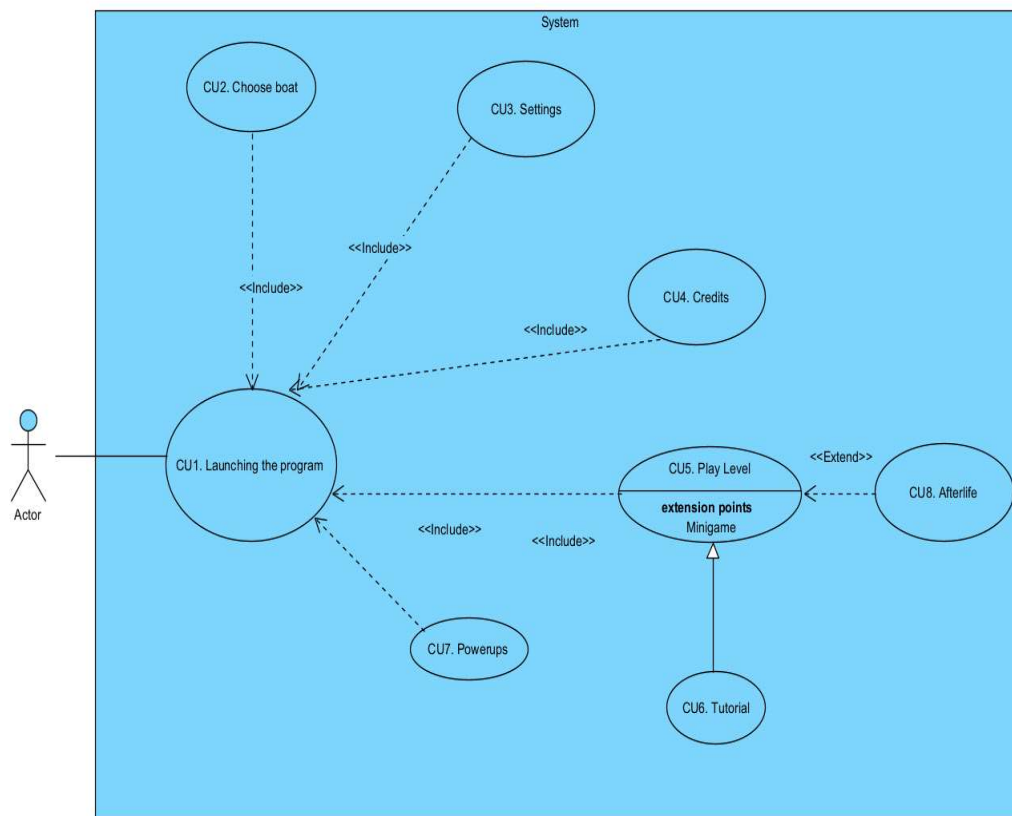


## Section n: Requirements diagram

### n.1 Use case Diagrams



## n.1 Textual Description of the use cases

### **Unique identifier:** CU1. Launching the program

#### **Context of use**

- The user clicks on the executable to launch the game. Once this is done a menu is displayed in which the player can select between “play level”, “choose boat”, “settings”, “tutorial”, “credits” and “exit to desktop”.

#### **Preconditions and activation**

- The program is properly installed, and the process launches once the user runs the executable.
- The user fulfills the minimum requirements in his machine.

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

- The program properly displays the main menu.

#### **Main scenario**

- The user has installed the game.
- The user launches the program properly.

- The menu is loaded and displayed on the user's screen.
- The user can navigate through the main menu.

### **Alternative scenarios**

- The user's computer does not have the necessary resources to run the game appropriately.
- There has been a problem with the installation and the executable behaves oddly.

### **Unique identifier:** CU2. Choose boat.

#### **Context of use**

- When the user clicks on the "choose boat" button, he will be able to see all the boats and their trade-offs, and he will be able to navigate through them to choose the one he prefers the most.

#### **Preconditions and activation**

- The user is already running the game and in the main menu.

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

- The boat selection menu is properly displayed.
- The user can navigate through the menu and see the boats.
- Once the user selects a boat, changes are applied and shown in his next run.

#### **Main scenario**

- The user is on the main menu.
- He clicks on the "choose boat" button.
- The user can see all the boats.

- The user selects a boat, and that boat is loaded for the next run.
- The user goes back to the main menu with the new changes applied.

### **Alternative scenarios**

- The user hasn't played the game before and in case he decides to play the level before selecting a boat, there is already a default one selected for him.
- In case the user enters the boat selection menu and exits it without selecting a new one, the previous selection still holds.

## **Unique identifier:** CU3. Settings

### **Context of use**

- When the user clicks on the "settings" option, a menu in which he can configure various aspects of the game is displayed.

### **Preconditions and activation**

- The user is already running the game and in the main menu.

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

- The user can configure the settings to his liking bounded by the options he is given.

### **Main scenario**

- The user is on the main menu.
- The user wants to change some aspect of the game's settings.
- The user clicks on the "settings" button and key binds and volume options are displayed, including a mute option.
- The user modifies either the key binds, the volume or both and saves the changes. The game's behavior is modified accordingly.
- The user goes back to the main menu with the changes applied.

