



Dino

User Manual

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1. Introduction

1.1. ¿What is “Dino”?

Dino is an interactive game in which the player controls a character that must jump over obstacles while the speed progressively increases, with the goal of beating their own previous record. The virtual environment works using physical elements, since through the use of an Arduino and touch sensors, the game receives the player's signals and responds to them in real time.

1.1. Objective of the manual

Its objective is to explain in detail and with visual examples (screenshots) how to use each section of the game correctly.

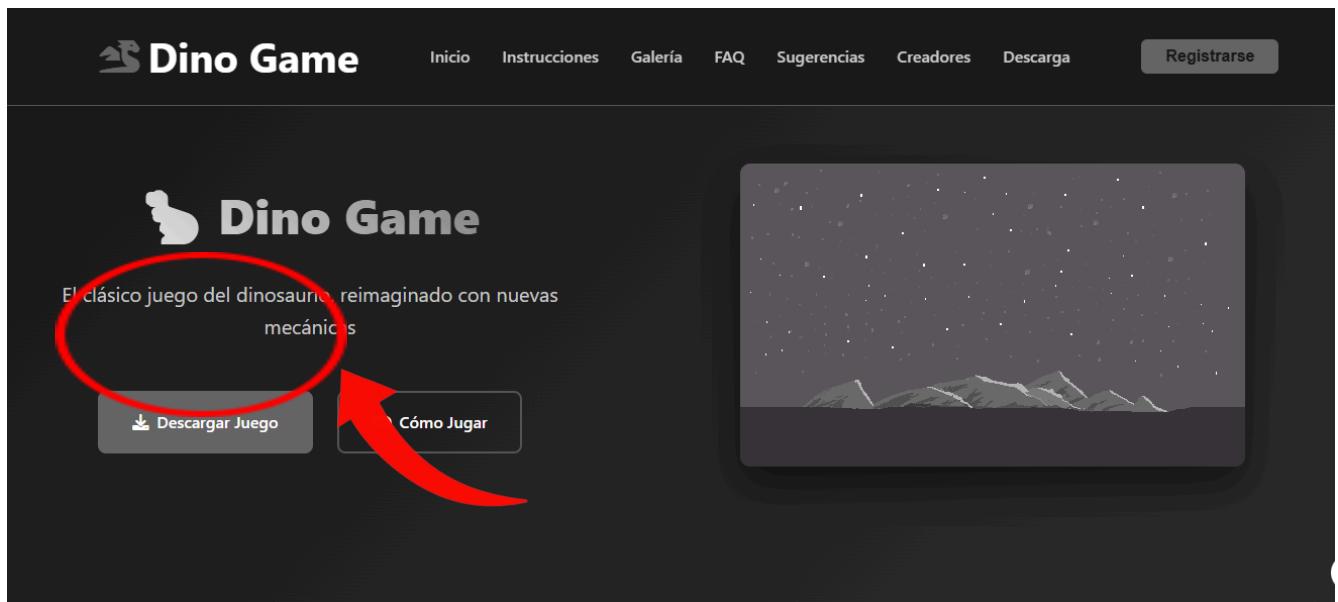
1.2. Who is it addressed to?

This manual is intended for anyone who wants to use the game and understand its basic operation in order to play it.

2. Facility

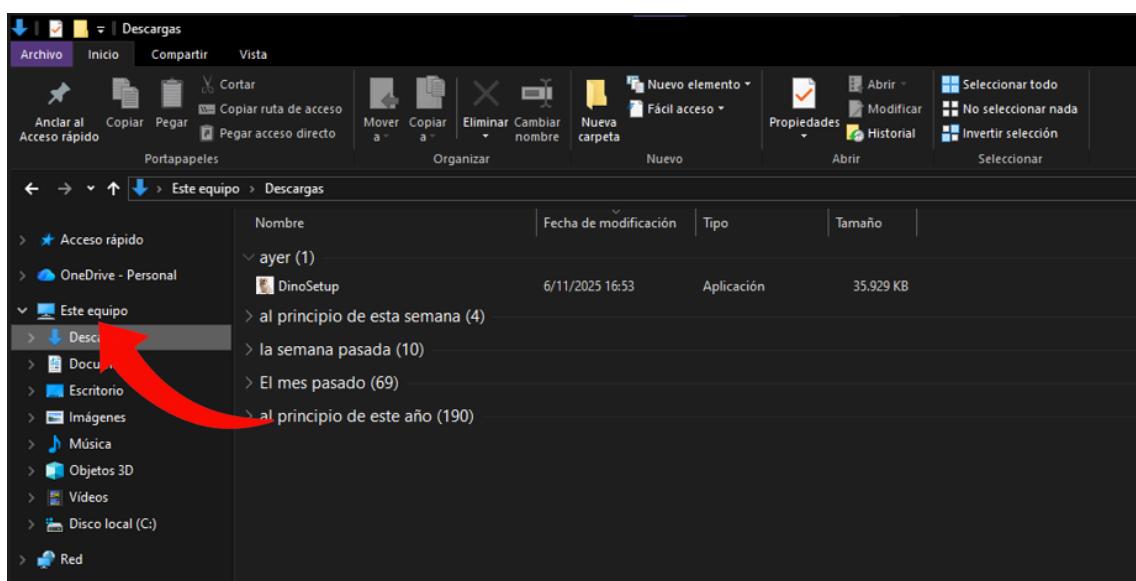
2.1. Facility

Step N°1 : Go to our “Dino Game” page: You can find the link at the following link, Dino Game



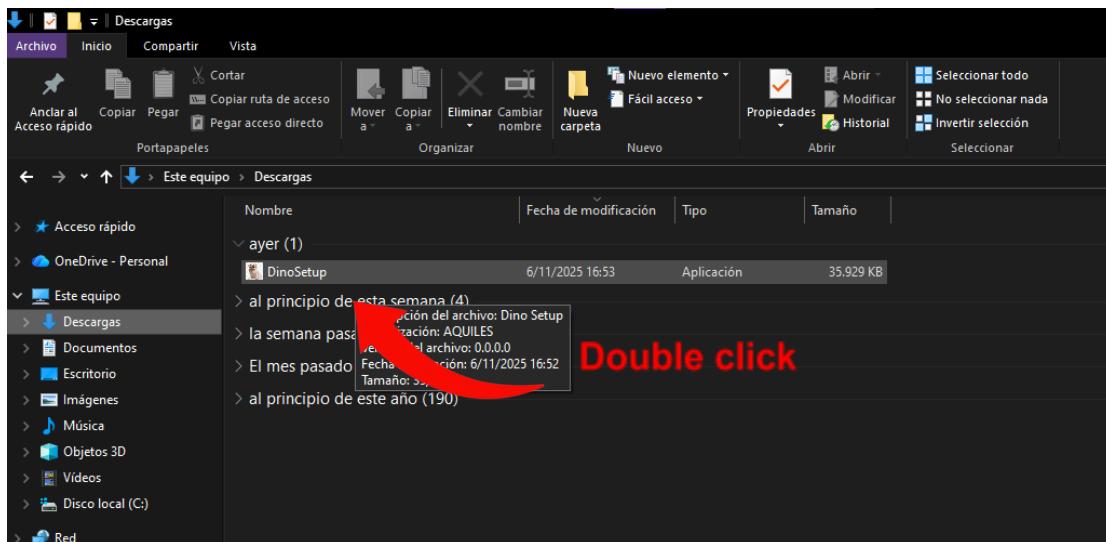
Step N°2 : Once there on the page, click on “Download Game” to start downloading the installer.

Step N°3: Once downloaded, go to “Downloads”

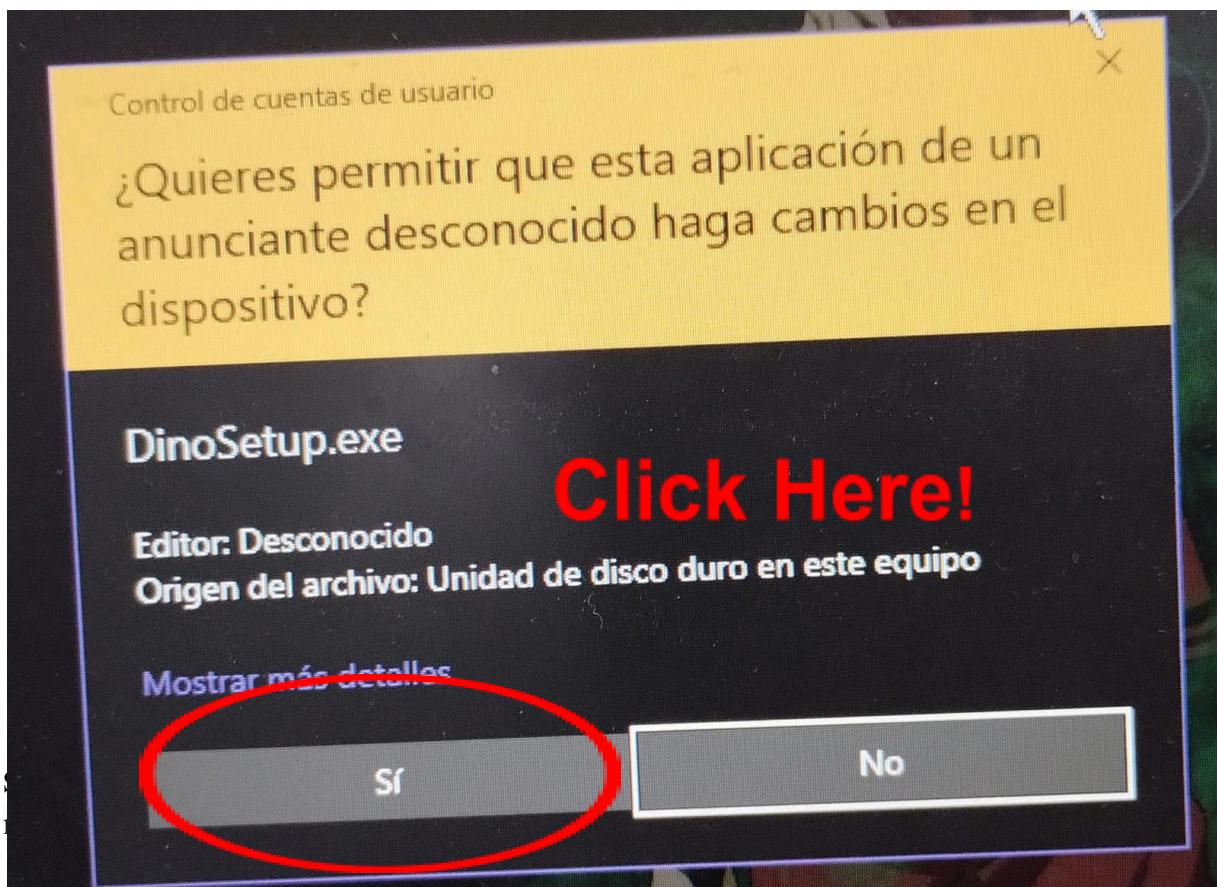




Step N°4: Double-click on the installer and give it administrator permissions



Step N°5: Once the installer has run, grant it administrator privileges for proper installation!





Step N°6: Once the installer has been run, you will need to select the language through a drop-down menu and then select “Aceptar” to continue with the download.

Seleccione el Idioma de la Instalación

Seleccione el idioma a utilizar durante la instalación.

English

Aceptar Cancelar

Seleccione el Idioma de la Instalación

Seleccione el idioma a utilizar durante la instalación.

