

ECOSPHERE

User Manual

Team 2



A GAME BY TEAM 2

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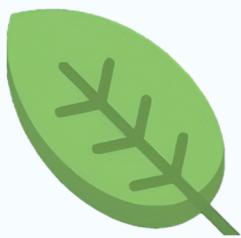
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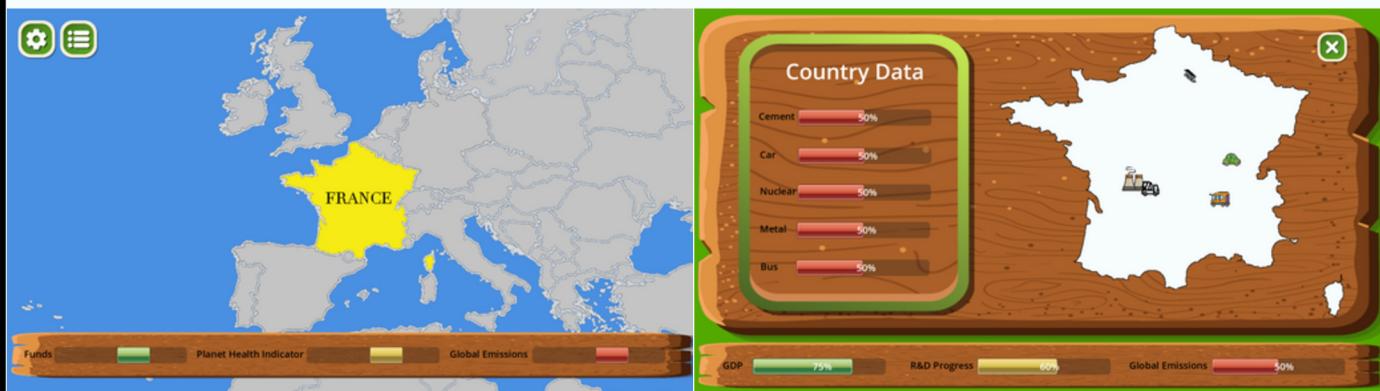
Introduction



Project Overview

For the second project of the year, we were asked to create a serious game about climate change, an important topic due to its current urgency.

To create this game, we use the Godot game engine, with the GDScript language (specific to Godot). Our game is 2D planisphere. The player will have to stop/slow down global warming with the current resources of the country when the player starts. For example, a player who starts in 2024 will not have the same starting point than a player who will begin in 2027.



Manual Organization



This document is a reference to help you avoid diving into the game without information about a particular aspect of the game and how it works. However, if you are looking for technical aspects like how the code has been written or the game core, please, refer you respectively to the technical and functional specifications. Finally, all the marked words are indicated in the Glossary section at the end of the document.

All the parts of the document are indicated below.

Hardware Requirements: Explains what you need to play the game.

Game Software: Describes the steps to follow to install the softwares (game and engine).

Informations about the Game: What is in the game, the main functionalities and how they work.

How to Play: Indicates the conditions to succeed in the game, to complete it.

Get Help: How to contact us if you encounter issues in the game and problems concerning the installation steps.

Glossary: Lists all the words that may be too difficult to understand in this document.

Requirements

Computer

This minimal system configuration is required to install and play the game (based on the Godot requirements):

- **Minimum:**

- Operating System: Windows 7 or +; macOS 10.12 or +; Ubuntu 14.04 or +
- Processor: From the 2000's processor
- RAM: 2GB
- Graphics card: Can support OpenGL 3.3

- **Recommended:**

- Operating System: Windows 10 or +; macOS 10.14 or +; Ubuntu 18.04 or +
- Processor: From Intel 7th (i5 recommended) and all the AMD Ryzen
- RAM: 8GB
- Graphics card: Can support Vulkan 1.0

