

CSE3063 – OBJECT ORIENTED SOFTWARE DESIGN
PROJECT 1 – ITERATION 1
REQUIREMENT ANALYSIS DESIGN

PROJECT NAME:
MONOPOLY GAME SIMULATION

Vision

In this project we are developing Monopoly game simulation with providing parameters (number of players, player names, starting amount, go square amount, number of tax squares and tax amount of tax square) from the user. The game shows the status of each player's actions and status to the system user.

Scope

Monopoly is a board game. In this game, players roll two six-sided dice to move around the game board, buying and trading properties and developing them with houses and hotels. Players collect rent from their opponents, with the goal being to drive them into bankruptcy. Money can also be gained or lost through tax squares.

System Constraints

- It is a simulation game that will be run as a console application.
 - It can be run on any device that has Java IDE installed.
 - There should be at least 2, at max 8 players.
 - The status of each player's actions will be provided to the system user at each iteration.
- Before the dice rolls: Cycle count, turn count, player name, current location and current money printed to the screen.
- After the dice rolls: Dice values, total dice value, current location after move, current money after move printed to the screen.

Rules

- There are minimum 2, maximum 8 players.
- After the first dice rolling, players are ordered by their dice values.
- Every player starts to the game with the given amount of money.
- If player's current location is a tax square, then she/he has to pay the tax amount to the bank.
- If player completes the 40 squared stage and passes from the go square then she/he earns go square amount of money.

- Player lefts the game when she/he is out of money or bankrupt.

Stakeholders

- Murat Can Ganiz (Customer)
- Serap KORKMAZ (Customer)
- Kevser İLDEŞ
- Fatmanur ÖZDEMİR
- Buse BATMAN
- Çağla ŞEN

Glossary of Terms

- Bank: It is for keeping money and spending among players when needed according to rules.
- Dices: Two equal sized cubes, which is used for generating random numbers between 1 and 12 total.
- Game board: The board game is played on that contains 40 squares.
- Money: Numbers representing amount each player has and to decide who win or lose at the end of the game.
- Piece: An object each player has, which can be car, hat, horse etc. and is to show where he/she is on the board.
- Player: A simulated person who plays the game.
- Square: The places on the board which shows properties, players will move on them.
- Go Square: First square of the board. If the player finishes the 40 squared stage, then increases her/his money by go square amount.
- Tax Square: If the player comes to a tax square, then she/he has to pay that tax amount to the bank.

Use Cases

- There is only one use case as this is a system simulation.

Use Case: Play Monopoly Game

Actors: User, System

1. User starts a new game.
2. User enters parameters required (such as player number, player money, number of tax squares etc.)
3. The simulation begins and informs user about players' info.

The step 3 is repeated until the game simulation ends (only one player left and all others are bankrupted).

References

<https://www.wikizeroo.org/index.php?q=aHR0cHM6Ly9lbi53aWtpcGVkaWEub3JnL3dpa2kvTW9ub3BvbHlfKGdhbWUp>