# Introduction

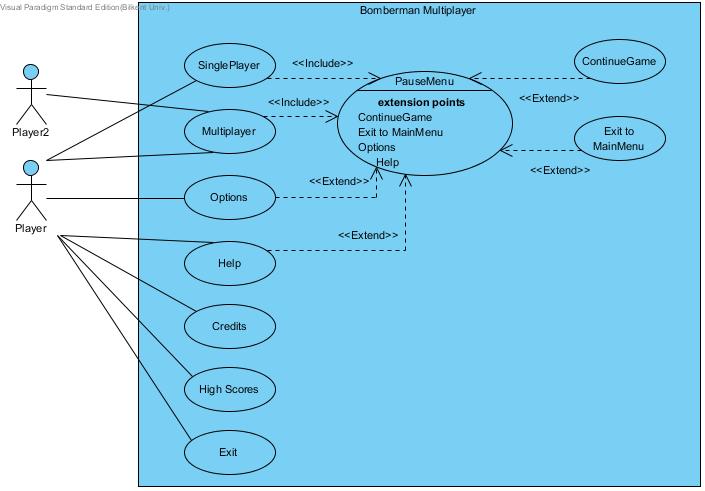
# Overview

# Functional requirements

# Nonfunctional requirements

# System models

## Use case model

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## Use cases

**Use case #1:**

**Use case name:** SinglePlayer

**Participating actors:** Player

**Interests:** Player aims to be the last man standing with a high score.

**Entry condition:** Player had executed the game and he is on the main menu, presses the “Single Player” button.

**Exit condition:** Player presses the “Pause Game” button or game is over.

**Pre-condition:** The default or last saved settings is applied.

**Post-condition:** The score of the player is added to high score chart if he wins and makes enough score.

**Main Flow of Events:**

1. Player starts the game the game and clicks “Single Player” button.

2. System creates the game area for the first level with destructible bricks of two types and non-destructible bricks. The player is positioned on the top left corner and 3 computer opponents are positioned on other corners. A game timer is set.

3. Player and opponents breaks the bricks by dropping bomb near them. After a destructible wall is destroyed totally, zero or one power up is dropped there by system and the first bomber goes through it takes that power up.

4. The bombs dropped by bombers also affects the bombers themselves. Bomber who goes through an explosion 3 times is eliminated.

5. The game continues until only one player remains. If the player is died, the game directly ends.

6. At the end, the System brings the game over screen front and if the player is winner and has a high score around previous high scores, its score is written on high scores chard with the Player’s name.

7. The player is brought back to main menu screen.

**Alternative Flows:**

1. More than one players are still alive when time limit is reached.

A.1. Bomber with highest score so far is selected to be winner.

A.2. System brings the game over screen front and if the player is winner same procedure is applied.

B. User clicks the “Pause Game” button.

B.1. Pause menu is brought front.

B.2. Case 3 is applied.

**Use case #2:**

**Use case name:** Multiplayer

**Participating actors:** Player1 & Player2

**Interests:** Players aims to be the last man standing by defeating both other player and computer opponents with a high score.

**Entry condition:** Player had executed the game and he is on the main menu, presses the “Multiplayer” button.

**Exit condition:** Player presses the “Pause Game” button or game is over.

**Pre-condition:** The default or last saved settings is applied.

**Post-condition:** The score of the winner player is added to high score chart if he makes enough score.

**Main Flow of Events:**

1. Player starts the game the game and clicks “Multiplayer” button.

2. System creates the game area for the first level with destructible bricks of two types and non-destructible bricks. The player1 is positioned on the top left corner, the player2 is positioned on the bottom right corner. The 2 computer opponents are positioned on other corners. A game timer is set.

3. Players and opponents breaks the bricks by dropping bomb near them. After a destructible wall is destroyed totally, zero or one power up is dropped there by system and the first bomber goes through it takes that power up.

4. The bombs dropped by bombers also affects the bombers themselves. Bomber who goes through an explosion 3 times is eliminated.