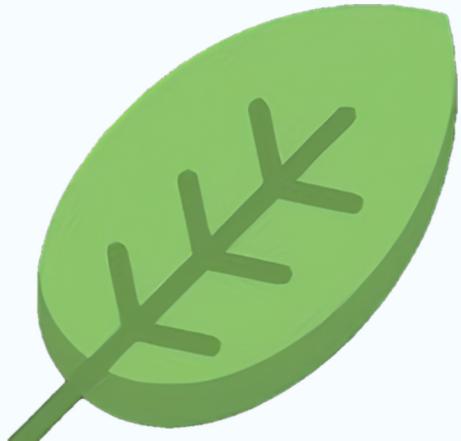
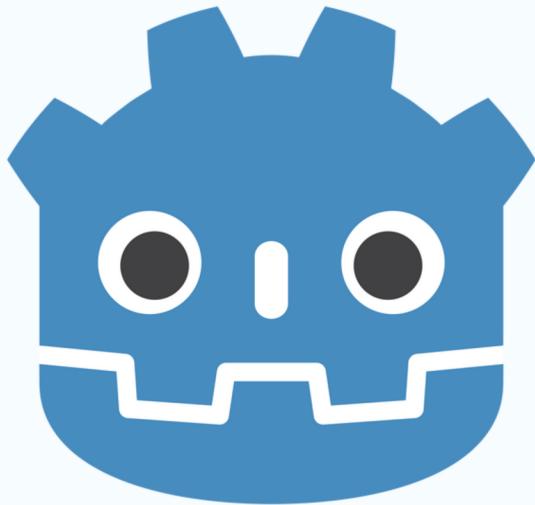


Software

To play the game, Godot is required on the computer.

If it already installed, the next section can be ignored and go here.

If not, please follow the steps on the page just below to setup the engine.





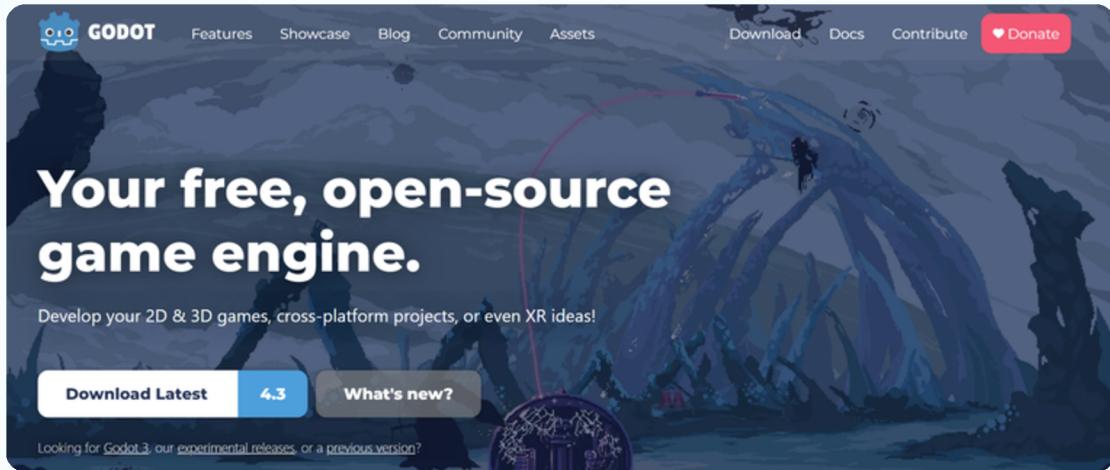
Game Software



How to install Godot?

First, Godot engine setup:

- 1) For this, please go to the [Godot website](#) and click on “Download Latest”



- 2) Once done, choose “Godot Engine”



3) When the file is downloaded, un-zip it from the File Explorer in the wished folder.

