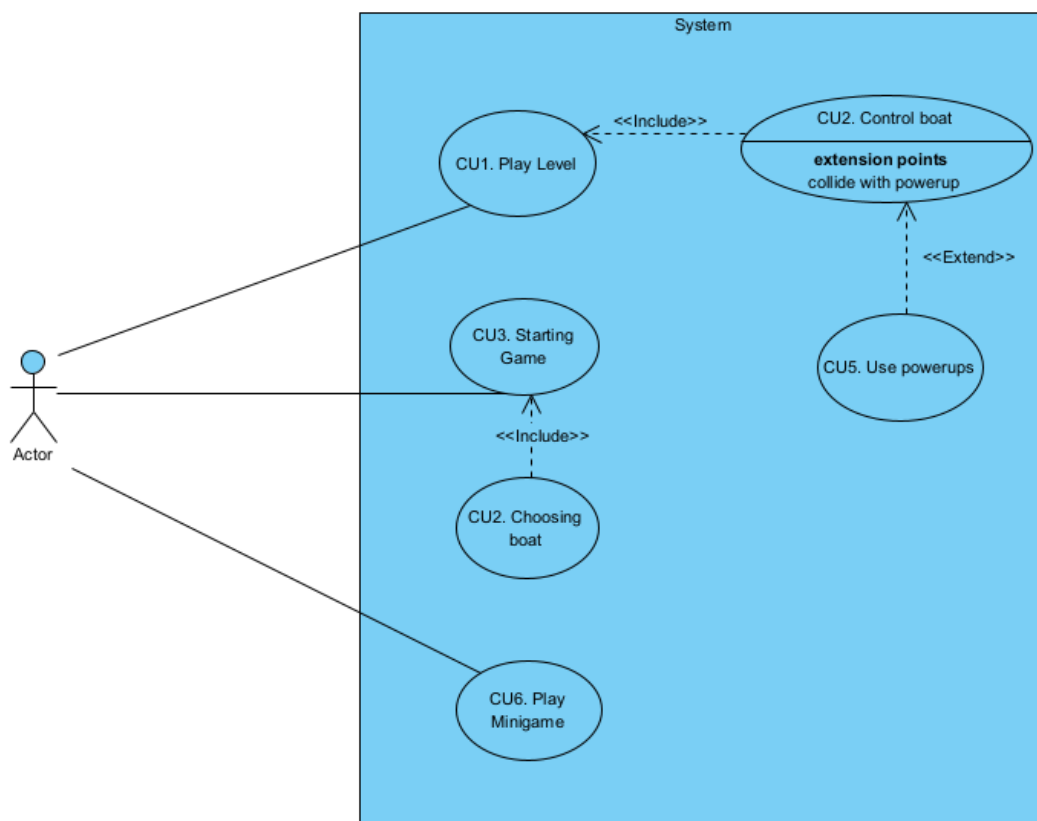


Section n: Requirements diagram

n.1 Use case Diagrams



n.1 Textual Description of the use cases

Unique identifier: CU1. Play level

Context of use

- We start the level.

Preconditions and activation

- The user is running the game and has already selected the boat.

Guarantees of success or post-conditions

- The level is loaded, and the player can play without issues.

Main scenario

- The player will be able to move around using the movement keys.
- Along the course, obstacles appear, and the player must avoid them.
- The player's aim is to reach the finish line in the shortest possible time and ultimately to be the first boat to do so.

Alternative scenarios

- The game might crash whilst the player tries to access the game.

Unique identifier: CU2. Choosing the boat

Context of use

- The user chooses the boat by using the control keys from a menu that is displayed on screen. This implies having the same boat on all 3 levels.

Preconditions and activation

- The game has been started.

Guarantees of success or post-conditions

- The player chooses the boat they want to play successfully.

Main scenario

- The system loads and displays the different boats on the screen.
- Each one has different characteristics, varying in style and stats.
- The player will choose a different boat depending on his preference.

Alternative scenarios

- The user exits the game without completing the action of choosing a custom boat.

Unique identifier: CU3. Start game

Context of use

- When starting the program.

Preconditions and activation

- Being on the start screen.

Guarantees of success or post-conditions

- Once the boat is chosen, the level screen is loaded.

Main scenario

- The player chooses to start a new game.
- The system loads the first screen where the user chooses the boat to play with.

Alternative scenarios

- An error occurs, and the player cannot start the game or finally decides not to play and closes the program.

Unique identifier:CU4. Control boat

Context of use

- The user wants to control the boat.

Preconditions and activation

- The boat has been selected (CU2) and the level has begun. Both previous cases have been successful.

Guarantees of success or post-conditions

- The boat movement matches the keys stricken by the user.

Main scenario

- The user presses the assigned key in the direction in which they wish to move.
- The system checks the validity of the movement and performs the movement if allowed.
- The system shows the change of position according to the user's decisions and the validity of them.
- The system continues checking if the control keys are pressed and the validity of them until the level comes to an end.

Alternative scenarios

- The move indicated by the player is invalid. The system makes no move, displays the game screen, and waits for a new move.
- The system is not able to recognize the key pressed by the user, displaying no movement.

Unique identifier: [CU5. Use Powerups](#)

Context of use

- During the race, power-ups will be available for grabs if the player collides with them.
- Being in a race.

Guarantees of success or post-conditions

- Player gets a Powerup to use during the race changing for a given time the way the boat behaves and the way the game is played.
- The system detects the selected Powerup and applies it accordingly.

Alternative scenarios

- Error in the detection of collision with the powerup.
- The powerup is not applied correctly or applied at all.

Unique identifier: CU6. [Play mini game](#)

Context of use

- If the boat is destroyed, the player will have a chance to come back to life by playing the Simon says mini game.
- Starts after boat is destroyed.

Guarantees of success or post-conditions

- If you pass the mini game, you will return to life.

Main scenario

- The player's boat has been destroyed and they are given an opportunity to return to the game as they left it.

Alternative scenarios

- The player loses the mini-game and the race ends.
- The system fails to start the mini-game and simply ends the race.