| Requirements | Description | Check |
|---------------|---|----------|
| User story 1 | As a player, I want to start a new game with an existing gameboard. | V |
| User story 2 | As a player, I want to name the players with input or randomly generated strings to better differentiate the players. | √ |
| User story 3 | As a player, I want to see the status of any specific player and all players. | √ |
| User story 4 | As a player, I want to see the status of the game, including the squares and the players' positions on the gameboard. | √ |
| User story 5 | As a player, I want to query the next player | V |
| User story 6 | As a player, I want to save the current game to a file | \ |
| User story 7 | As a player, I want to load a game from a file and continue the game | √ |
| User story 8 | As a gameboard designer, I want to design a new gameboard based on an existing gameboard by modifying the property squares (including their name, price, and rent). | \ |
| User story 9 | As a gameboard designer, I want to load an existing gameboard and customize it by modifying its squares. | \ |
| User story 10 | As a gameboard designer, I want to save the gameboard I designed. | \ |
| FR1.1.1 | Players will be presented with a graphical menu to select from predefined gameboards. | V |
| FR1.1.2 | There will be a button that allows the user to start the game by pressing it. | V |
| FR2.1.1 | A text input field will be provided for each player to enter their name. | ✓ |
| FR2.1.2 | The system shall generate random names if players choose not to enter custom names, displayed in the GUI. | V |
| FR3.1.1 | During the game, each player's information, including their money, properties, and names, will be displayed on the screen. | V |
| FR4.1.1 | The gameboard will be visually represented in the GUI, showing player positions and property ownership. | V |
| FR4.2.1 | The GUI will refresh automatically after each action to reflect the latest game state. | V |
| FR5.1.1 | The current player will have an indicator to show that it is their turn. | √ |
| FR5.2.1 | The game system will automatically end the turn of the current player after all actions are completed, allowing the next player to start their turn. | V |
| FR6.1.1 | A "Save Game" button shall available in the GUI, prompting players to enter a filename and save the game. | V |
| FR6.1.2 | The system shall confirm the successful save operation through updating the save record displayed on the interface. | V |
| FR6.2.1 | A "Load Game" button will provide access to saved game files. | V |
| FR6.2.2 | The system shall restore the game state, including player positions, balances and game board details, upon loading. | V |

| FR7.1.1 | Designers will have access to a graphical interface for modifying property names, prices, and rent values. | V |
|---------|---|--------------|
| FR7.2.1 | A "Load game board" button will provide access to saved game board files. | V |
| FR7.2.2 | The system shall restore the game board state, including the details of each property, such as name, price, and rent, as well as the other fixed squares, upon loading. | V |
| FR7.3.1 | A "Save game board" button shall available in the GUI, prompting players to enter a filename and save the game board details. | \ |
| FR7.3.2 | The system shall confirm the successful save operation through updating the save record displayed on the interface. | > |
| NFR1.1 | The GUI shall be easy to use. User shall be able to use all the system functions after half an hour of training. After this training, users can find and use all function in the game by their own without reading the user manual. | \sqrt |
| NFR2.1 | The system shall respond to user inputs (e.g., clicks, selections) within 1 second to ensure a smooth and engaging gaming experience. | V |
| NFR2.2 | To maintain fluid user experience, during system operation, the GUI interface shall maintain a frame rate of over 30 frame per second. | \ |
| NFR3.1 | The system shall handle unexpected inputs gracefully. For example, input string to the property price when designing the game board. Providing informative error messages and guidance to users rather than crashing or freezing. | \sqrt |
| NFR4.1 | The average time to restart after a failure shall not exceed 2 minutes to minimize downtime. | \ |
| NFR4.2 | The percentage of events causing failure shall be less than 0.1% during normal operation. | > |