

## Section 1. Use Case Diagrams

## Section 2. Textual description of use cases

The following is a textual description of the use cases shown in the diagram in the previous section.

### Unique identifier

- CU1. Play level

### Context of use

- The level is started.

### Preconditions and activation

- The user has logged onto the game and has already chosen his boat.

### Guarantees of success or post-conditions

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

### Main scenario

- The player uses the movement keys to move around and avoid obstacles.
- 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, thus arriving before any opponent.

### Alternative scenarios

- The user tries to access the game and an error occurs leading to a crash.

### **Unique identifier**

- CU2. Choose boat

### **Context of use**

- The user chooses via the keyboard cursors the boat he wants to play with. 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 will have different aesthetics and stats.
- The player chooses the boat that seems most suitable depending on their preferences.

### **Alternative scenarios**

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

### **Unique identifier**

- CU3. 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.

### **Guarantees of success or post-conditions**

- The boat moves in the direction indicated 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 displays the game screen with the player's new position.
- The system continues to display the game screen and waits for new moves until the end of the level.

### **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.

**Unique identifier**

- CU4. 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 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.

### **Unique identifier**

- CU5. Being in shop

### **Context of use**

- Once the mini-game is over, the player is presented with a shop where they can redeem the points earned in the mini-game for Powerups for the next race.

### **Preconditions and activation**

- Play the mini game (CU4).

### **Guarantees of success or post-conditions**

- A shop screen opens.

### **Main scenario**

- The system detects that the mini game has been completed.
- The system checks the number of points of the player.
- The system displays the shop screen.
- The user closes the shop.

### **Alternative scenarios**

- Some kind of error occurs.

**Unique identifier**

- CU6. 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 next race. Main scenario
- The system detects the selected Powerup.

**Alternative scenarios**

- Error.

**Unique identifier**

- CU7. 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 requests 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.