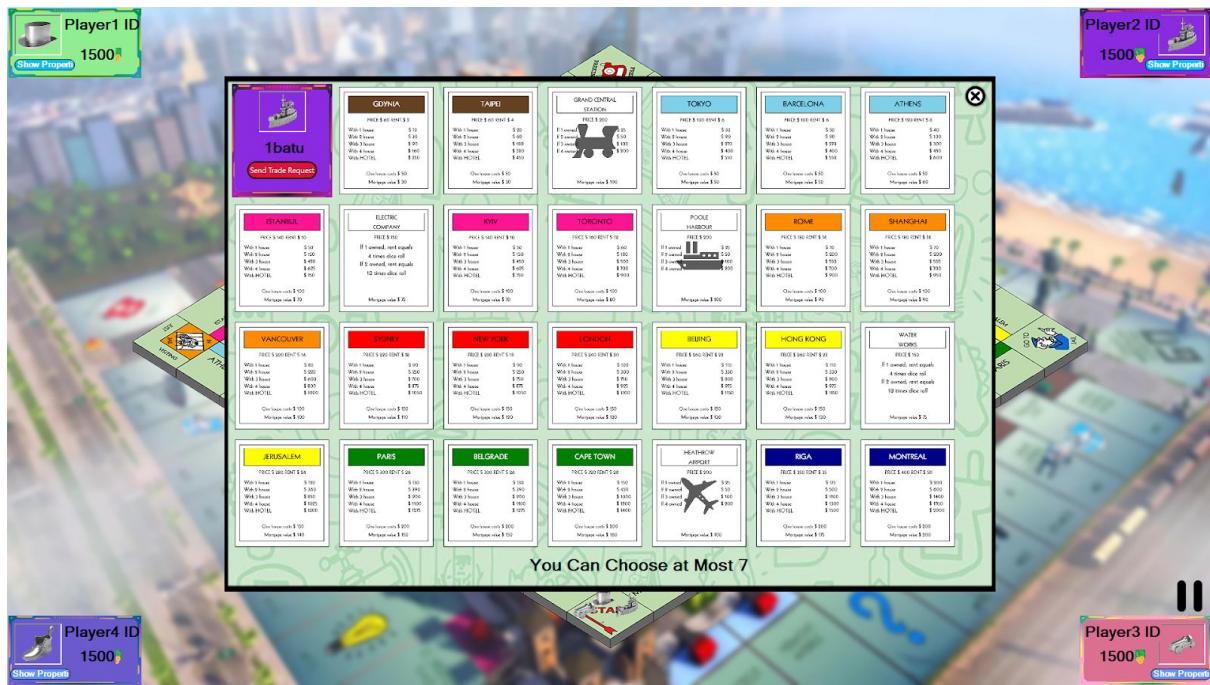


Figure 11: Sending Trade Request -1

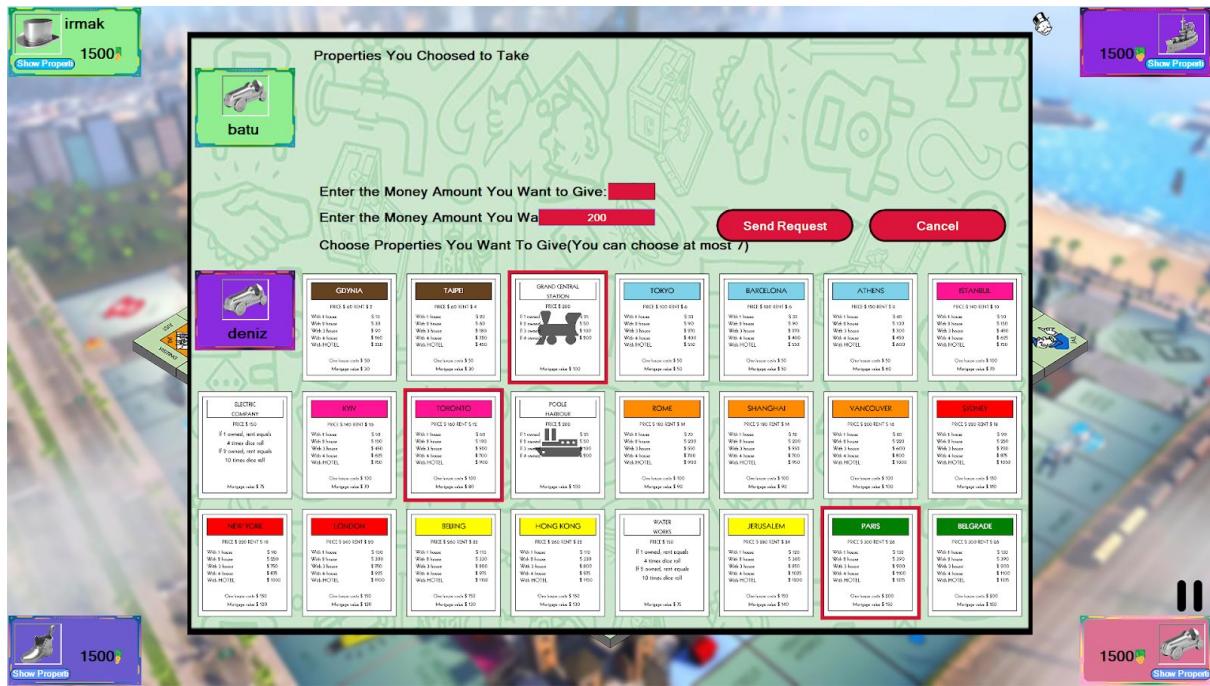


Figure 12: Sending Trade Request -2

You have the chance to send requests to another player to trade or buy the belongings of the other players if it is your turn. You can offer money or your belongings in return of the desired properties, cards or

money. After that, the other player will receive the offer on his/her screen and can either accept or deny the request.

