REQUIREMENT ANALYSIS DOCUMENT

Requirement Specification

Vision

Monopoly is a board game representing business people and property deeds. Required players minimum 2, maximum 8 players. Main purposes are buy valuable properties or businesses and raise money from players properties. Players who go bankrupt are disqualified. The last player wins.

Scope

Monopoly game will provide;
→ 40 square that are purchasable (land, transportation, public corporation) square, tax square, jail and the starting square. They include quantity of price, rent or tax except jail class.
→ Each player is given an equal amount of money at the starting point.
→ Players move by rolling dices. If the square entered by the player is a purchasable square, player can buy it if it enough money exists. If the square entered by the player is a tax square, the amount of money in the square according to tax type is took from the player's cash box. The player who runs out of money leaves the game or if three rounds pass after player entered in the jail and cannot leave the jail, player will go bankrupt and the game continues until the last player remains. . If the square entered by the player is a card square then player draw a card from deck and do process in card.
→ Each player who comes back to the starting point is paid a certain amount.

System constraints

GUI part is not included the game. The required displayments are made in console. To run the application JDK should be installed. No more plug-ins, softwares.

Project Members

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Terminology

Glossary of Terms (Alphabetically listed)

Board : This is a game board list that include squares.
Cards: This class includes cards types and apply cards effect.
Dice : The item is used to get random numbers between 1-6
Game : The environment that runs the game.
Jail : The square that blocks the player's move.
LandSquare: The square that has features of lands.

Main : Where the simulation was created.
Person : This class include players attributes.
PublicCorporationSquare: The square that has attributes of public corporations.
PurchaseableSquare: This is a interface of all of the purchasable squares.
Property : This class includes common features of purchasable squares.
Square : The structure that where players travel on and that constitutes the board object.
StartingSquare : Players start the game from this square and win award every time they pass.
TaxSquare: Players must pay taxes when they arrive at this square.
TransportationSquare: The square that has attributes of transportation.

Use case

1. Initially, we get properties from the config.properties file. This file includes player number, player start money in the game, tax amounts..
2. At the beginning of the game all players are in the starting square.
3. The first player throws the dices and progresses up to the sum of the dice.
4. If the square from which the player comes is the cards, player draw a card and the process specified on the card is applied. Else if the square is taxSquare, the player gives money according to tax square type. Else if the square is Jail then player enter the jail. According to rules of jail, player can get out of jail. Else if the square is purchasable then player will buy it.
5.If the square that player in it has a owner then player(renter) will pay rent to owner
6. When the player loss all money player will be bankrupt and he/she disqualified or he/she cannot exit in jail then player will be bankrupt.
7. When a player remains in the game, the game is over and that player wins.