English

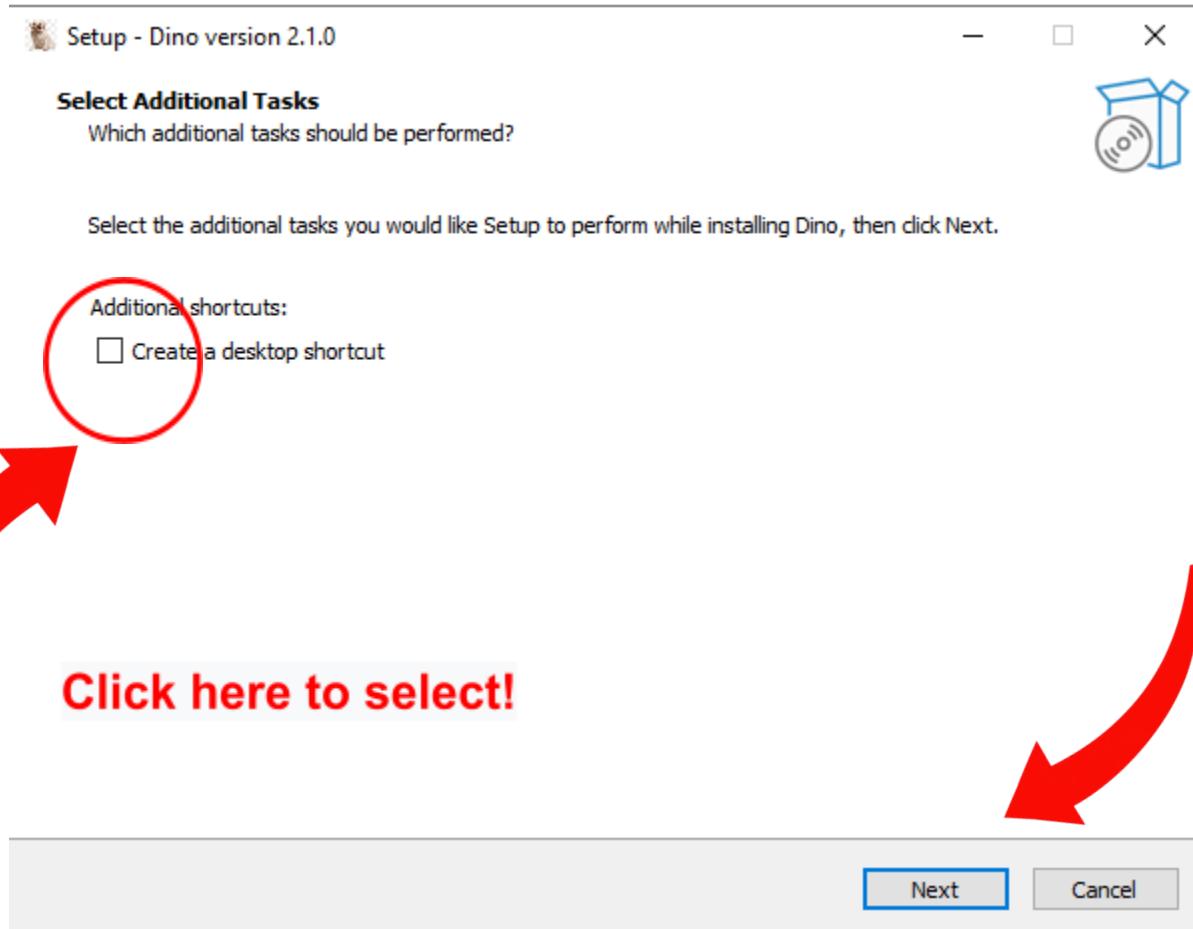
English

Español

Português Brasileiro

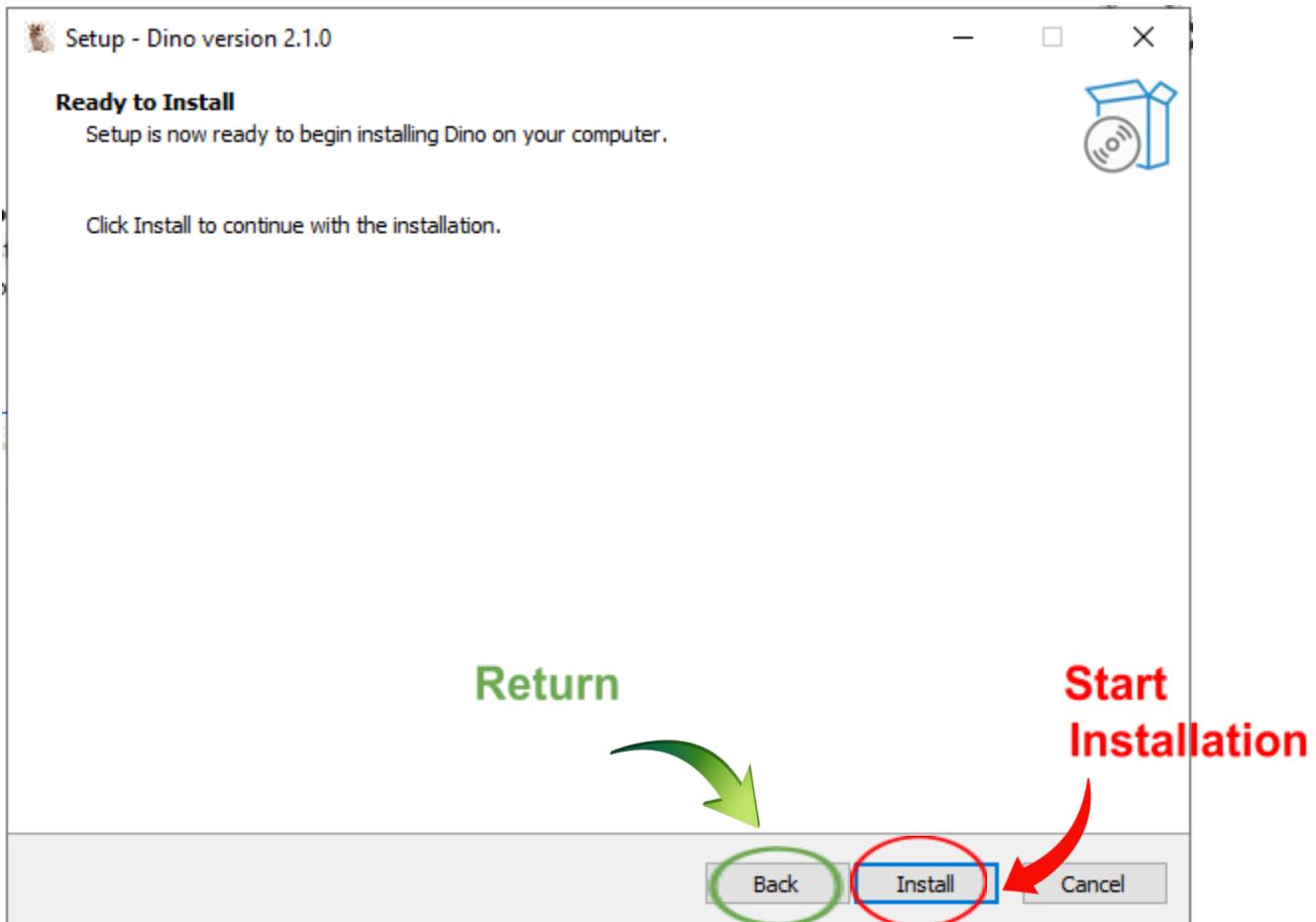
Aceptar Cancelar

Step N°7 : Continuing with the installer, it will ask if you want to create a shortcut on your PC's desktop for easier access to the game. To accept, click the box mentioned earlier! Press "Next" to proceed to the next section!



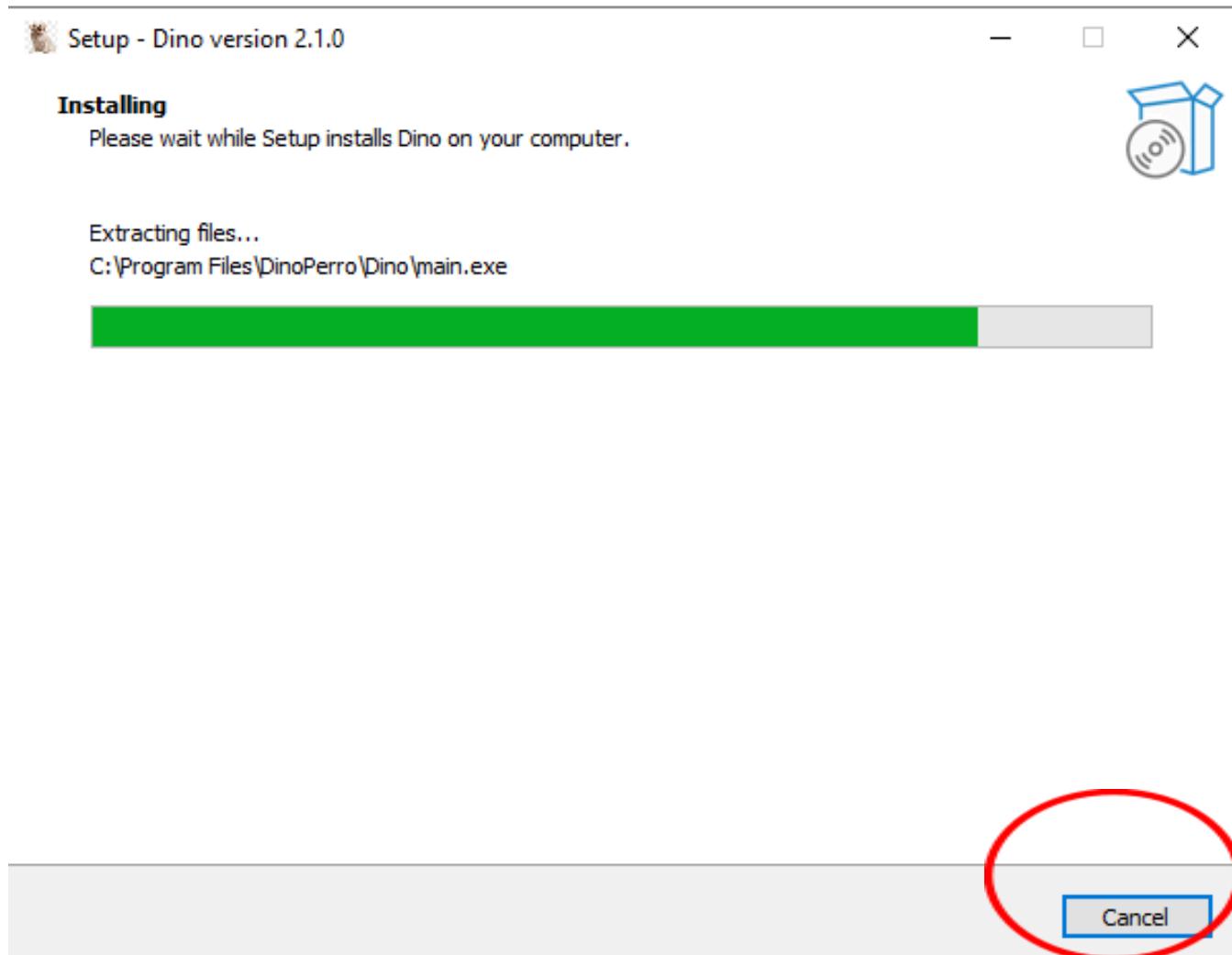
Step N°8 : Once you've completed the previous steps, you can install the game by pressing "Install"! This shouldn't take more than 5 minutes!

If you want to go back because you want to change something, then press "Back".



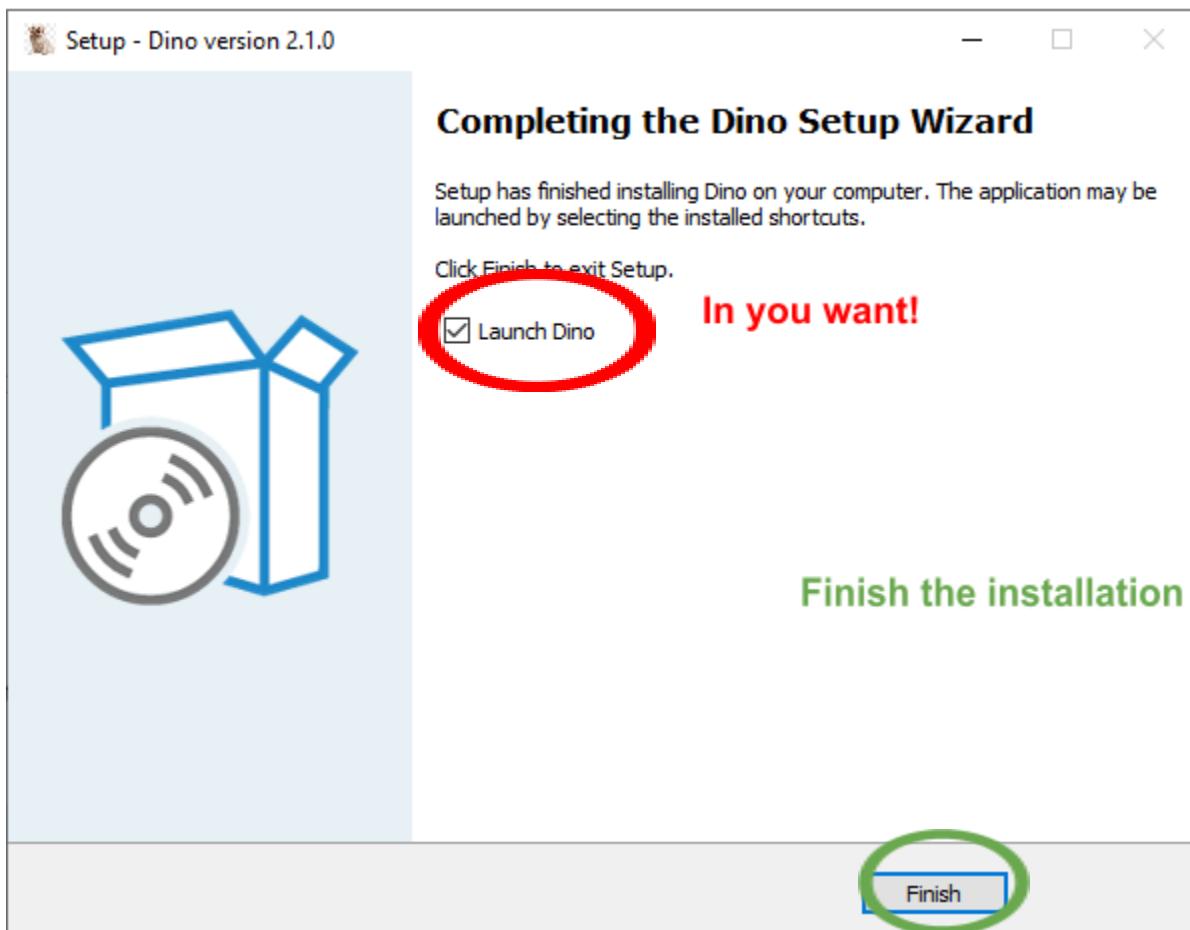


Step N°9 : Then we have to wait for the process to finish. You can cancel it at any time using the "Cancel" button.

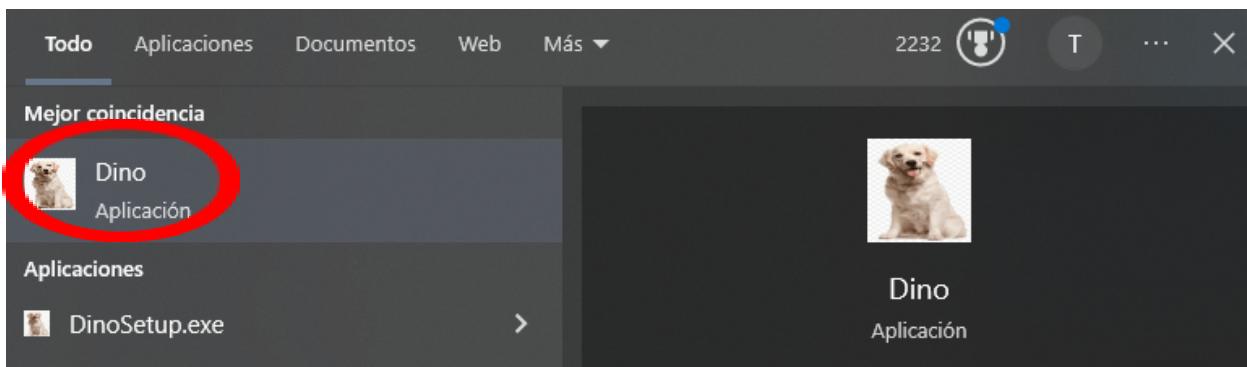




Step N°10 : Next, the tab to finish the installation will appear, where we can select in a box whether we want to run the game after it finishes!



Step N°11 : Once the installation is complete, go to where you installed it and enjoy the game! Remember, you can search for it using the Windows search bar if you didn't create a shortcut!



3. Controls

3.1. Ways to play

We developed two game modes: one digital and one physical.

In digital mode, anyone can visit our website, download the game, and play it directly on their computer using a standard keyboard.

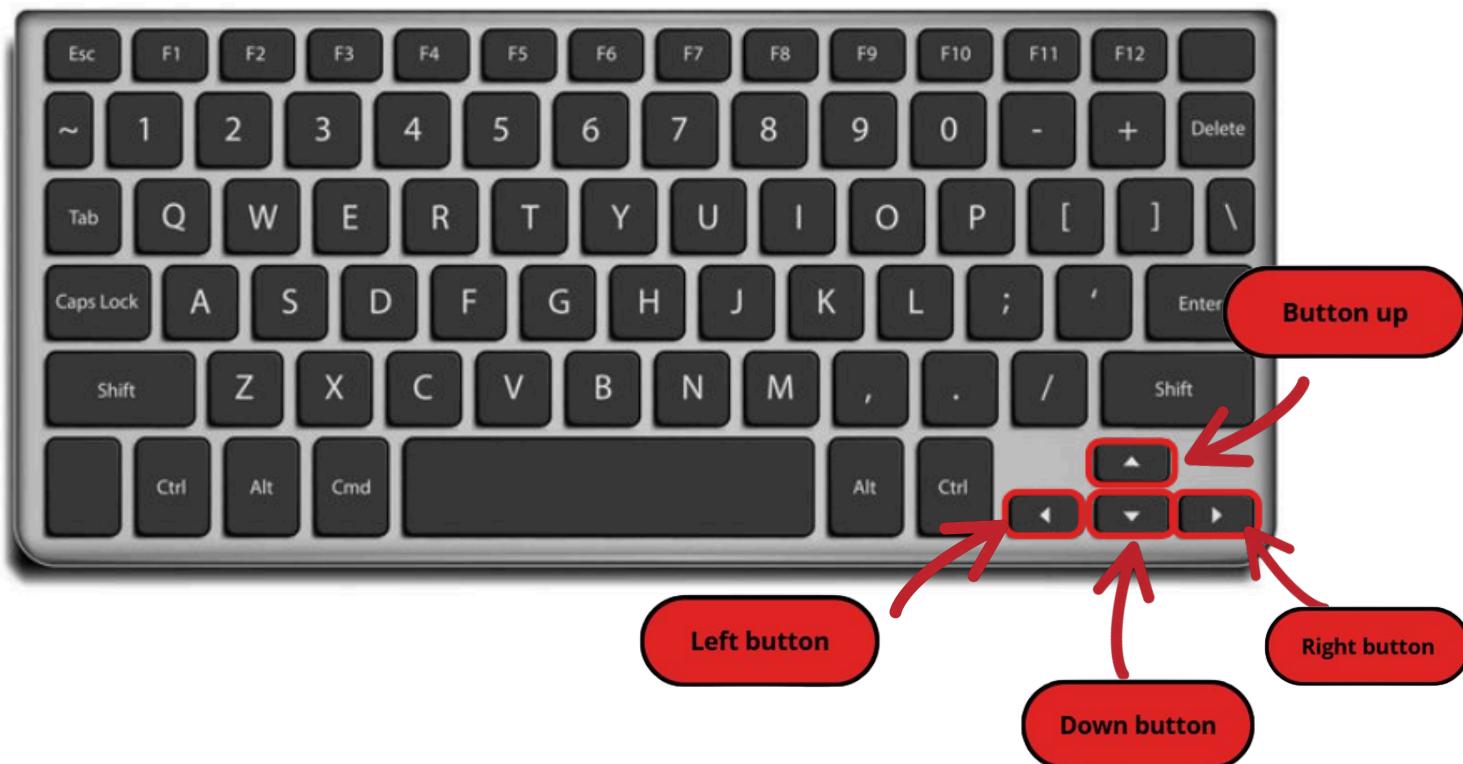
On the other hand, the physical mode offers a more interactive experience. While the buttons and their functions are the same, it differs in its use of Arduino technology, which allows the same keyboard actions to be emulated through a system of physical buttons.

