

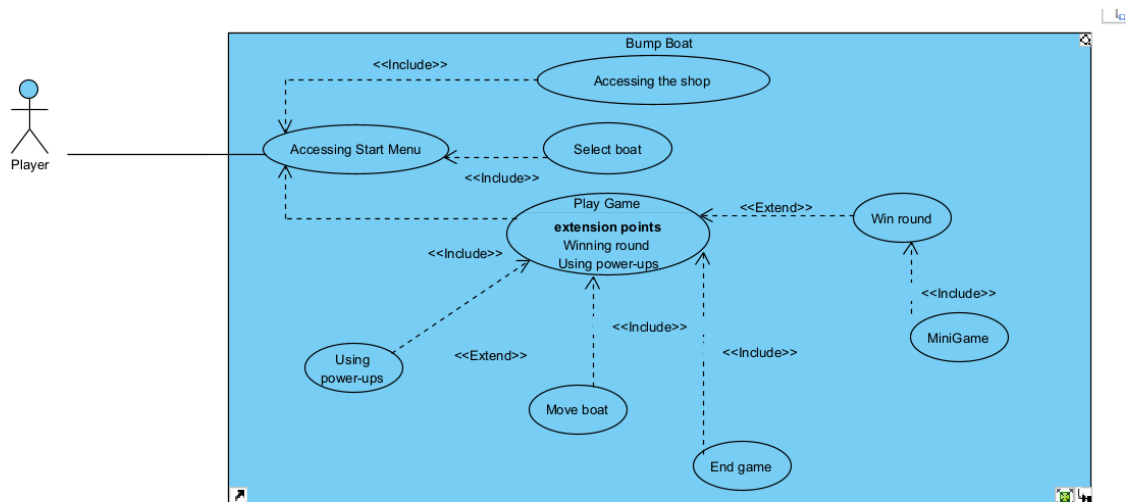
# **BUMP BOAT**

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## 1. USE CASE DIAGRAM:



### a. USE CASE DOCUMENTATION

#### UC1. Accessing Start Menu

Context of Use: The player accesses this menu to access the shop, selects the boat or starts a game.

Preconditions: The player can see the menu when the game is executed

Success Guarantees / Post-conditions: A new game is started, the boat can be upgraded, the boat can be changed

#### Main Scenario:

1. The game shows the menu
2. The player selects 1 of the 3 options
3. The player submits the changes, confirming the boat, or the power-ups the user has bought or starting a new game.

#### UC2. Accessing the shop

Context of Use: The player accesses the shop to buy different power ups which can give them advantages during the game using coins obtained during the minigame.

Preconditions: The player must have accessed the start menu first.

Post-conditions: Accessing the shop menu.

Main Scenario:

1. The player selects the shop in the start menu.
2. The system shows to the player the shop menu.
3. The player selects what they want to buy (or not buying anything).
4. The player confirms their decision.
5. The system will add the power ups to the player's inventory in the next game.

Alternative Scenario:

- The player tries to buy something without having enough money and an error message is shown.

**UC3. Select boat**

Context use: Before starting a game the user will be able to select a boat among several options

Preconditions: The player has to execute the executable enter the start menu.

Success guarantees/Post condition: The player will start a game with selected boat

Main scenario:

1. The player accesses main menu
2. The player selects boat

Alternative scenario:

- The player tries to start the game without selecting boat
- The window asking to select boat pops-up

**UC4. Play Game**

Context of Use: The player will be able to start a game whenever they have accessed the menu.

Preconditions: The player runs the executable file of the game.

Success guarantees / Post condition: A new game is now created.

Main scenario:

1. The player accesses the menu.
2. The player selects the option "Start game".
3. The new game is created.

Alternative scenario:

- The game is not correctly created and an error message is shown.

## **UC5. Win round**

Context of Use: when player arrives first to the finish line without breaking the boat the round is won

Precondition:

1. The player accesses the main menu
2. The player starts a game

Success Guarantees/Post-Conditions:

The game shows the user a text saying that the user won

Main Scenario:

1. The player starts a game
2. The player avoids colliding with obstacles
3. The player arrives first to the finish line

Alternative Scenario:

- The user didn't arrive the first, so the game show a text saying that the user lost, and the game ends

## **UC6. Minigame**

Context of Use: When the player wins a level, they will automatically start a minigame in which they will have to obtain coins from a lake in a limited time. These coins will be used afterwards to buy power-ups at the shop.

Preconditions: The player must have won a level to start playing the minigame.

Post-conditions: The player has played the minigame successfully and they might have obtained a certain number of coins.

Main Scenario:

1. The player wins a level.
2. The mini-game starts and a countdown starts.
3. The player moves across the lake by boat obtaining as many coins as possible.
4. The countdown ends and the mini-game finishes.
5. The amount of coins that the player has obtained are stored for the next time they go to the start menu.

Alternative Scenario:

- The mini-game is not correctly executed and an error occurs.

## **UC7. End Game**

Context of Use: The player will end a game whenever they lose a round or the boat breaks.

Precondition: The player has already started a game.

Success Guarantees/Post-Conditions: The player returns to the start menu.

Main Scenario:

1. The player has started a game.
2. The player overtakes the other boats.
  - 2.1. The player is not able to overtake the other boats.
3. The player avoids obstacles.
  - 3.1. The player boat breaks.
4. The player passes all rounds.

Alternative Scenario:

- The game is not correctly ended and an error message is shown.

## **UC11. Move boat**

Context of Use: The player encounters an obstacle during a game.

Precondition: The player has already started a game.

Success Guarantees/Post-Conditions: The player's boat does not collide, maintaining its current attributes.

Main Scenario:

1. The player has started a game
2. The player's boat heads towards an obstacle.
3. The player presses the required buttons so as to avoid the obstacle.
4. The player continues with the game.

Alternative Scenario:

- The player is not able to press the buttons in time, colliding with the obstacle.
- A bug occurs causing the player's boat to pierce through the obstacle.