### **Alternative scenarios**

- The user does not change any settings and the game keeps behaving in the same way it did before.
- The user makes some changes but does not save them. Not altering the way, the game behaves.

## **Unique identifier:**CU4. Credits

### **Context of use**

- The user is on the main menu, and he wants to see the credits of the game.

### **Preconditions and activation**

- The user is already running the game and in the main menu.

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

- The user can see all the people that participated in creating the game once he clicks on the “credits” button.

### **Main scenario**

- The user is on the main menu.
- The user wants to see who created the game.
- The user clicks on the “credits” button.
- A video is displayed in which the player can see all the people that were involved on the game development.
- Once the video ends, the player returns to the main menu.

### **Alternative scenarios**

- The player decides to finish the video abruptly by pressing “Esc” and he is returned to the main menu without issues.

## **Unique identifier:**CU5. Play Level

### **Context of use**

- The user wants to play the game, so once he is on the main menu he clicks on the “play level” button, initializing the run with the default settings and boat or the ones he had previously selected.

### **Preconditions and activation**

- The user is already running the game and in the main menu.
- The user’s computer is powerful enough to play the level, as it is more demanding than launching the game and main menu navigation.

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

- The run will launch.
- The boats, obstacles and scenery will be loaded on screen.
- The user will be able to complete the run and control the boat throughout it.

### **Main scenario**

- The user is already on the main menu and decides to click on the “play level” button.
- Once the button is pressed the user will enter the run with the selected boat and settings.
- Inside the run the player can control the boat and avoid obstacles.
- The user can pause the game and a menu with the options “resume “and “exit to title” is displayed.
- If the player crashes with enough obstacles he will lose all his hp and, the first time, an after-life Simon says like mini-game will be launched.
  - If the player completes the mini game successfully his hp will be restored and he will come back to the point in which he died.
- Once the run is complete, he will advance to the next level or if found in the

last one he will win the game.

- After finishing the run, either after winning or losing, he will have the opportunity to play the level again or to return to the main menu.

### **Alternative scenarios**

- The user decides to exit mid-game returning to the main menu or desktop without issues.

## **Unique identifier:**CU6. Tutorial

### **Context of use**

- The user wants to play the tutorial, so once he is on the main menu he clicks on the “tutorial” button, initializing the run with the default settings and boat or the ones he had previously selected.

### **Preconditions and activation**

- The user is already running the game and in the main menu.
- The user’s computer is powerful enough to play the tutorial, as it is more demanding than launching the game and main menu navigation.

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

- The tutorial will launch.
- The boats, obstacles and scenery will be loaded on screen.
- The user will be able to complete the tutorial and control the boat throughout it while the labels are displayed.

### **Main scenario**

- The user is already on the main menu and decides to click on the “tutorial” button.
- Once the button is pressed the user will enter the tutorial with the selected boat and settings.
- Inside the tutorial the player can control the boat and avoid obstacles.
- The user can pause the tutorial and a menu with the options “resume” and “exit to title” is displayed.

- During the tutorial the user is introduced to the game mechanics by pop up labels that explain the basic aspects of the game, including a movement practice, where he is told to move right and left, and then he is asked to avoid some obstacles.
- He will also be introduced to the afterlife minigame. He will be killed and shown the mechanics of it.
- And he will be shown the mechanics of the powerup system, by colliding with one powerup and then activating it. While the labels explain the behavior.
- Once the tutorial is completed the user will be returned to the main menu.

### **Alternative scenarios**

- The user decides to exit mid-tutorial returning to the main menu or desktop without issues.

## **Unique identifier:**CU7. Powerups

### **Context of use**

- While the user is found in the game, some powerups will be placed along the river.
- The user can, by colliding with them, activating one of the three powerups the game offers: higher speed, invincibility, and healing.

### **Preconditions and activation**

- The user is already running the level.

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

- The user has collided with the powerup, and the according effect is applied.

### **Main scenario**

- The user is already in the run.
- While he plays the level some powerups will be displayed along the river.
- If he collides with the powerup, the effects of it will be applied.
- If he collides with the healing powerup, some of his health will be restored.
- If he collides with the speed powerup, his velocity will be increased for some



period.

- If he collides with the invincibility powerup, his will not receive damage for some period.
- After the period comes to an end, and in case the powerups with which he collided with where speed or invincibility, his stats will return to normal values.

### **Alternative scenarios**

- The user does not collide with any powerups.

**Unique identifier:**CU8. [Simon says afterlife minigame.](#)

### **Context of use**

- When the user dies for the first time a minigame with Simon says like mechanics is loaded on screen.

### **Preconditions and activation**

- The user has lost all his HP for the first time in the run.

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

- The user can play a game in which he is given the opportunity to return to life.
- In case he ends up winning, he will be able to return to the river where he left it.

### **Main scenario**

- The user is already in the run.
- The user collides with enough obstacles to lose all his HP.
- Once he does so, a minigame is loaded on screen.
- In this game he is shown an increasingly difficult sequence he must replicate.
- In case he fails reproducing the sequence he will die, having the opportunity

to play the main level again or to return to the main menu.

- In case he succeeds, he will return to the point where he died, with some of his HP restored.

### **Alternative scenarios**

- The user decides to leave mid-game, returning to either the main menu of exiting to the desktop.