3.2. Controls with digital mode

The game emulates keyboard keys, which perform different functions depending on the context or tab you're in within the game.

For example, the arrow keys control the character's movement during gameplay, but they're also used to navigate menus and confirm options when you're not in the game.

3.2.1. Gráfico

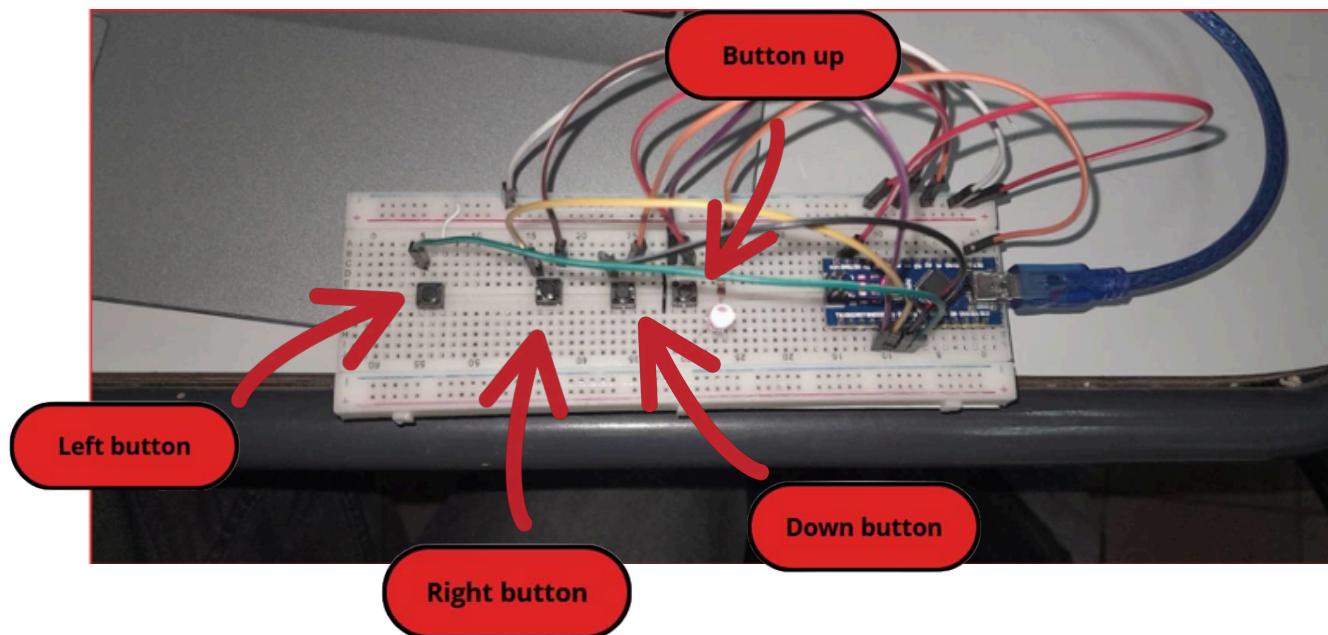


3.3. Controls with the physical modality

In this mode, the game emulates the keys of a traditional keyboard, but using a physical system of buttons built with Arduino technology.

Each button is connected to the Arduino circuit and programmed to send the same signal as a keyboard key when pressed.

3.3.1. Gráfic



3.4. Equivalence between modalities

In both the digital and physical versions, the game controls perform exactly the same functions.

The difference lies solely in how the player interacts with them:

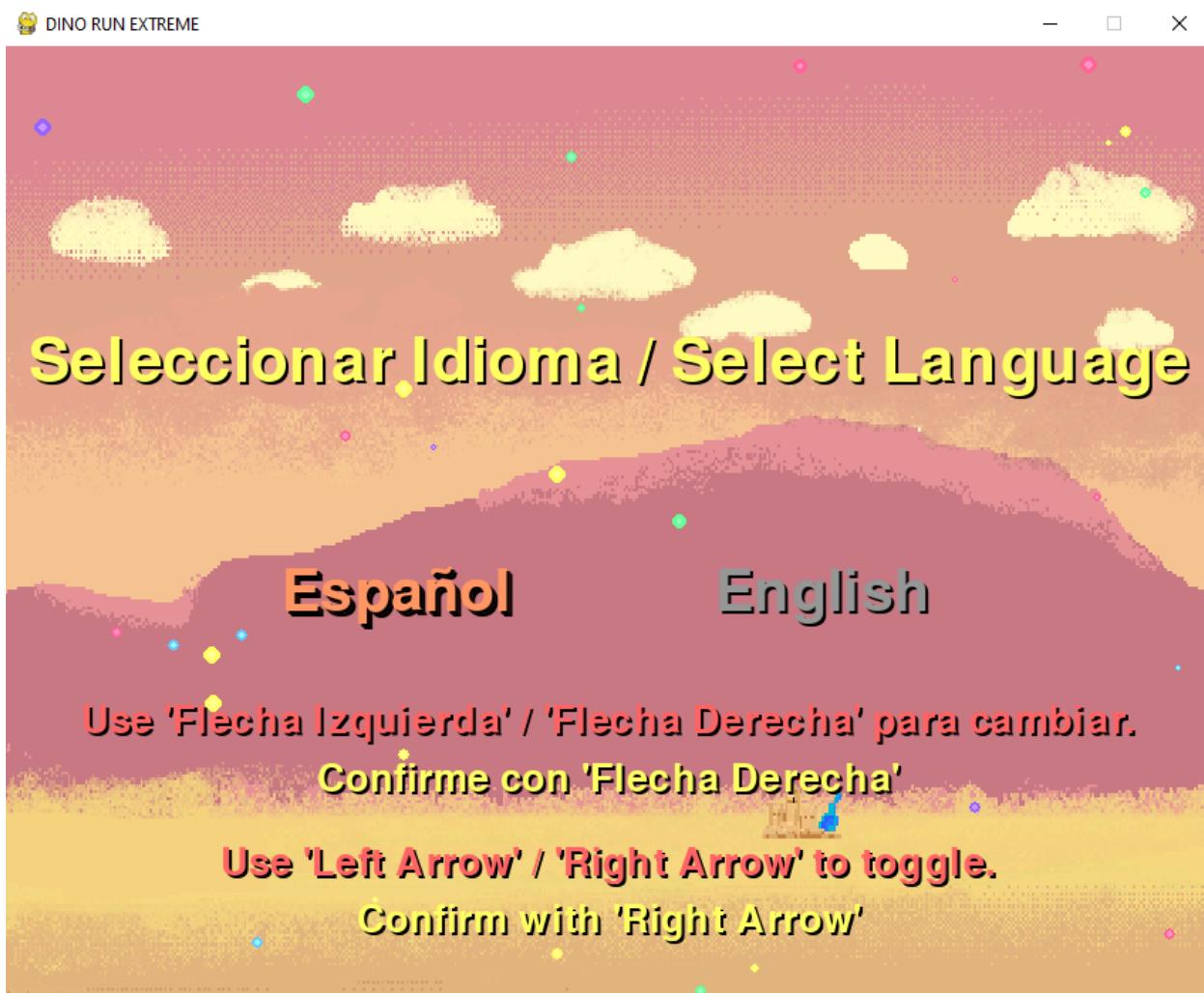
- In the digital version, actions are executed using the computer keyboard.
- In the physical version, the same actions are performed using buttons connected to an Arduino system, which emulates the keyboard signals.

In both cases, the controls maintain the same operating logic, automatically adapting according to the module or context of the game you are in.

4. Select language module

4.1. Description

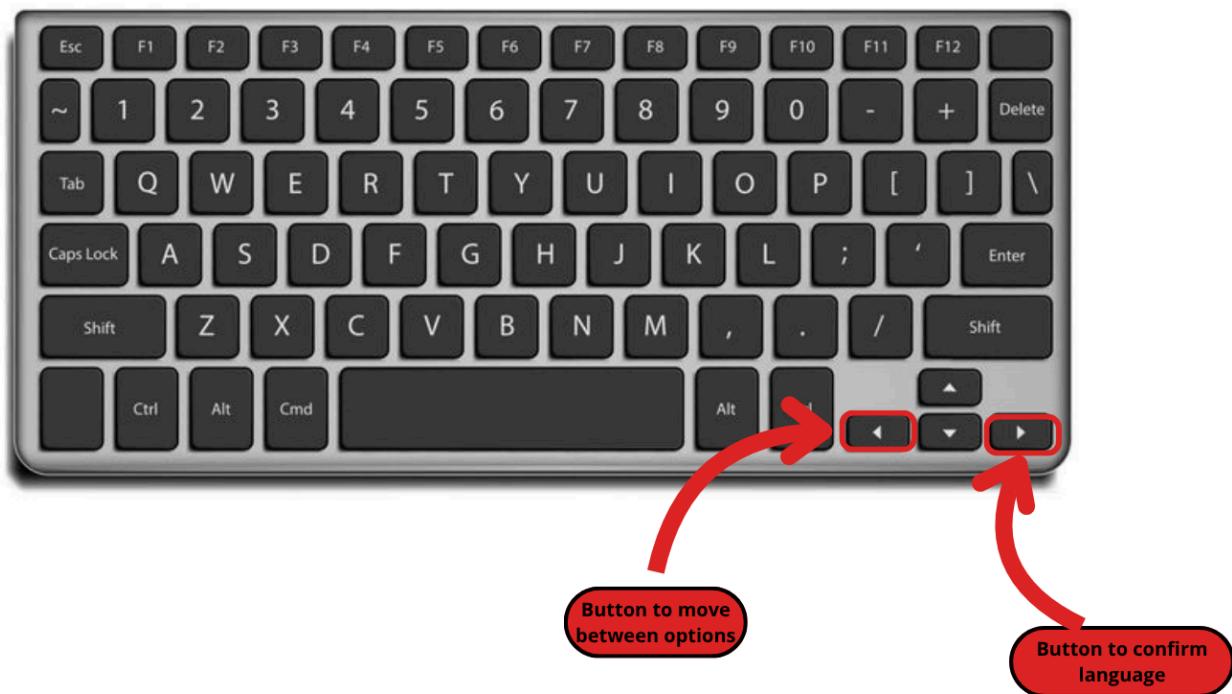
The language selection module is the first thing that appears when you start the game. Its purpose is to allow the player to choose the language in which all game content will be displayed. The screen presents the options Spanish and English, accompanied by brief instructions on how to navigate and confirm the selection. Once the language is chosen, it is automatically applied to the entire game environment, modifying the text, menus, and messages to maintain an experience consistent with the player's preference.



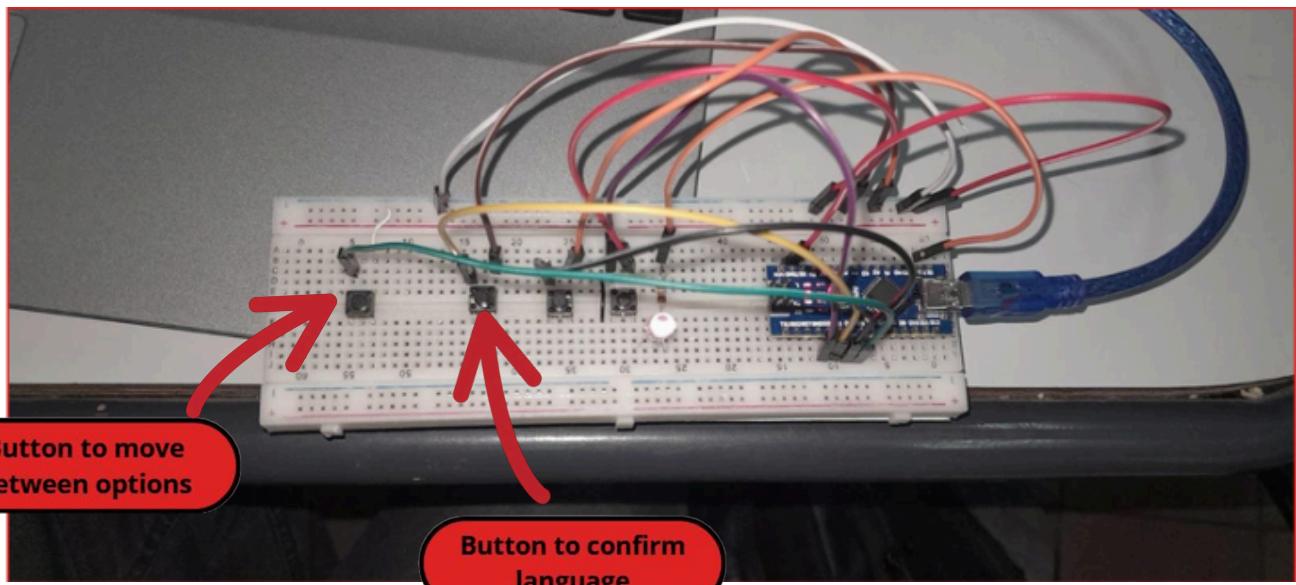
4.2. Operation and movement of the controls

The controls are responsive in both digital and physical modes: pressing Left moves the cursor to the previous option; pressing Right switches to the next language or confirms the selection. This dynamic remains identical in both versions of the game, with only the interaction method (keyboard or Arduino system) changing.