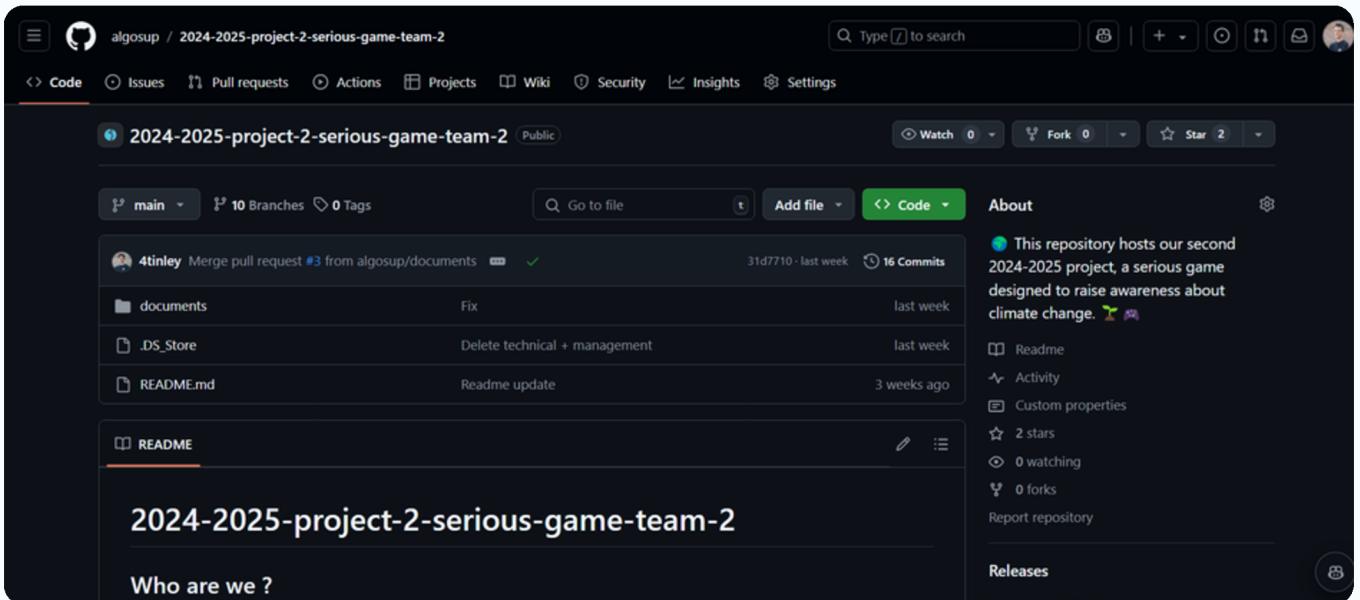
The Godot engine is now ready to be launched! 

How to install the Game?



When Godot is successfully installed, good job, half of the work is done.

1) Visit the [GitHub repository](#)

A screenshot of a GitHub repository page for "2024-2025-project-2-serious-game-team-2". The page shows the repository's main branch, 10 branches, and 0 tags. It includes a list of recent commits by "4tinley", such as "Merge pull request #3 from algosup/documents" and "Delete technical + management". The README section contains the text "2024-2025-project-2-serious-game-team-2" and a link to "Who are we ?". The repository has 0 stars, 0 forks, and 0 releases. The sidebar on the right provides an "About" summary: "This repository hosts our second 2024-2025 project, a serious game designed to raise awareness about climate change." It also lists "Readme", "Activity", "Custom properties", "2 stars", "0 watching", "0 forks", and a "Report repository" link.

2) Click on “Release”

3) Download the .exe file

4) Execute the .exe file to launch the game.

Good job, you can now play the game! 



Informations about the Game

Main Menu

The main menu is displayed like this, with 3 possibilities:



- The **PLAY** button that launches the game
- **HOW TO PLAY** that shows the game mechanics
- The **QUIT** button that closes the game

In-Game



The game is a planisphere displayed in 2D. Each country can be selected with the mouse. Once clicked, another in-game page is opened, displaying the selected country's map, its data, and information about GDP, Research and Development (R&D) and Global Emissions. Everything is displayed using progress bars.