5. The game continues until only one player remains. If both 2 players are died, the game directly ends.

6. At the end, the System brings the game over screen front and if the winner is one of the 2 players and he has a high score around previous high scores, its score is written on high scores chard with the Player’s name.

7. System displays the main menu screen.

**Alternative Flows:**

1. More than one players are still alive when time limit is reached.

A.1. Bomber with highest score so far is selected to be winner.

A.2. System brings the game over screen front and if winner is one of the players, same procedure is applied.

B. Users click the “Pause Game” button.

B.1. Pause menu is brought front, is controlled by only one player.

B.2. Case 3 is applied.

**Use case #3:**

**Use case name:** PauseMenu

**Participating actors:** Player

**Interests:** Player aims to pause the game

**Entry condition:** A single or multiplayer game is being played and user clicks the “Pause Game” button.

**Exit condition:** Player presses the “Continue Game”, “Options”, “Help” or “Exit to Main Menu” buttons.

**Pre-condition:** Current game time and scores are shown in screen.

**Post-condition:** -

**Main Flow of Events:**

1. User clicks “Pause Game” button from game screen.

2. System freeze the game timer and displays the game timer and current game scores.

3. If user clicks “Continue Game” button, previous game screen is brought back and continues.

4. If user clicks “Options” button, case 4 is applied.

5. If user clicks “Help” button, case 5 is applied.

6. If user clicks “Exit to Main Menu” button, the Main Menu is displayed.

**Use case #4:**

**Use case name:** Options

**Participating actors:** Player

**Interests:** Player aims to change the game configurations.

**Entry condition:** Player is in main menu or pause menu and clicks the “Options” button.

**Exit condition:** Player presses the “Save & Exit” or “Exit without Saving” buttons.

**Pre-condition:** The default or last saved settings is shown in configurations.

**Post-condition:** User’s changes is saved.

**Main Flow of Events:**

1. User clicks “Options” button from main menu or pause screen.

2. System displays the Options screen where the adjustable settings with current configurations are shown.

3. User configures the game speed and volume settings of sounds and music according to his desire.

4. User clicks “Save & Exit” button and System brings user to Pause Menu or Main Menu according to the state before the Options.

**Alternative Flows:**

1. User goes back without any change.

A.1. User clicks “Exit without Saving” button and System brings user to Pause Menu or Main Menu according to the state before the Options.

**Use case #5:**

**Use case name:** Help

**Participating actors:** Player

**Interests:** Player wants to be informed about game rules and playing.

**Entry condition:** Player is in main menu or pause menu and clicks the “Help” button.

**Exit condition:** Player presses the “Back” button.

**Pre-condition:** -

**Post-condition:** -

**Main Flow of Events:**

1. User clicks “Help” button from main menu or pause screen.

2. System displays the Help screen where user can find game information and instructions.

3. User clicks “Back” button and System brings user to Pause Menu or Main Menu according to the state before the Help.

**Use case #6:**

**Use case name:** Credits

**Participating actors:** Player

**Interests:** Player wants to be informed about the developers of the game.

**Entry condition:** Player is in main menu and clicks the “Credits” button.

**Exit condition:** Player presses the “Back” button.

**Pre-condition:** -

**Post-condition:** -

**Main Flow of Events:**

1. User clicks “Credits” button from main menu.

2. System displays the Credits screen where user can find information about the developers.

3. User clicks “Back” button and System brings user to Main Menu.

**Use case #7:**

**Use case name:** High Scores

**Participating actors:** Player

**Interests:** Player wants to see game’s high scores records.

**Entry condition:** Player is in main menu and clicks the “High Scores” button.

**Exit condition:** Player presses the “Back” button.

**Pre-condition:** -

**Post-condition:** -

**Main Flow of Events:**

1. User clicks “High Scores” button from main menu.

2. System displays the sorted high scores chart.

3. User clicks “Back” button and System brings user to Main Menu.