4.2.1. Chart of the controls in digital mode



4.2.2. Chart of controls in physical mode



5. Module Select Name

5.1. Description

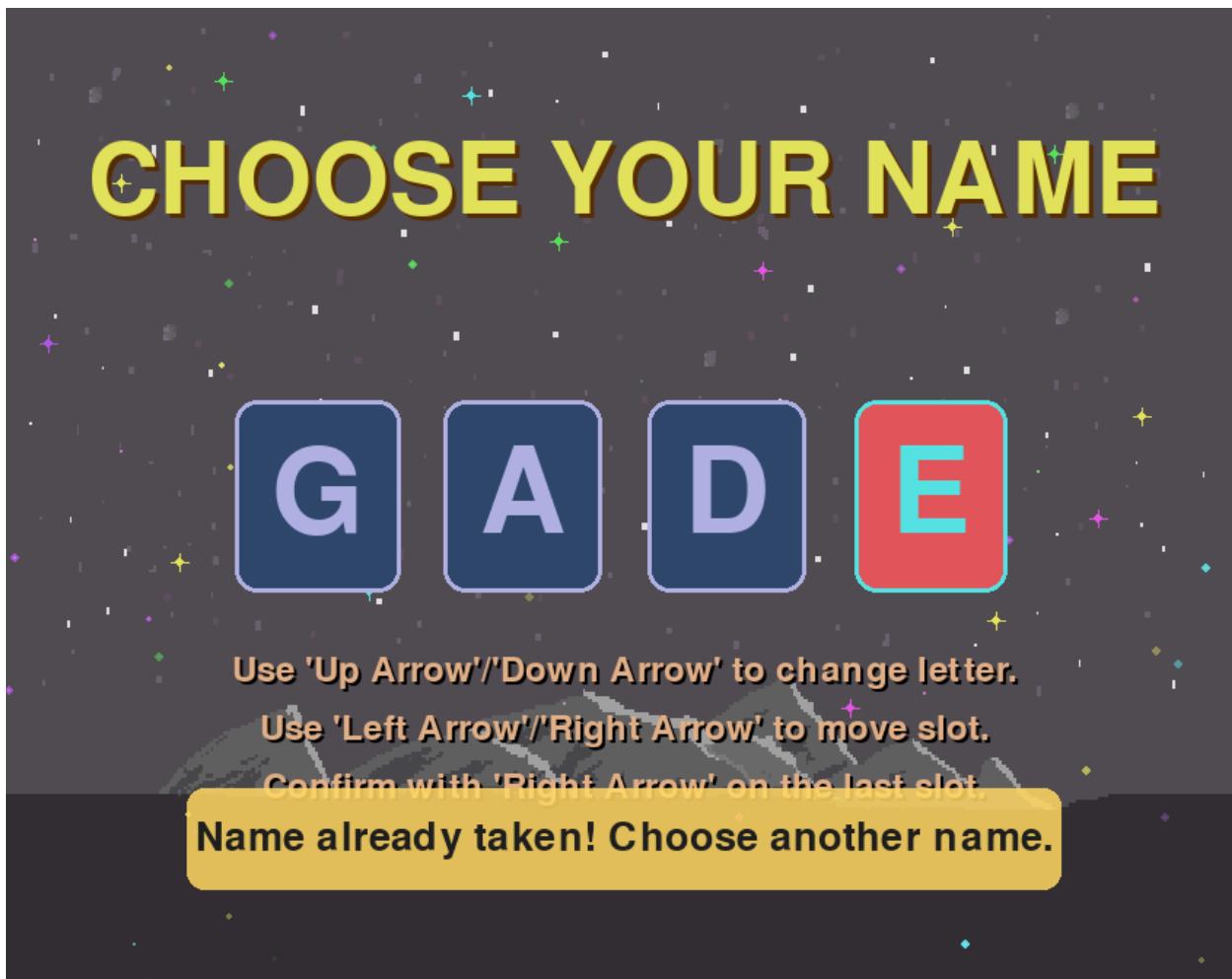
This module appears immediately after selecting the language. Its purpose is to allow the player to create a username to identify them within the game. The screen displays four boxes, each representing a letter of the username.



5.2. Error message due to repeated name

If the player attempts to enter a name that has already been used, the game will display an error message indicating that the name is duplicated. In that case, the system will not allow the player to advance to the next module until a different name is entered. This ensures that each player has a unique identity within the game.

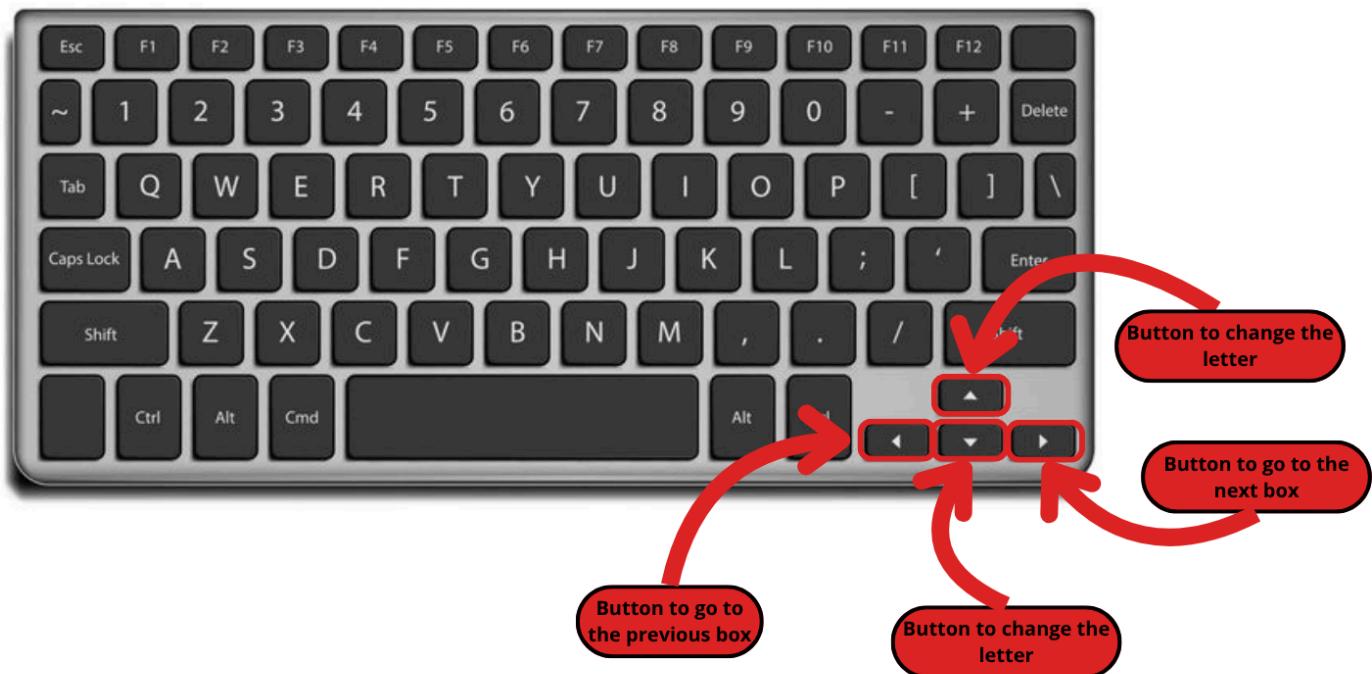
The selection is made by using the Arduino's touch controls on the desired character. This decision determines the protagonist's appearance within the game, but it does not affect gameplay. Once the character is selected, the system automatically starts the game.



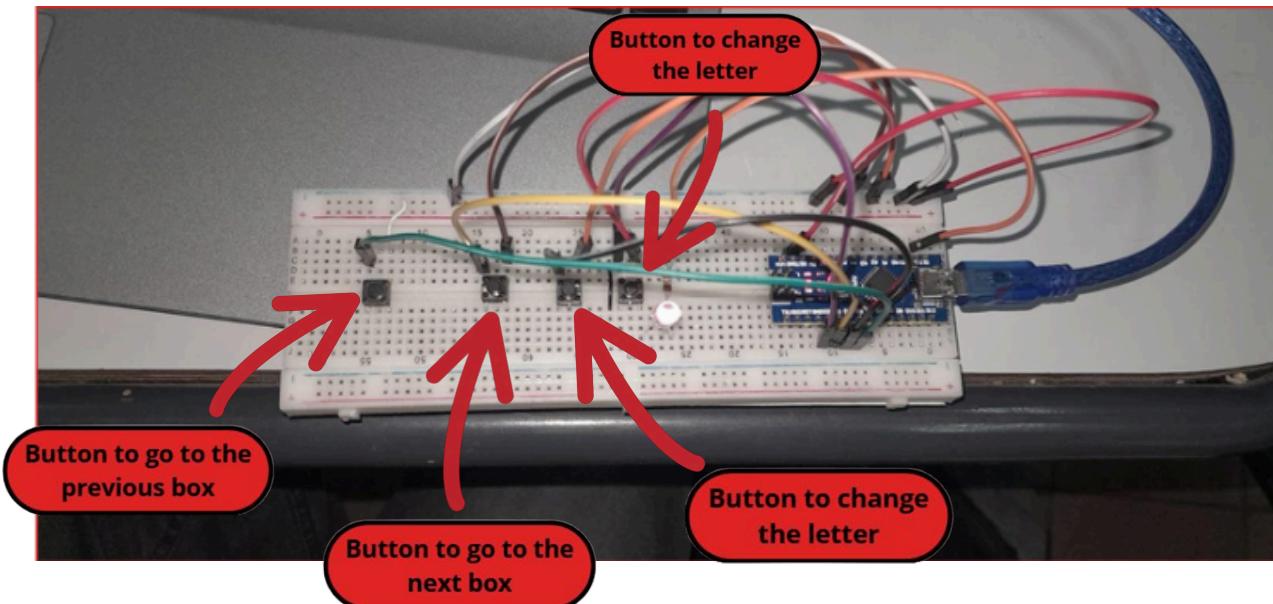
5.3. Operation and movement of the controls

The module works simply. The Up and Down arrows allow you to change the letter within the active box, scrolling through the alphabet. The Left and Right arrows allow the player to move between the different positions of the name. When the name is complete, pressing the Right Arrow in the last box confirms the selection. This system maintains the same logic in both the digital (keyboard) and physical (Arduino with buttons) versions.

5.3.1. Chart of the controls in digital mode



5.3.2. Chart of controls in physical mode



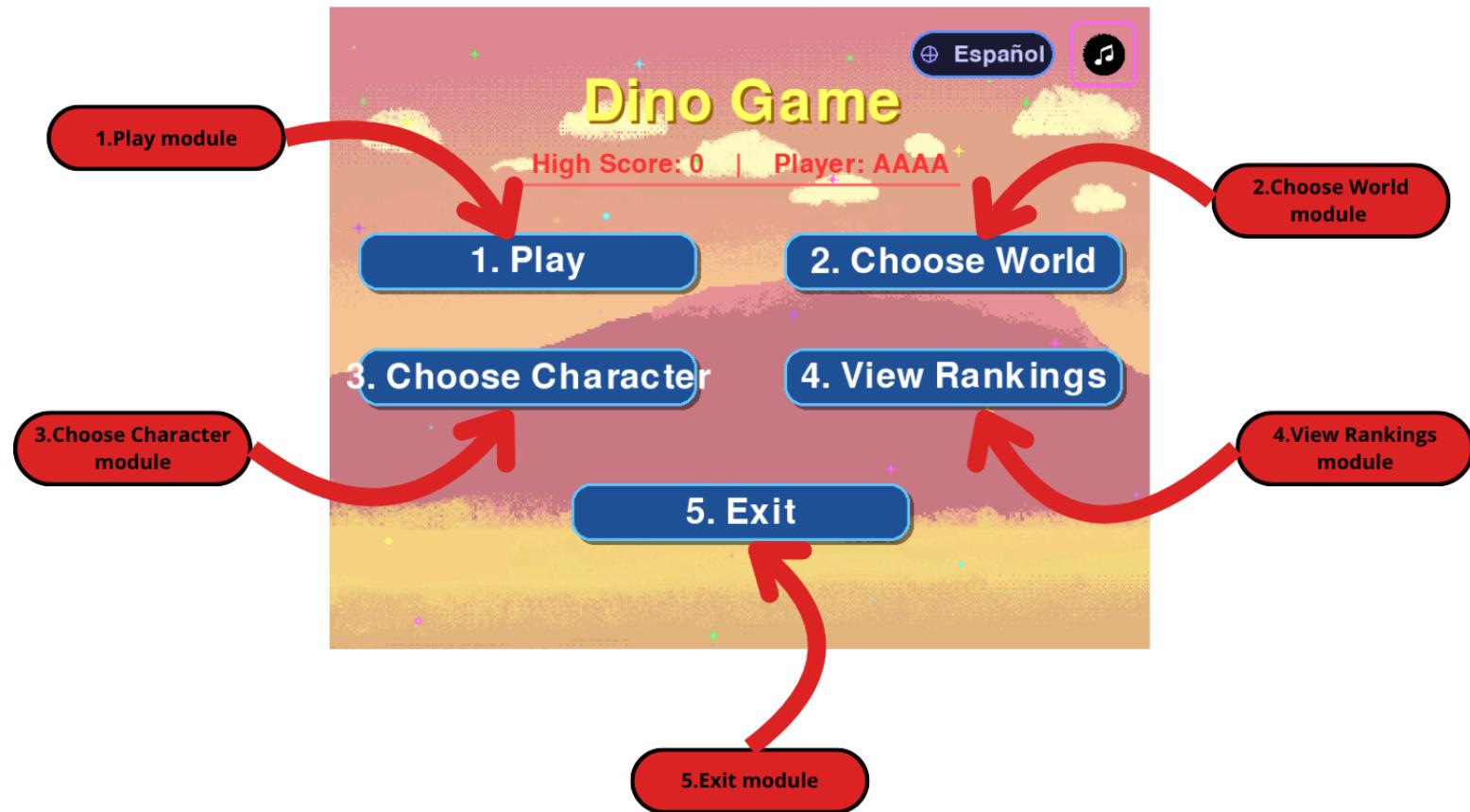
Note :

Once you have filled in all the fields to form your desired name, press the right button again to confirm your selection and proceed to the next module.

6. Menu Module

6.0.1 Description

The menu is the game's main screen and serves as the user's starting point. It includes a header with the game's name ("Dino") and displays the various available interaction options.





6.0.2. Common shares

Start the game: Press the "Play" button to begin a new game.

Choose Character: Click the "Choose Character" button to customize the game to your preferences.

Choose Name: Select the "Choose Name" option to enter the player name that will be displayed in the leaderboard.

Select World: Use the "Choose World" button to change the game's stage or environment.

Configure Sounds: Access "Sounds" to activate, deactivate, or modify the music and sound effects.

View Leaderboards: Click "View Leaderboards" to see the highest scores.

Exit the game: Select "Exit" to close the program.

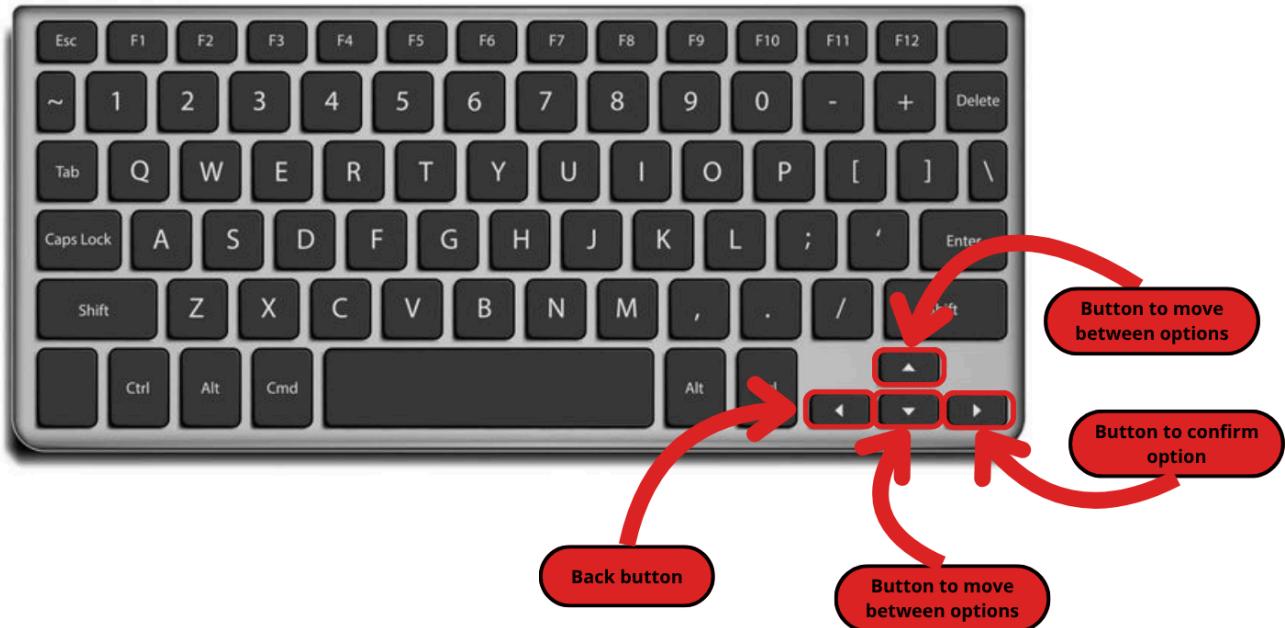
6.0.3. Operation and movement of the controls

To navigate the main menu, use the up and down arrows to scroll through the different options. When you want to select an option, press the right arrow to confirm and access the corresponding module.