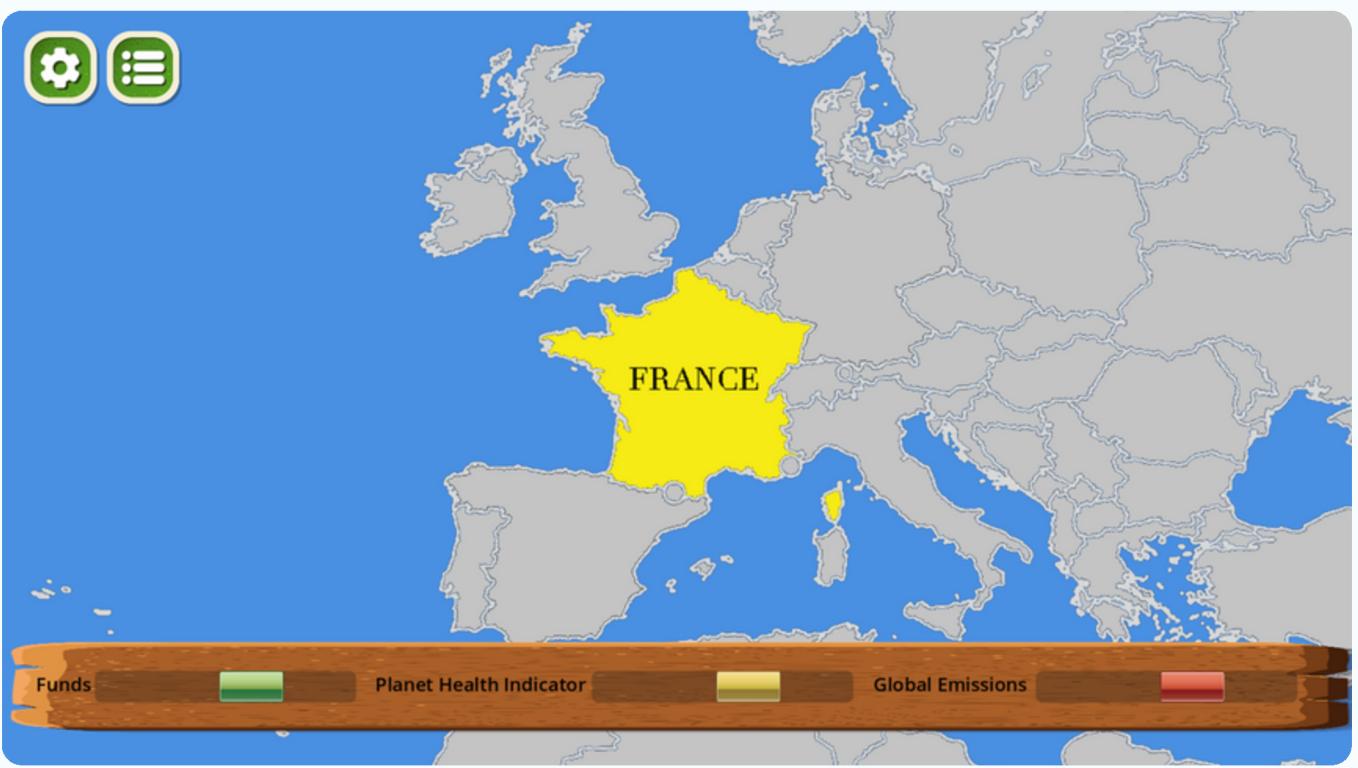
For the GDP bar: The fuller the bar, the more money you have to buy R&D.

For the R&D Progress bar: The more the bar is filled, the more global emissions can be reduced (You still have to make the right choices, because the power is in your hands).

For the Global Emissions: The emptier the bar, the less the global emissions are and the better the country is doing (the planet thanks you 🌱).