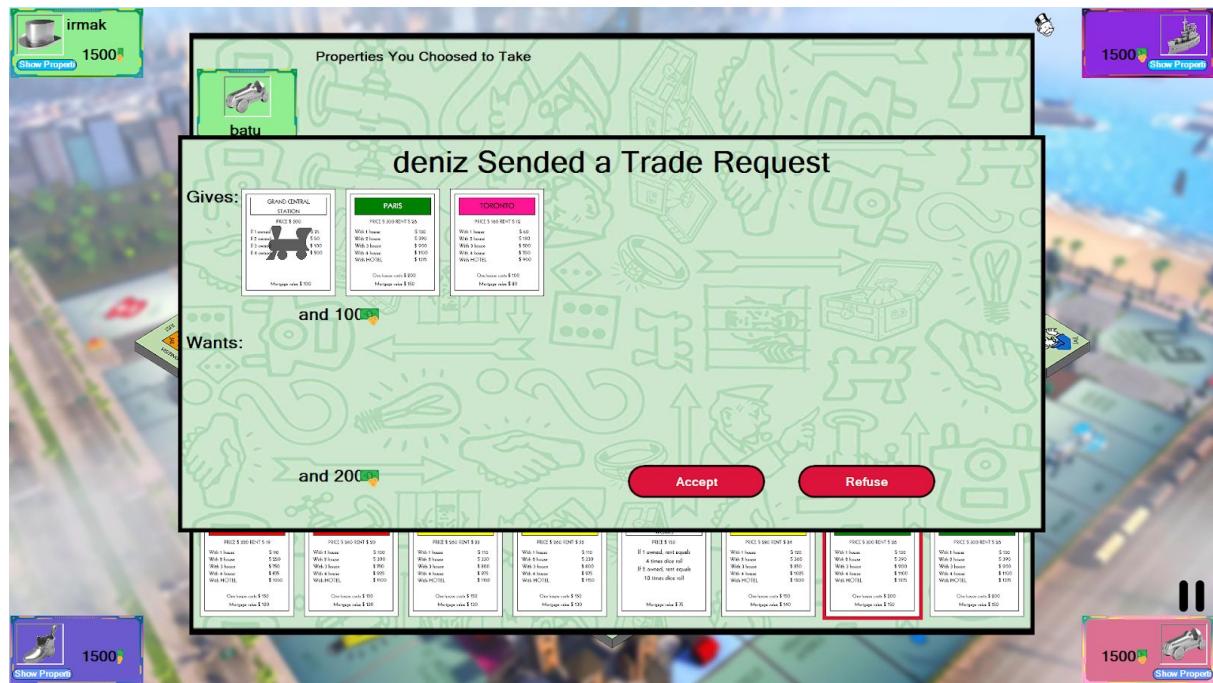


Figure 13: Trade Request screen

The trade request screen pop-ups on your screen if another player sends a trade offer to you on their turn. You can see what is offered to you in return to your desired belongings. You can accept or decline that request.

3.12. Jail



Figure 14: Jail screen

If you are in jail, you can try rolling doubles on the next round to get out of jail, if it is a success you can keep on playing on the next turn. However, you can only try rolling doubles for 3 rounds, if it is still a failure in the third round, you need to pay \$50 to the middle to set free.

As a second option you can pay \$50 to the middle any of the next 3 rounds and keep on playing the next round without trying to roll doubles.

3.13. Chance and Community Chest Cards



Figure 15: Chance Card



Figure 16: Community Chest Card

In the game, there are 3 Chance and 3 Community Chest squares.

When you land on one of these squares, by clicking on the pile found in the middle of the map you will be able to draw a card. According to the

content of the drawn card, you may lose or gain money, be sent to jail, have a chance to get out of jail without paying any money, or landed on a different square.

3.14. Pay Rent



Figure 17: Pay Rent screen
(pay rent)

When you land on an asset which is owned by another player, you need to pay the corresponding rent.

3.15. Build



Figure 18: Build House screen

In the game, there are 32 houses and 12 hotels in total. When all of them are being used in the game people will not be able to build houses anymore. There are three conditions to build a house on a property: you need to be located on that square, have to build only a house at one time and you need to own all the properties with the same color.

After building 4 houses, you will be able to build a hotel on the next rounds, and the other 4 houses are returned to the bank. The maximum number for building a house on a single property is also 4.

3.16. Pause Menu



Figure 19: Pause Menu screen

While playing the game, if you want to change the settings or quit the game, you can open the Pause Menu. You can continue playing by clicking the “Resume” button.

4. Build Instructions

Unzip the project file, save the unzipped file to a directory. The screen scale percentage needs to %100 and the resolution of the screen needs to be 1920x1080. There are 2 options to run the game:

1. Install Microsoft Visual Studio IDE to your computer. After the installation, find .sln file in the project files. It needs to be in the main directory. After opening the .sln file the code has to be started. Game screen will pop up.
2. In project, bin/Debug directory should contain an .exe file. After opening the .exe file, the game screen will pop up.

5. Work Allocation

- **Deniz Kasap:** He worked on the backend of the project, created the game logic and implemented the classes for the players and operations.
- **Batuhan Budak:** He implemented the UI of the game such as the main menu view, map view and game operations. He also added animations for the pawns and the dice.
- **Ömer Faruk Kayar:** His main task was the database of the game. He made sure that the game is online and can be played with 4 players.
- **Irmak Çeliker:** She worked on all reports and decisions of the implementation of the game. She added some customizations to the game. She worked on the debugging stage as well.
- **Kübra Okumuş:** She worked on all reports and decisions of the implementation of the game. She worked on database configuration. She worked on the debugging stage as well.