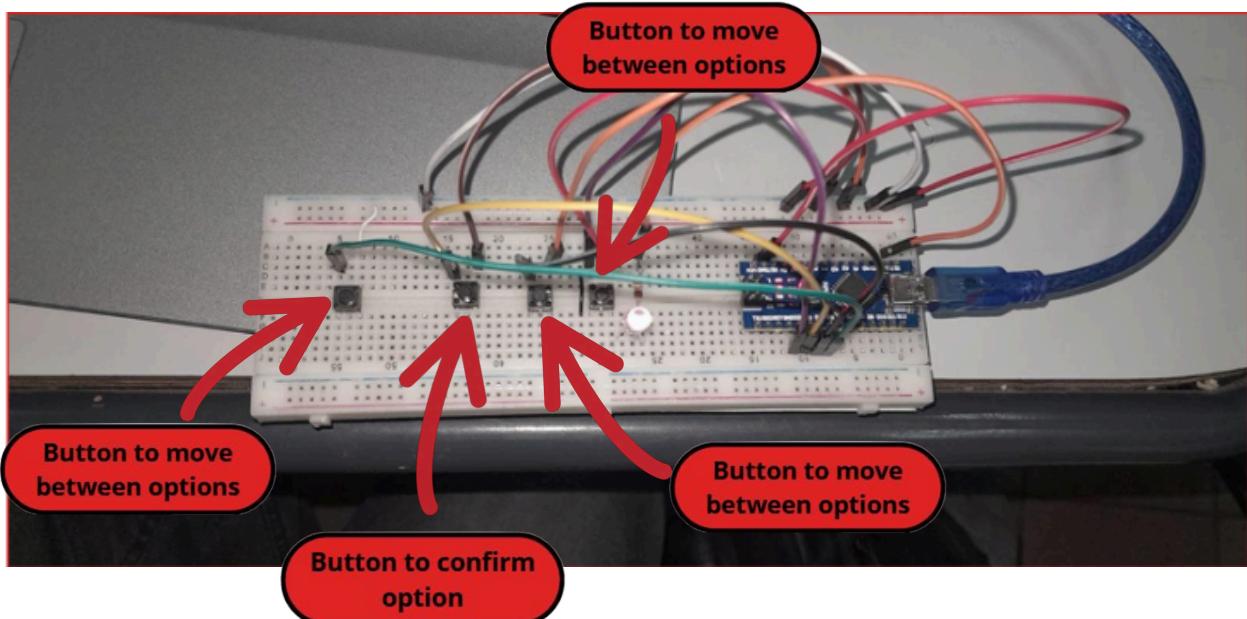
At the top of the menu are the Language and Sound buttons, which you can access by moving to the left.

Finally, to access the main game options, simply press the down arrow, which allows you to scroll directly to the main menu sections.

6.0.3.1 Chart of the controls in digital mode



6.0.3.2. Chart of controls in physical mode

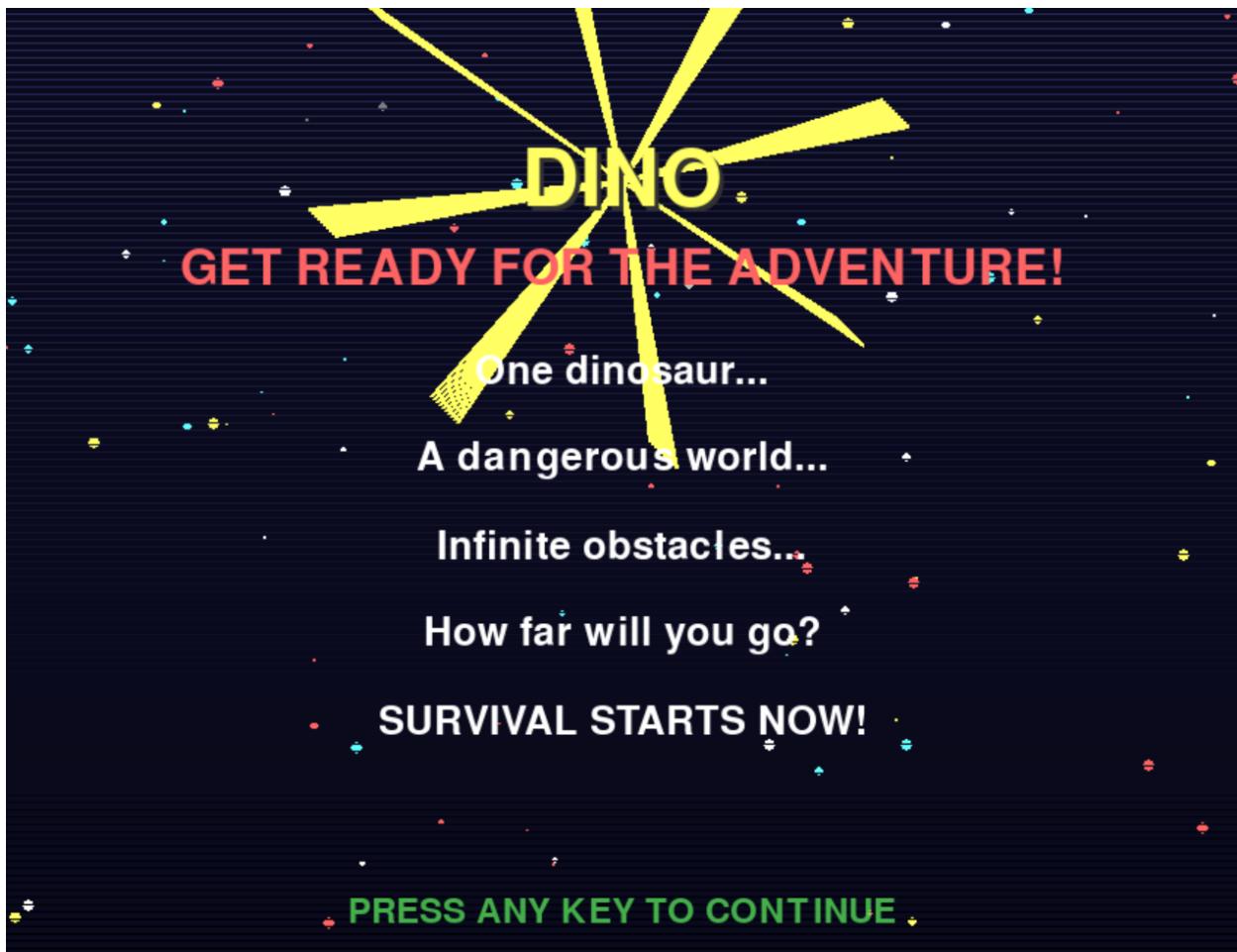


6.1. Play Module

6.1.1. First screen

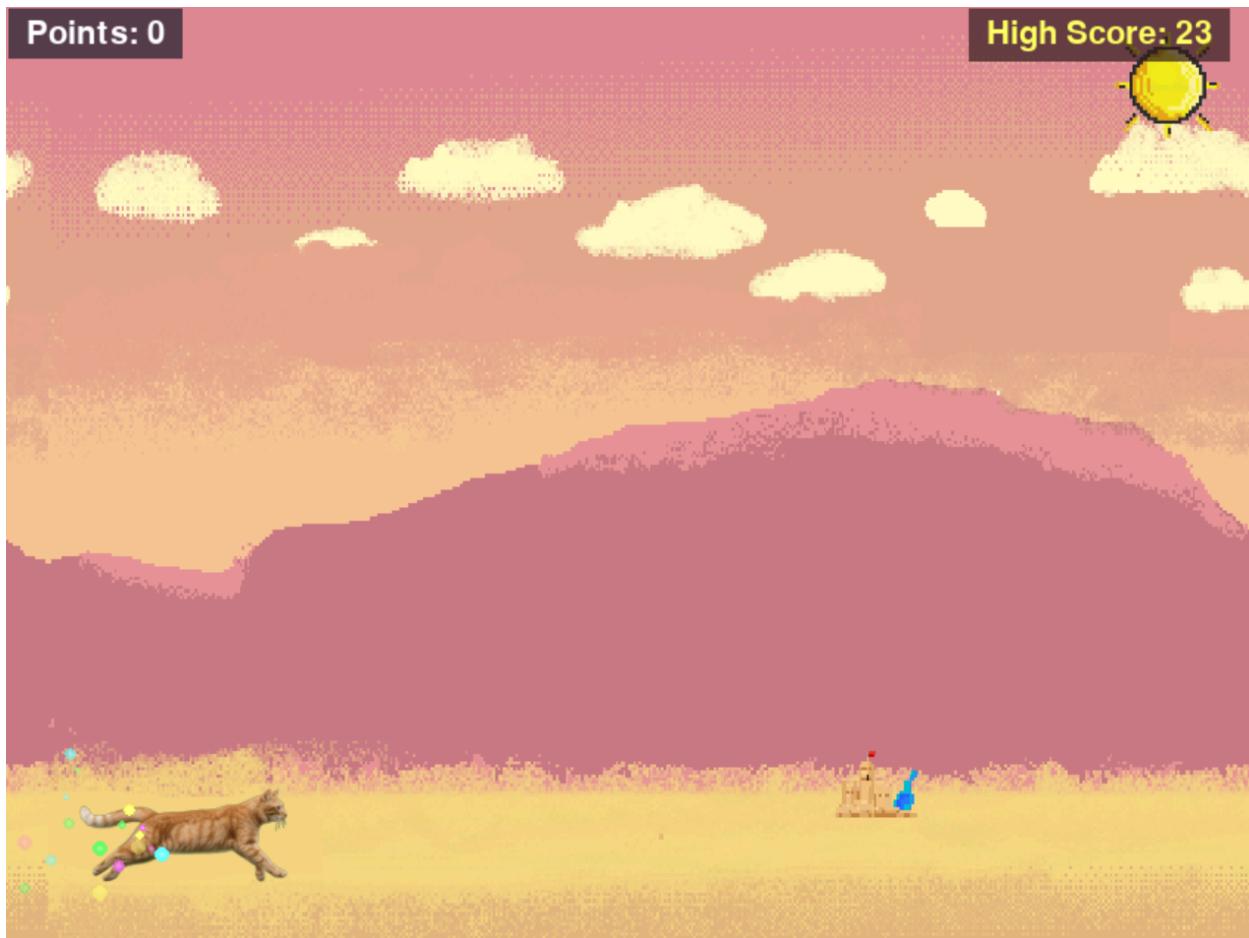
Pressing the button to the right on the "1. Play" option first displays an introduction to the game, presenting the title Dino along with a motivational message inviting the player to prepare for the adventure.

This screen briefly describes the challenges the player will face.



6.1.2. Game development

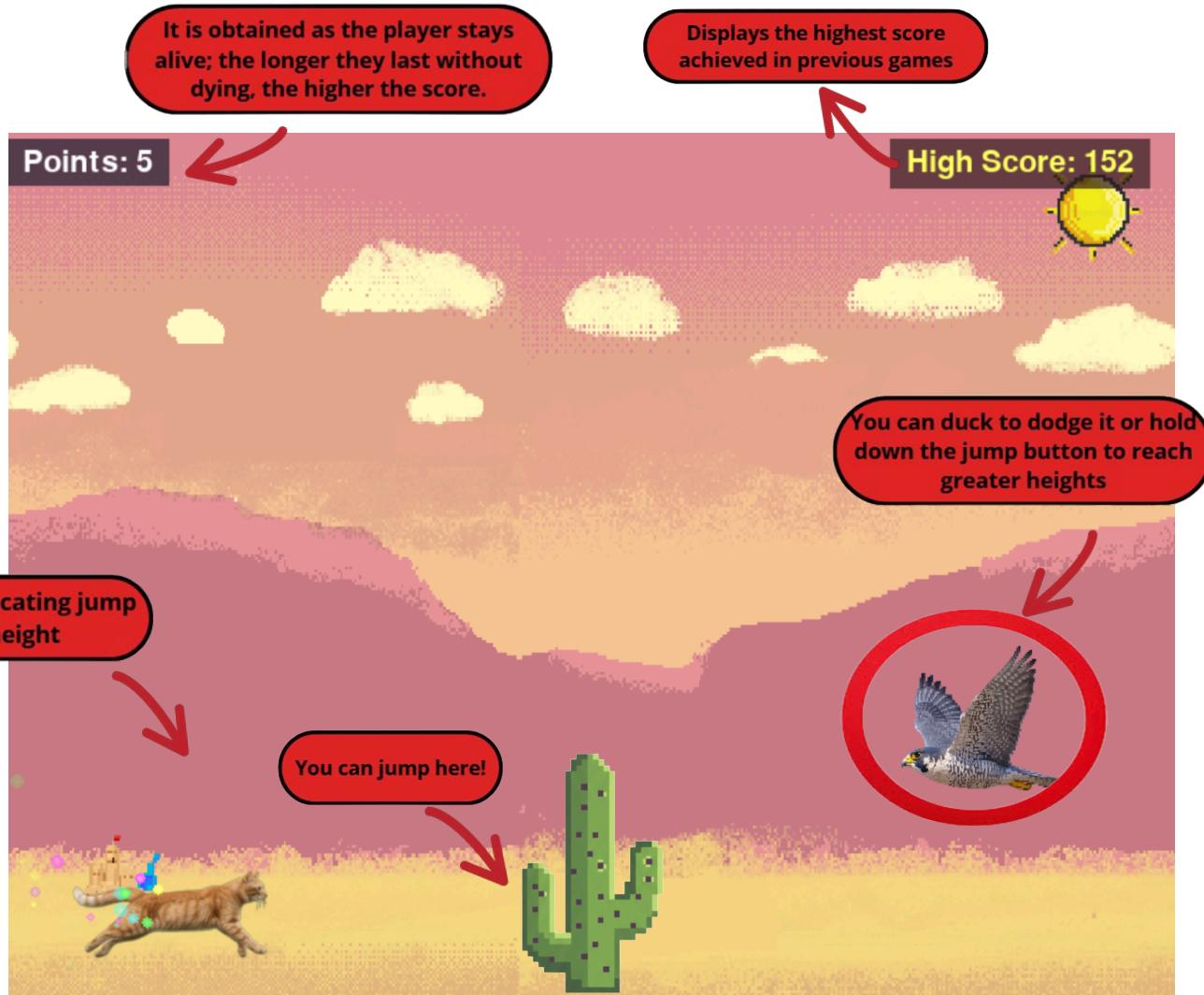
Once the introduction is over, the player enters the game directly. At this stage, the action begins, where the main objective is to overcome various obstacles, such as birds and cacti, for as long as possible. The player controls the dinosaur, which must jump and dodge obstacles to avoid losing. As the player progresses, their score or personal record increases.