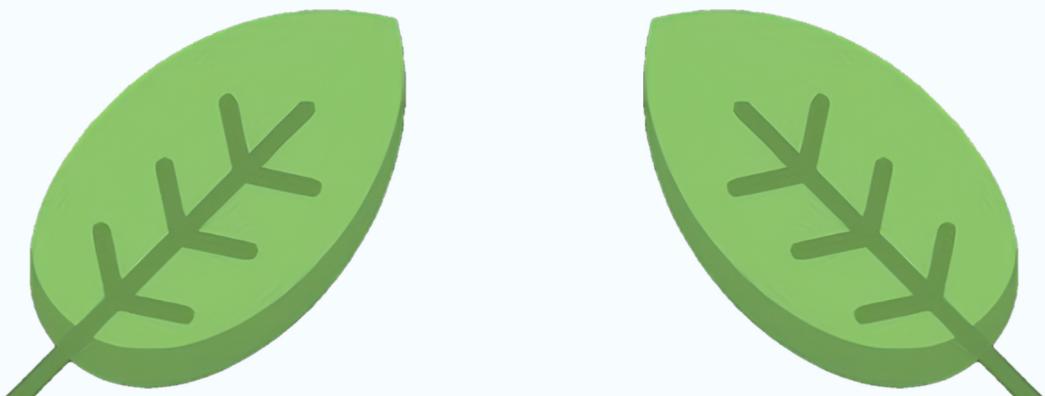
Let's go back to the main game, that's to say the planisphere.



The 3 bars are still present, but this time they represent global metrics:

- The total Funds (rather than the GDP of a single country),
- The Planet Health Indicator (which reflects how the current choices impact the planet's well-being),
- The Global Emissions. This one is directly linked to the Planet Health bar: when the Emissions bar is emptier, the Planet Health bar becomes fuller.

Each country is colored related to its CO² Emissions, green being the best (the country is not consuming a lot) and black the worst (the country uses fossil fuels, the cars are still used a lot).

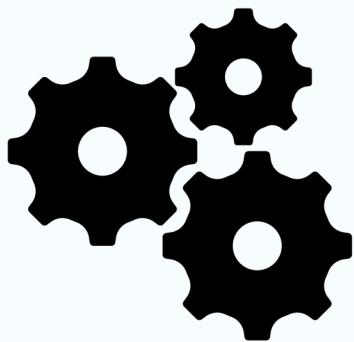
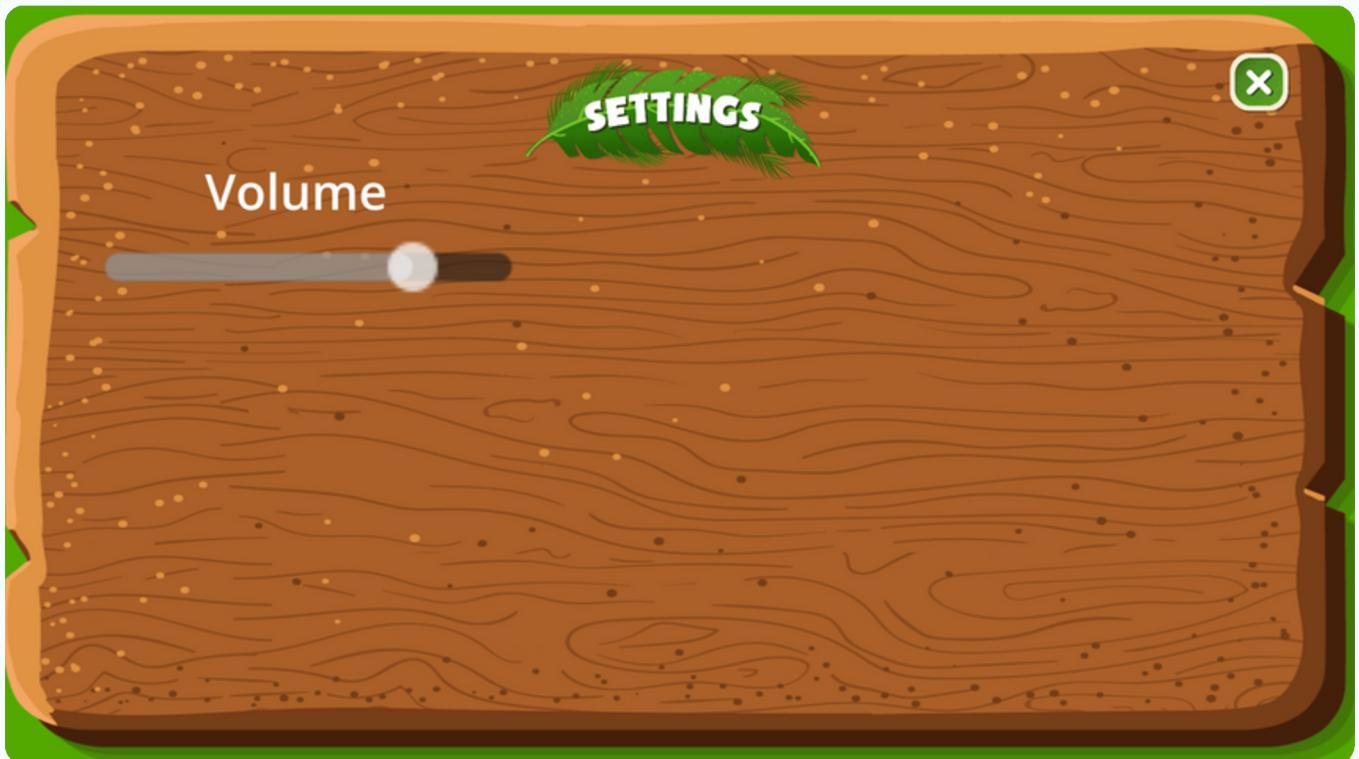


