<Monopoly Game>

Use-case Specification

Version <2.0>

Revision History

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| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 2020/04/21 | 1.0 | First draft. | LianJiawei Group |
| 2020/06/20 | 2.0 | Update after Elaboration iteration. | LianJiawei Group |
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<Monopoly Game>

# 1. Introduction

#### **Purpose**

This report describes the use-case model comprehensively, in terms of how the model is structured into packages and what use cases and actors there are in the model.

#### **Definitions, Acronyms and Abbreviations**

See Glossary.

#### **References**

Glossary.

Use-Case: < Start Game >

**Brief Description**

Observer start play game.

**Actor Brief Descriptions**

Observer: An observer is a user who want to use this game system

**Preconditions**

Observer logs in his account successfully.

**Stakeholders and Interests:**

1. Game system should load the game scenery quickly.

Basic Flow of Events

1. Game system provides the board with start game button and so on.
2. Observer enters the game.

# The use case ends.

Alternative Flows

2a. Observer select the saved game to continue.

1. Game system loads the saved game.

Post-conditions

Update relative data. Start the game.

Special Requirements

Game system should show texts, pictures, and buttons to guide observers to start the game.

Additional Information:

**Frequency of Occurrence:** Only occurs at the beginning of a game.

Use-Case: < Move >

**Brief Description**

Observer click the dice to make movement.

**Actor Brief Descriptions**

Observer: An observer is a user who want to use this game system

**Preconditions**

It’s observer’s turn to move and observer is not be imprisoned.

**Stakeholders and Interests:**

1. Observers can access quick responses and feedback from game system.

Basic Flow of Events

1. Game system provides dice.
2. Observer clicks the dice.
3. Game system plays animation of rolling dice.
4. Game system displays the pips of dice.
5. Game system displays the moving route of observer.
6. Update the position of player.
7. Finish movement.

# The use case ends.

Alternative Flows

1a. Observer decides to use prop cards.

1. Game system displays what prop cards observer owns.
2. Use prop cards.

1b. Game system detects that player is imprisoned.

1. Skip this turn.

4a. Game system detects that player has ‘turtle’ buff.

1. Display a dice with one pip.

5a. Game system detects that player has ‘reverse’ buff.

1. Moves the player to the reverse direction.

6a. Game system detects that there is some barrier in the player’s route.

1. Set player’s position before the barrier.

6b. Game system detects that player has ‘stay’ buff.

1. Do not update the position.

Post-conditions

Update the position of observer. Finish observer’s turn.

Special Requirements

1.Game system provides texts and pictures as tips.

2.The game is able to pause when on background.

Additional Information:

**Frequency of Occurrence:** Could be nearly continuous.

Use-Case: < Use Prop Cards>

**Brief Description**

Observer use prop cards he own.

**Actor Brief Descriptions**

Observer: An observer is a user who want to use this game system

**Preconditions**

Observer have the prop card

**Stakeholders and Interests:**

1.Observer can access quick responses and feedback from game system.

2.Observer can use prop card easily.

Basic Flow of Events

1. It is observer’s turn,
2. Observer decide to use prop card Turtle Card.
3. Game system checks validity.
4. Game system ask effect on which player.
5. Observer select the player.
6. Game system add turtle buff to the design player.
7. Observer use prop card finish.

# The use case ends.

Alternative Flows

2a: Observer decide to use prop card Stay card.

1. Game system checks validity.
2. Game system ask effect on which player.
3. Observer select the player.
4. The player chosen by the observer can’t move in next turn.
5. Observer use prop card finish.

2b: Observer decide to use prop card Doubling card.

1. Game system checks validity.
2. Game system ask effect on which square.
3. Observer select the square.
4. Game system validate whether the square is occupied by observer.
5. The chosen square’ tolls will be doubling in three turns.
6. Observer use prop card finish.

2c: Observer decide to use prop card Transposition card.

1. Game system checks validity.
2. Game system ask effect on which player.
3. Observer select the player.
4. Game system exchange the position of chosen player and observer.
5. Observer use prop card finish.