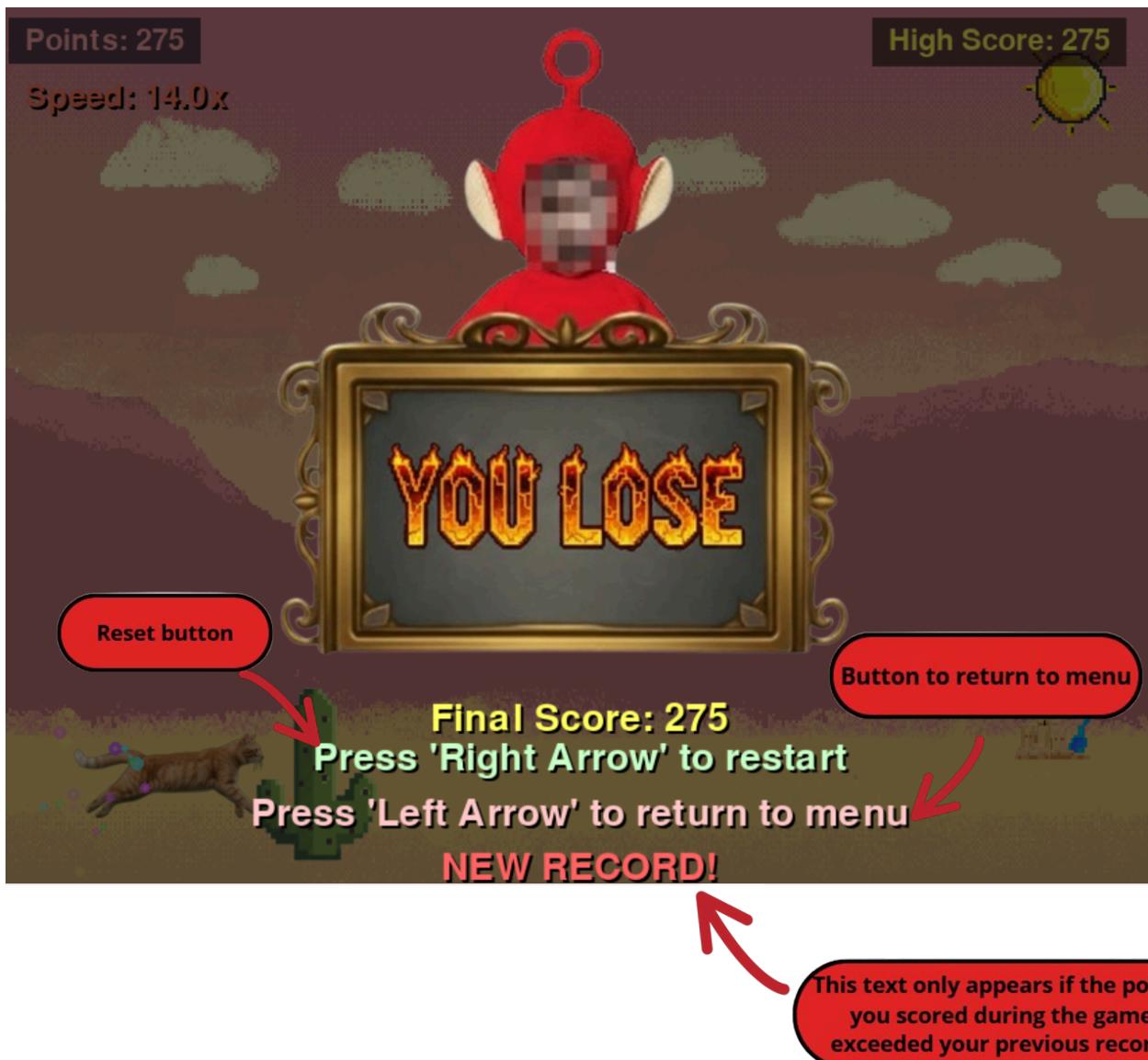
6.1.3. Operation and movement of the controls

During the game, the player controls the character's movements using the directional buttons. Pressing up makes the character jump, and holding it down determines the jump height, allowing the player to dodge obstacles of varying sizes. Pressing down makes the character crouch to avoid colliding with aerial obstacles, such as birds. If the player loses, two options appear on the screen: restart the game by pressing the right button, or return to the main menu by pressing the left button.

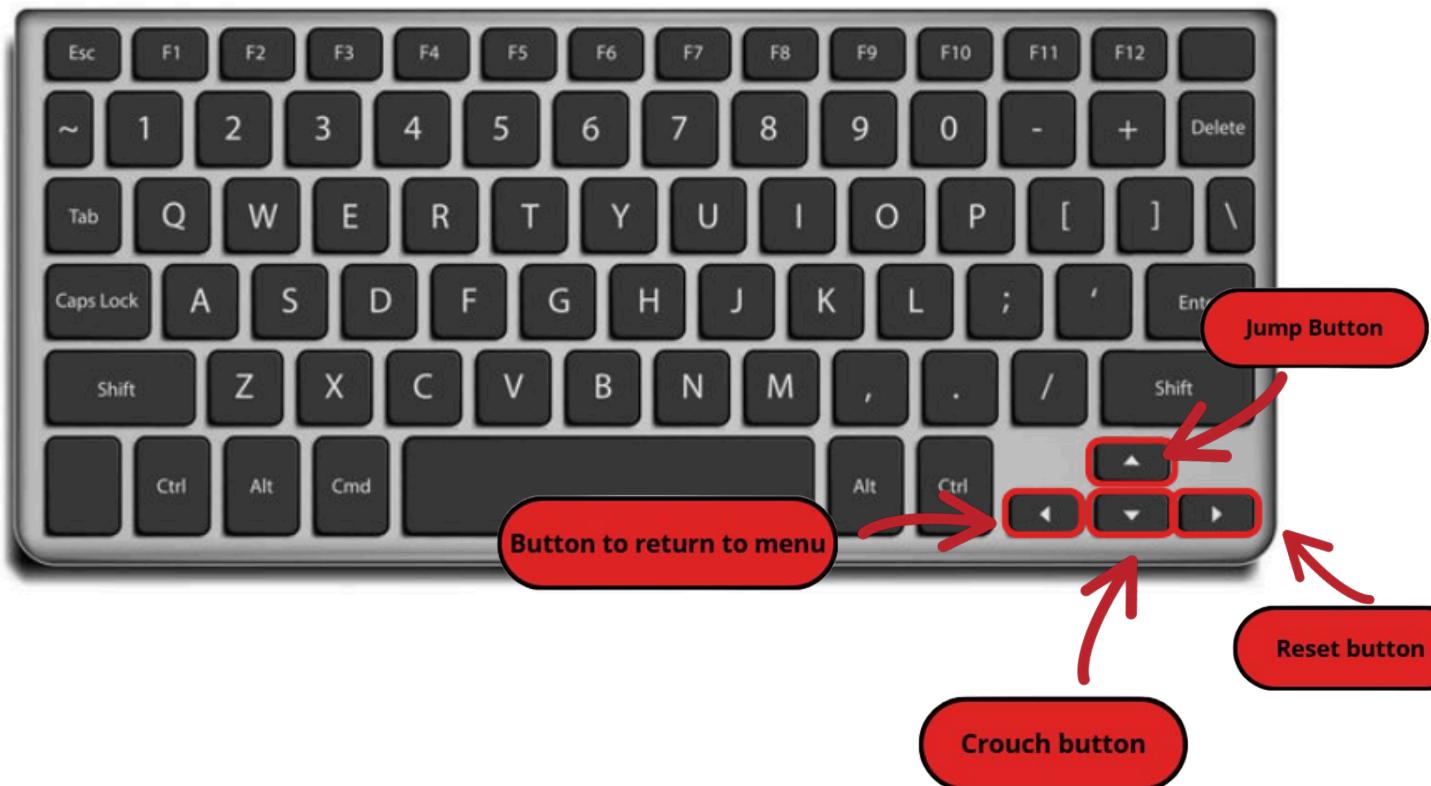
6.1.4. Game in action and its parts



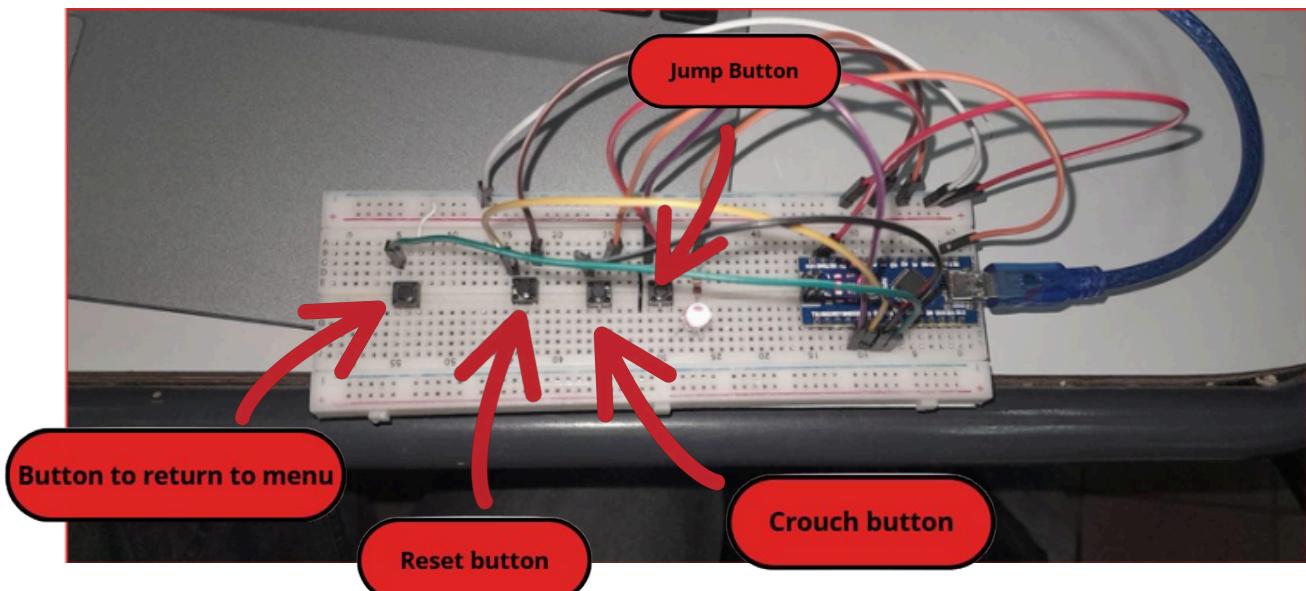
6.1.5. Game Over screen and its parts



6.1.3.1. Chart of the controls in digital mode



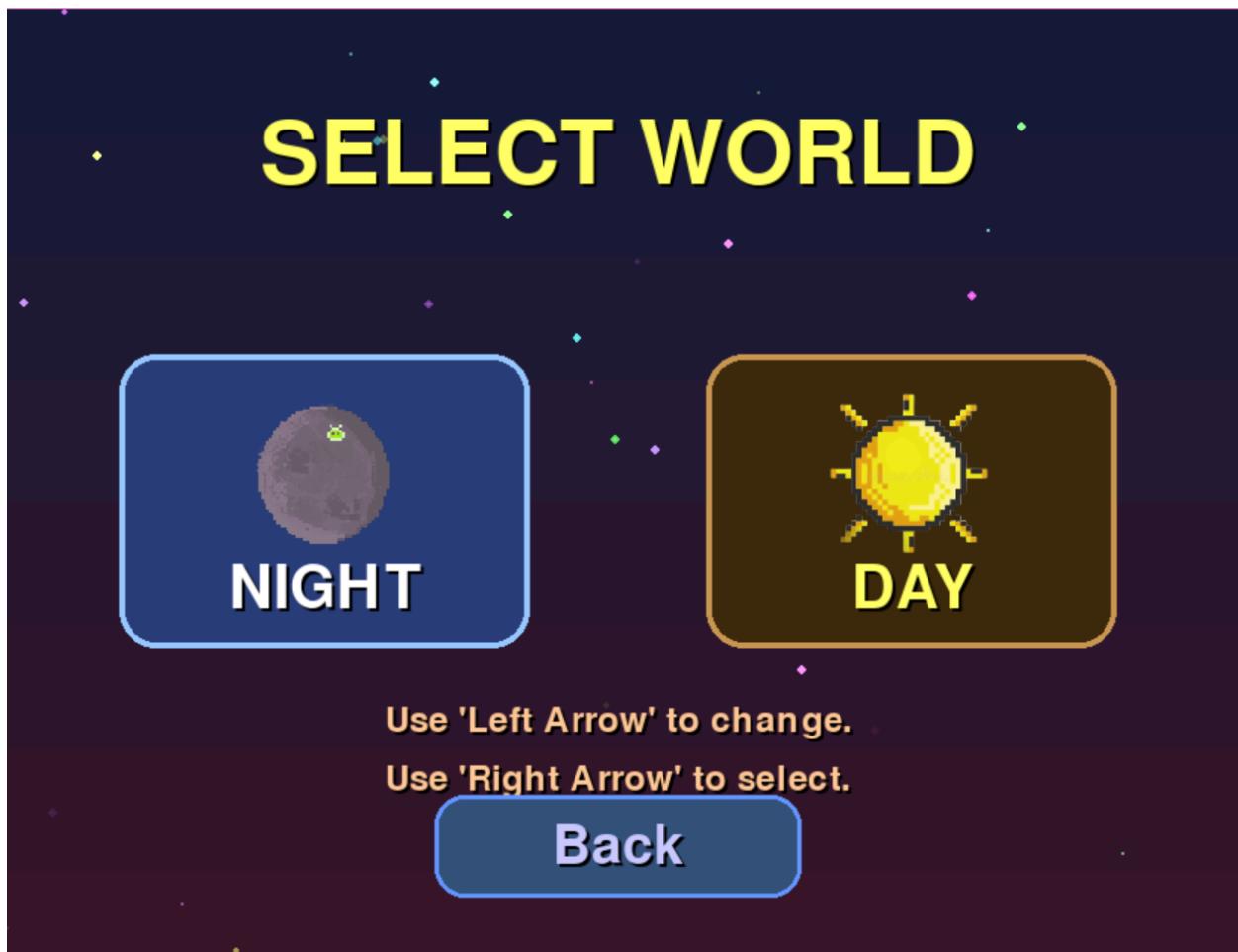
6.1.3.1. Chart of controls in physical mode



6.2. Choose World Module

6.2.1. Description

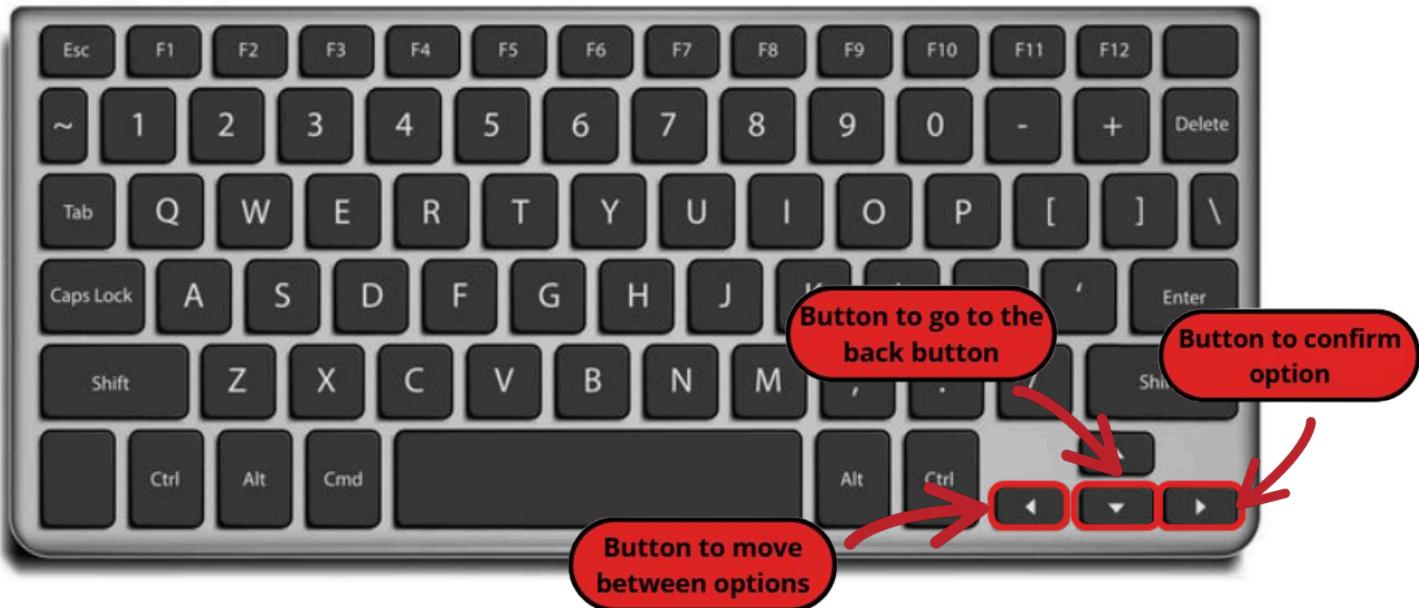
The "Choose World" module allows the player to select the game environment in which they wish to begin their game. This choice defines the visual conditions of the level (day or night themes), modifying the textures of objects such as cacti and the ground.