Settings



Settings are available here. They include the following:

- Volume: Allow the player to control the game music directly in game.





How to play



Main Page

On the main page, also named as *Planisphere*, the player has a visual access to all the country in the world. Then, at the bottom of the screen, there are **3 bars**; they are explained in the previous section. To reach the temporary end of the game (since it never ends), the player has to reduce the **Global Emissions** bar to the maximum (0%).

For this, the player has **funds**, representing the total money he has (all countries combined), but we will come back to this later, in the indicator by country.



When the player clicks on one country, another page opened (as explained before) and like on the Planisphere map, there are 3 bars at the bottom and the Country Data on the left. However, the 3 bars represent something else than the previous ones. Indeed, they are used for the **GDP**, the **R&D** of the country and finally the **Global Emissions**.

When he is in the country page, some icons will appear gradually.



When the player clicks on one of them, a question will be displayed, and he will have to choose between "Yes" or "No". The choice has to be made according to the best for the planet environment.

In the past three days, France has launched a campaign promoting the use of hybrid buses. Does this initiative result in no change to the country's GDP?

YES

NO

If the player chooses the correct option, he will lose **GDP** (if "Yes" is the correct answer), earn **R&D** and reduce the **Global Emissions** (*Example below*). If not, the player will lose **GDP** too (if he chose "Yes") but increase the **Global Emission** and the **R&D** will not change. Choices have consequences on country data.

No selected.

Correct! The increase in electric buses has led to lower CO2 emissions.

GDP: 0

R&D Progress: 0.7

Global Emissions: -4



Get Help



Contact Us

If you encounter problems during the installation process, during the game or if you simply have questions about our game that are not covered here, feel free to contact us, our team is here to help you! You can reach us through the following informations:

- **By Mail**✉: If you want direct help, you can reach us at enoal.adam@algosup.com. If all goes well, you could receive a reply within 2 working days (from Monday to Friday).
- **By GitHub**💻: You can contact us through [GitHub](#) by the GitHub Issues (direct redirection if you click on GitHub just above). When you are on the website, click on “New issue” in the top right-hand corner and just after, add a title then a description of the problem.

