REQUIREMENT ANALYSIS

Vision

We envision a “Simulated Monopoly Game” for our customers. This simulation has designed for players to be able to play traditional Monopoly board game with basic instructions. With the help of this software, customer can simulate Monopoly without physical objects.

Problem Statement

On each iteration each simulated player will automatically take turn, roll dices, move on the board based on the face values, and based on the landed square act according to the rules of traditional Monopoly board game.

Scope

- This system provides information about how many outcomes may occur at the end of the game to customer.
- This system provides observing result of monopoly game without playing and wasting time.
- This system may provide an information about how to enhance and upgrade the game.

System Constraints

- User can’t have impact on the process of simulation after simulation starts.
- There can’t be more than 8 players and less than 2 players.
- The simulation will run within command prompt.
- Each player can roll the dice once per turn.

Stakeholders

- Murat Can Ganiz (Customer)
- Serap Korkmaz (Customer)
- A.Enes Gündüz (Developer)
- A.Tunahan Cinsoy (Developer)
- Muhammed F. Eroğlu (Developer)

Glossary of Term

Bank – A structure which handles all transactions happening in simulation

Board – Virtual plate for playing the game

Card – Prompts player to do set of instructions

Dice – Declares how many squares user will move

Chance Card – Mostly prompts player to move

Community Card – Actions which concern all of the players in the game

Cell – Sub-board fields which have specifications for operations

Starting Cell – Starting Cell, players get paid every time when they surpass here

Property Cell – Cell which is available for purchasing and building houses

Chance Card Cell – Cell which contains Chance cards

Community Card Cell - Cell which contains Community cards

Jail Cell – Cell which does jail functionality

Station Cell – Cell which contains stations, not suitable for building houses

Piece – An indicator which differentiates each player

Property – Buildings which are built for renting purposes

Player – Virtual actors of the game

Water Cell – Gets tax from player for Water Company

Electric Cell – Gets tax from player for Electric Company

Use Cases

1. Each player gets in game money according to the input value from bank
2. Each player selects their own icon
3. Player moves her/his icon forward one by one according to face value of the dice
4. When movement ends, player does the prompts of that cell
5. If the corresponding cell is Jail, user cannot move until 3 moves unless he/she rolls even number.
6. If the corresponding cell is Water or Electricity, player has to pay tax to (value which is declared before the start of the game) Bank.
7. If the corresponding cell is Property Cell, player can choose to buy or not to buy there according to his/her given possibility of taking risk values. If user comes his/her property cell again, he/she can choose whether building a house or not.
8. If the corresponding cell is Card Cell, player will take a card from the appropriate cell deck (e.g. Chance, Community) and will do the instructions. If user takes jail getaway card, he/she can use it in case of being in jail.
9. If the corresponding cell is Station Cell, player can choose to buy it. But these cells are not suitable for building houses.
10. Next player applies same steps.
11. If a player loses all of his money, he gets out of the game.
12. Until the number of candidates of the game becomes 1, same procedure happens.
13. The last player wins the game.