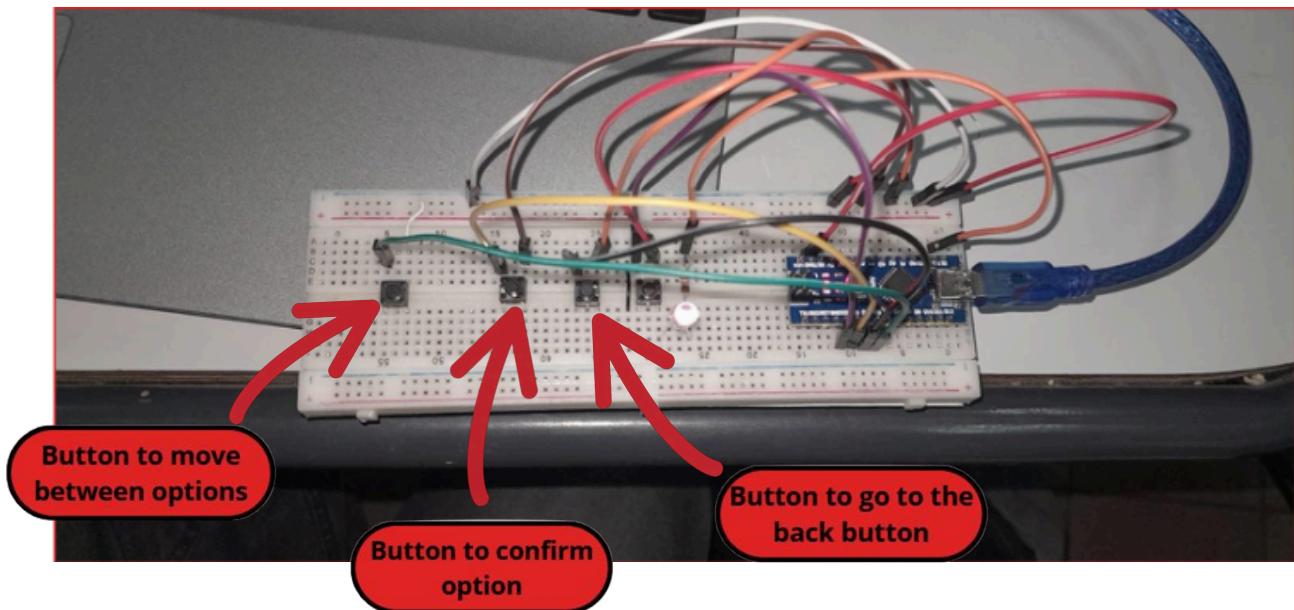
6.2.2. Operation and movement of the controls

On the world selection screen, you can choose between Night and Day modes. To switch between options, use the left arrow key on your keyboard. Once you've selected your desired world, press the right arrow key to confirm your choice and continue. The Back button is located at the bottom; to access it, press the down arrow key and then the right arrow key to return to the previous menu.

6.2.2.1. Chart of the controls in digital mode



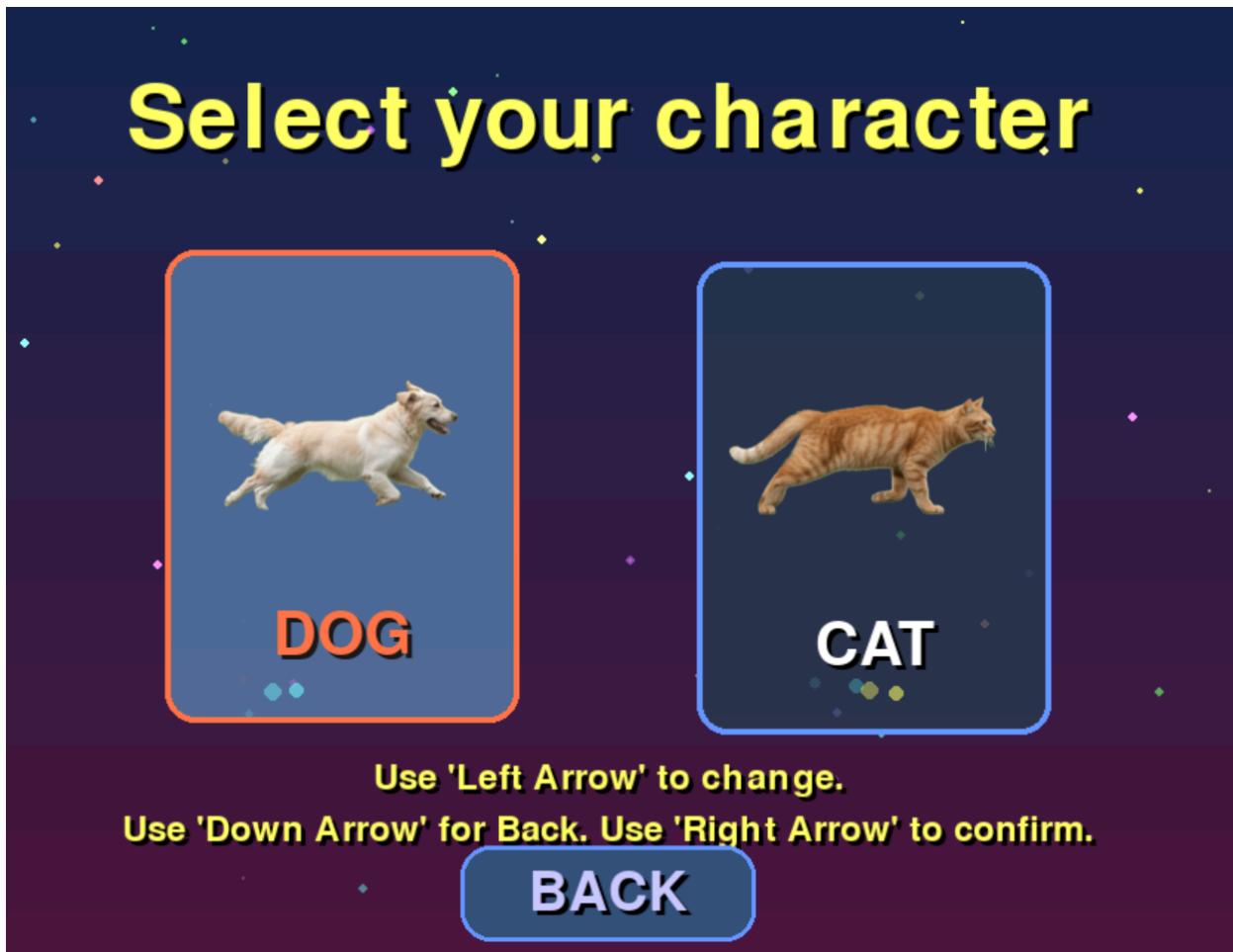
6.2.2.2. Chart of controls in physical mode



6.3 Choose Character Module

6.3.1. Description

On the character selection screen, you can choose between Dog and Cat, representing the two available protagonists in the game. Once you've selected your desired character, you can proceed to the next stage. At the bottom of the screen is the Back button, which allows you to return to the previous menu if you prefer.



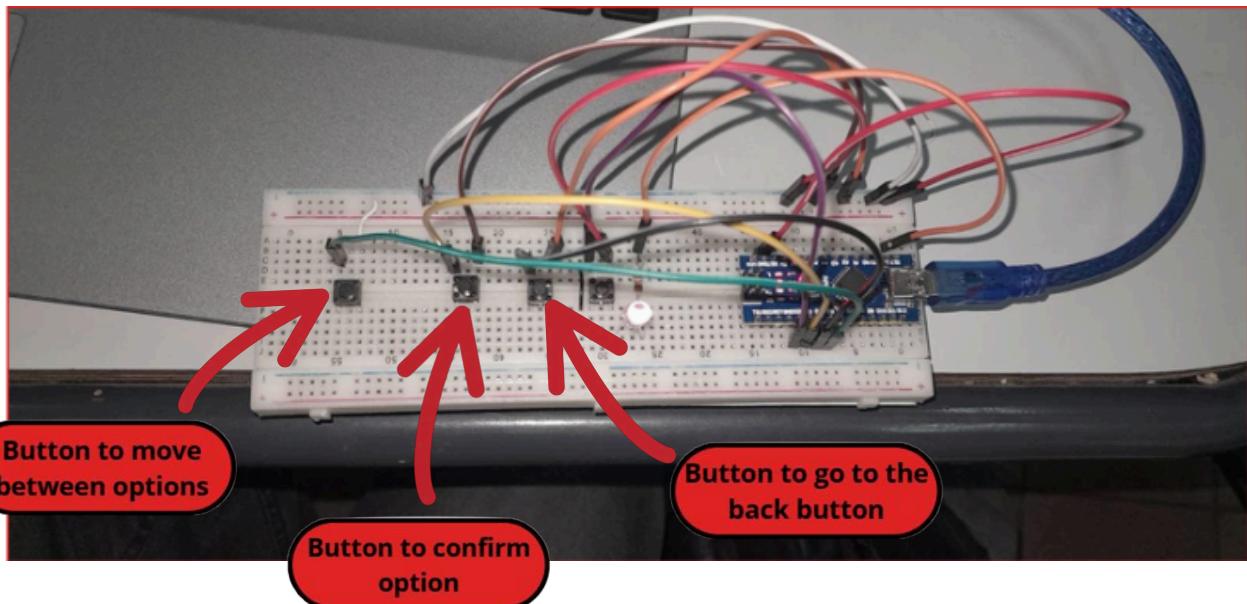
6.3.2. Operation and movement of the controls

On the character selection screen, you can switch between the Dog and Cat options using the left arrow key. Once you've selected your desired character, press the right arrow key to confirm your choice and continue. To return to the previous menu, press the down arrow key to select the Back button, and then the right arrow key to confirm.

6.3.2.1. Chart of the controls in digital mode



6.3.2.2. Chart of controls in physical mode



6.4 View Rankings Module

6.4.1. Description

The “View Ranking” module allows you to see the three best scores achieved in the game, clearly showing who the top-performing players are.

6.4.2. Top 3 Record Screen

This screen displays the top three positions with gold, silver, and bronze medals, along with the player's name and score.



6.4.3. Operation and movement of the controls

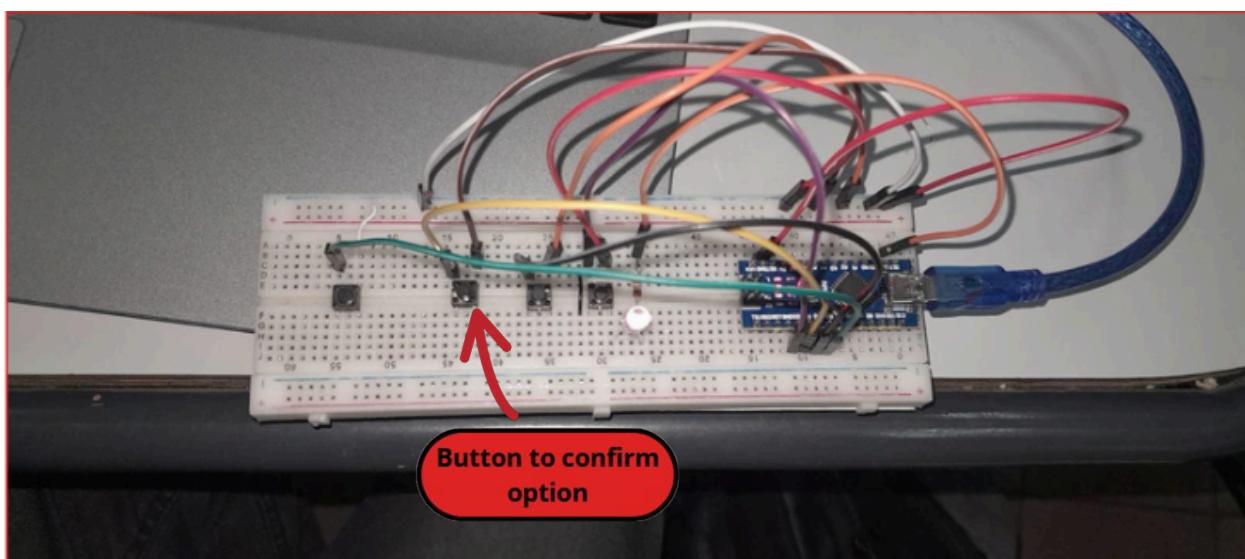
On the “View Rankings” screen, you can interact with the “back” button by tapping the button on the right to confirm the action and return to the main menu.

6.4.3.1. Chart of the controls in digital mode



6.4.3.2. Chart of controls in physical mode

Button to confirm option



6.5 Exit Module

6.5.1. Description

The "Exit" button allows the player to safely close the game and return to the desktop or the system's main menu. Its function is to ensure that the user can end the game at any time without losing their ranking data.

6.5.2. Operation and movement of the controls

You can interact with the exit menu button by tapping the button on the right to confirm the action and close the program.