To be well understood by the team, please, provide us the more information you can, in the order:

- What is, according to you, the type of the bug,
 - What happened,
 - The step(s) to reproduce the bug,
 - What you expected without the issue.
- **By LinkedIn** : Finally, you can follow and reach us on LinkedIn. You can find the Technical Writer's profile by the link opposite ([LinkedIn Profile](#)). You'll receive an answer from 1 to 2 days maximum.

Don't hesitate to check our GitHub repository to verify if an update has been released.



Safety Help



Health Warnings:

 **Epileptic seizures:** A low percentage of people can suffer of epileptic seizure when they are exposed to such visuals captures, especially some bright patterns and stuff. Play video games can expose these people to epileptic seizures. Please, make sure to don't be affected by this kind of problems and if it's the case, contact your practitioner.

 **General problems:** If you feel one of these symptoms before playing or when you're playing video games: eye pain, vision deterioration, headaches, muscular contraction, convulsions, memory lapses, faints or disorientation, please, STOP playing and visit your doctor before restarting the game. Don't hesitate to also take a break every hour minimum to prevent of these problems!

 **Tiredness:** Respect your body limits. If you are too tired, avoid playing video games to reduce the apparition of headaches and eye pain.

 **Monitor:** Be aware to your environment, place your computer/monitor at a reasonable distance from your eyes.

Computer:

 **Ventilation:** Let the ventilation mechanisms work. Don't put anything in front of them or you will damage the components of your computer and risk overheating.

 The team IS NOT RESPONSIBLE for any damage caused to your equipment if it not provokes by the software.



Q&A



Please, before looking at the steps afterwards, ensure you have the specifications to launch our game.

Why won't the game launch?

Let's ensure you're successfully download Godot.

1. If you waited more than 2 minutes, pass to the next steps.
2. Execute the .exe file in the Zip file previously downloaded from the Godot website.
3. Once Godot is launched, hurrah, just close it.
4. Try to relaunch the game. It should work! (if is not, pass to the next question)

Why the game crashes or lags?

Let's reinstall the game.

1. Go to our [GitHub page](#) and download ...
2. Re-launch the game with the most recent file

Why I have visuals bugs (like flashing lights or something directly related to the screen)?

Let's check your drivers



1. Go to the PC drivers' website ([Dell](#), [Asus](#), [Lenovo](#), [HP](#), [Acer](#), [MSI](#); for Apple go to the Boot Camp Assistant)
2. If you have an Intel Graphic Card, write Intel following by the general name of your graphic card (for example, Intel UHD Graphics Driver).
3. If you have a NVidia Graphic Card, write NVidia following by the general name of your graphic card (NVidia GeForce GTX e.g.) and choose the correct driver, related of the specific Graphic Card name (NVidia GeForce GTX 680, or 6xx for series 600)
4. Install the latest downloadable version of it.
5. Once it done, go to your File Explorer > Downloads > Click on the newly downloaded driver.
6. Follow the on-screen instructions
7. When it is installed, reboot your PC
8. Try to relaunch the game. It should work!

If none of these questions answer yours or if there are any bugs or issues whatsoever, please contact us by the platforms written above.



Glossary



Godot	An Open-Source Game Engine, created by Juan Linietsky and Ariel Manzur. It was released in 2014 and is cross-platform (i.e. it works on every platform, both on the developer and player side).
GDScript	A scripting language use in Godot which is optimized on it. It looks like to Python with a very similar syntax and indentation system.
OpenGL	An Application Programming Interface (API) used to interact with the Graphic Processing Unit (GPU) directly to obtain a graphic render boosted by the Hardware
Vulkan	An API, successor of OpenGL, allowing more control over the GPU and compatible with the newest Graphic card
GitHub	GitHub is a cloud-based platform where you can work together, store, share with others to write code published document and more.
Zip File	An archive file format that supports lossless data compression. They can compress multiple files (or folders) into one, or just one big file.
Software	A set of programs, procedures, and rules that enable a computer to work. It can be an OS like Windows, an application, etc.
Hardware	The computer science materials used to do something (e.g. computer, smartphone, etc.)