2d: Observer decide to use prop card Reverse card.

1. Game system checks validity.
2. Game system ask effect on which player.
3. Observer select the player.

4. Game system change the moving direction of the chosen player.

5. Observer use prop card finish.

2e: Observer decide to use prop card Roadblock card.

1. Game system checks validity.
2. Game system ask effect on which square.
3. Observer select the square.
4. Game system set a roadblock in the chosen square.
5. Observer use prop card finish.

2e: Observer decide to use prop card Roadblock card.

1. Game system checks validity.
2. Game system ask effect on which square.
3. Observer select the square.
4. Game system set a roadblock in the chosen square.
5. Observer use prop card finish.

2f: Observer decide to use prop card Free card.

1. Game system checks validity.
2. Game system ask observer to confirm use the prop card.
3. Observer confirm usage.
4. Observer will not need to pay tolls.
5. Observer use prop card finish.

2g: Observer decide to use prop card Framed card.

1. Game system checks validity.
2. Game system ask effect on which player.
3. Observer select the player.
4. Game system add an imprisoned buff to the chosen player.
5. Observer use prop card finish.

2h: Observer decide to use prop card Snatch Card.

1. Game system checks validity.
2. Game system ask effect on which player.
3. Observer select the player.
4. Game system select a prop card which the chosen player had randomly.
5. Game system recycle the prop card from the chosen player.
6. Game system add the prop card in observer’s own prop card.
7. Observer use prop card finish.

2h: Observer decide to use prop card Dice card.

1. Game system checks validity.
2. Game system ask which point observer wanted.
3. Observer select the point.
4. Game system set the next dice point according to the chosen point.
5. Observer use prop card finish.

Post-conditions

Game system update some information according to the prop card.

Special Requirements

Observer can easily get prop card information.

Additional Information:

**Frequency of Occurrence:** Could be nearly continuous.

Use-Case: < Trigger events in a square >

**Brief Description**

Game system trigger events according to the square.

**Actor Brief Descriptions**

Observer: An observer is a user who want to use this game system

**Preconditions**

Observers finish movement and stay in a square.

**Stakeholders and Interests:**

1. Observers can access quick responses and feedback from game system.

Basic Flow of Events

1. Observer enters a square and stays there after finishing movement.
2. Game system identifies the square.

3. The square is Start Point.

4. Game system rewards money to observer.

5. Game system perform information: p1 go through the start point, reward $1000.

6. Finish the event.

# The use case ends.

Alternative Flows

3a: The square is a property.

1: Game system asks observer whether build the house.

2. Observer responses the game system.

3. Game system updates the square information and observer’s money.

3b: The square is occupied by other observers.

1. Game system identifies the house level.

2. Game system updates the observer’s money according to house level.

3c: The square is Airfield:

1. Observer selects a square to land on.

2. Game system updates observer’s position.

3d: The square is Prison:

1. Game system updates the observer’s state to imprisoned state.

3e: The square is Cappuccino:

1. Observer selects a house he owns and doubling the tolls.

3f: The square is Random events.

1. Game system selects an event randomly.

2. Game system executes the event.

3. Game system updates the relative data.

Post-conditions

Update the relative data. Finish observer’s turn.

Special Requirements

Game system can execute exactly and quick.

Additional Information:

**Frequency of Occurrence:** Could be nearly continuous.

Use-Case: < Save game >

**Brief Description**

Observer save game progress.

**Actor Brief Descriptions**

Observer: An observer is a user who want to use this game system

**Preconditions**

The Observer is playing games.

**Stakeholders and Interests:**

1.Observers can quickly save the game and well preserved.

Basic Flow of Events

1. Observer are playing games.
2. Observer click the quit button.
3. Game System save game progress.
4. Game system exit to the home page.

# The use case ends.

Alternative Flows

3a: Game system save the game progress failed.

1. Game System perform message: Game progress save failed. Please try again.

2. Game continues.

Post-conditions

The game progress is saved and the game exits.

Special Requirements

Game system can save game progress correctly.

Additional Information:

**Frequency of Occurrence:** Seldom.