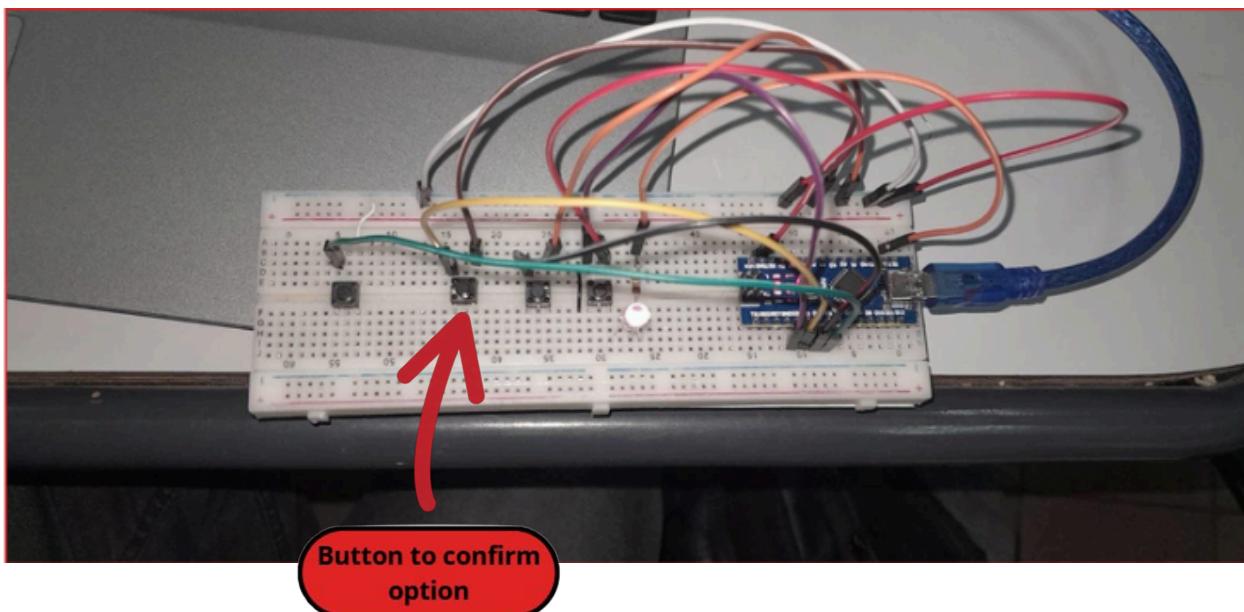


6.5.2.1. Chart of the controls in digital mode



Button to confirm
option

6.5.2.1. Chart of controls in physical mode

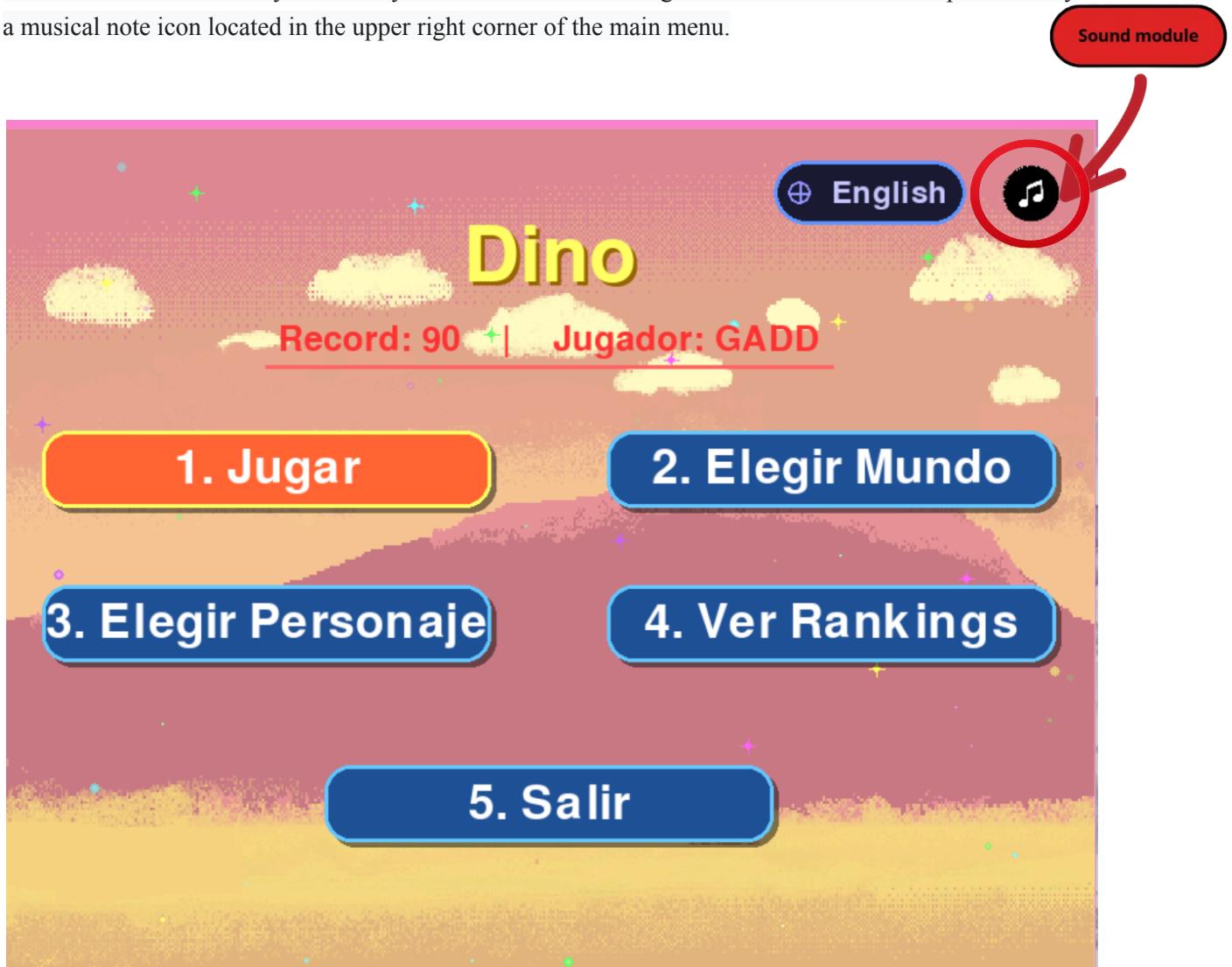


Button to confirm
option

6.6 Sound Module

6.6.1. Description

The sound module allows you to easily enable or disable all the game's audio effects. It is represented by a musical note icon located in the upper right corner of the main menu.

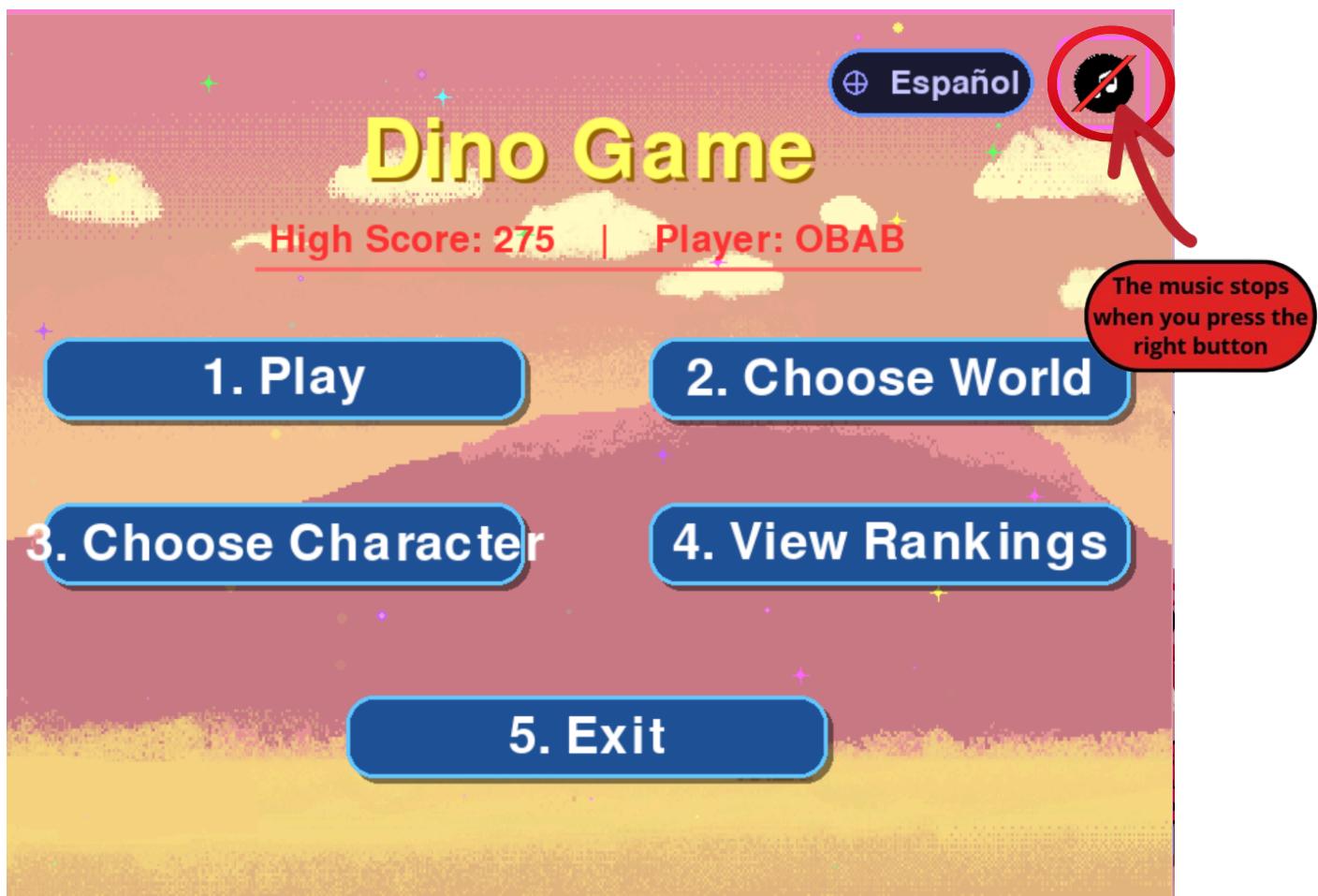


6.6.2. Operation and movement of the controls

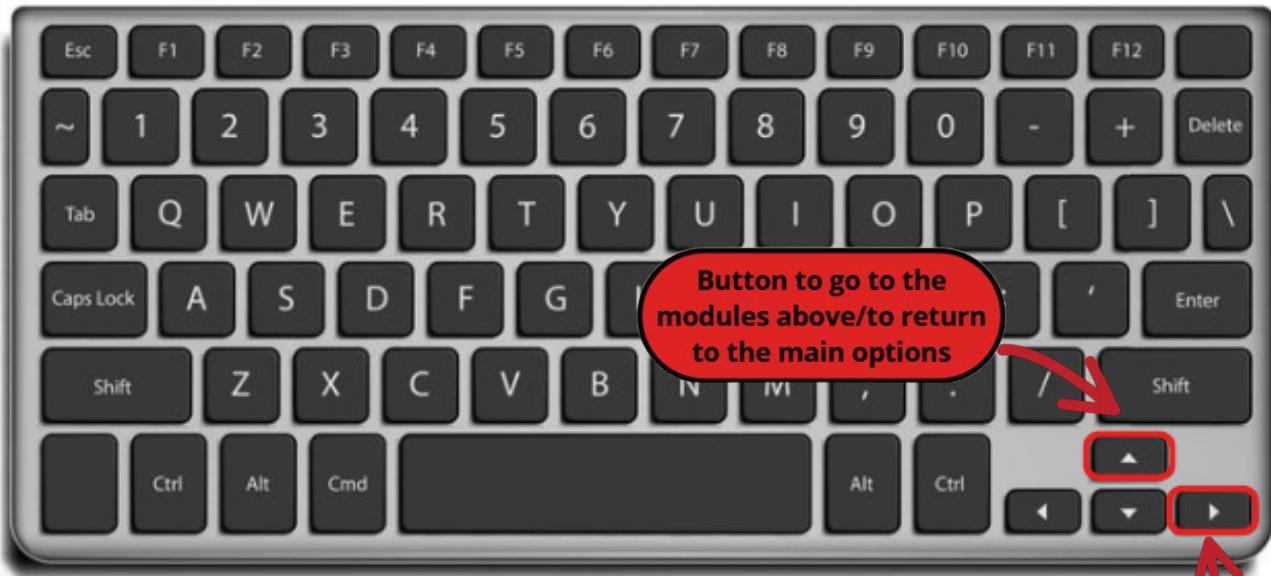
Pressing the right button on the icon mutes all game sounds, including background music and effects. Tapping the same button (right) again instantly reactivates the sounds, allowing the player to fully enjoy the audio experience.

Additionally, the player can navigate between the different menu modules using the arrow keys: To move up to higher modules, tap or press the up arrow. To return to the main options, simply tap the up arrow again, returning to the game's main menu.

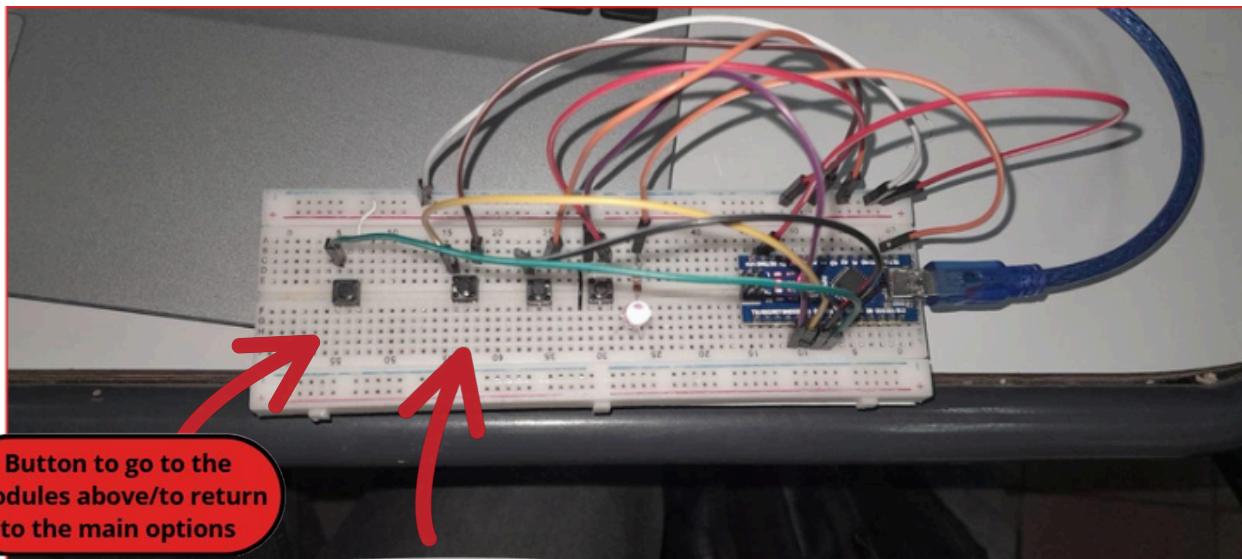
6.6.3. Visual indicator for sound deactivation



6.6.3.1. Chart of the controls in digital mode



6.6.3.2. Chart of controls in physical mode





7. Frequently Asked Questions (FAQ)

What happens if I don't have the Arduino connected?

A: Nothing, the game runs perfectly, but the functions and data that depend on serial input will not respond.

How do I exit the game?

A: By using the correct combination of serial signals to navigate to the menu button that says "Exit," or, if there is any error or execution issue, press the "ESC" key on the keyboard to close the window.

Is the game infinite?

A: Yes, the game is infinite; however, as time passes, certain events may occur that can cause you to lose.

Is it compatible with other operating systems?

A: No, since compilers and libraries differ between operating systems, making it difficult for the same game to exist across multiple platforms.

Can the game be paused?

A: No, pausing is not a feature designed for this type of game, as it aims to stimulate reaction time and hand-eye coordination. Being able to pause would be considered cheating.

Is a database connection required?

A: No, you can run the game without a database connection, but sections that rely on it, such as viewing rankings, will not function.



8. Glossary of Terms

Arduino NANO:

Required hardware component used as the microcontroller board that receives signals from the player.

Touch Sensors:

Physical hardware elements that detect player contact and send signals to the Arduino, enabling in-game interactions (jumping, crouching).