

Frogger Raccoon

Edition

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Introduction

Project Overview

This document is provided to a user to help them use a particular system, product, or service seamlessly. If you need technical things refer you to the functional or technical specification, all words underlined are in the glossary at the end of this document.

Frogger is a 1981 arcade action game developed by Konami. The object of the game is to guide five frogs to their homes by dodging traffic on a busy road, then crossing a river by jumping on floating logs and alligators.



Our game is a little different from the original, you play as a raccoon who needs to cross roads to jump in trash to win but you need to be careful due to garbage trucks driving on the road.

Organization of the manual

The user manual consists of the following sections to ensure proper readability and efficient navigation:

Introduction: Overview of the game and its objectives.

System requirements: List the minimum and recommended hardware and software requirements for the game to function properly.

Installation & Setup: Offer step-by-step instructions for installing and setting up the game or software.

Game controls: Detail the input methods for interacting with the game.

Gameplay instruction: Explain how to play the game, including mechanics, objectives, and goals. Break down the game modes, rules, and strategies to ensure users understand how to progress and succeed.

Glossary: Define key terms and jargon used within the game or software. This is especially important for complex systems or genres with specialized language.

Contact Us: Provide the necessary information for players to get in touch with support or the development team.

System requirements

Hardware

- **NandLand Go-board:** The primary hardware used to run the game, it has all the source immaterial for the game so be careful with it.



- **Screen with VGA Wire:** A display compatible with VGA connections for video output (If you have VGA to HDMI adapter you can display it on your HDMI screen).
- **Computer or Power Bank:** A source of power and processing to run the game, if you have a new go-board without the source code in it, you need a laptop to transfer the code in it.

Software

Specify any required software that needs to be installed on the Go-board or computer to ensure the game functions correctly. **But** if you have a new go-board you need to do some steps before starting to play.

Go-board Specification

Refer you to the website nandland.com to install and setup all the things you need for your Go-board, the QR code below redirects you on the [right tutorial](#).



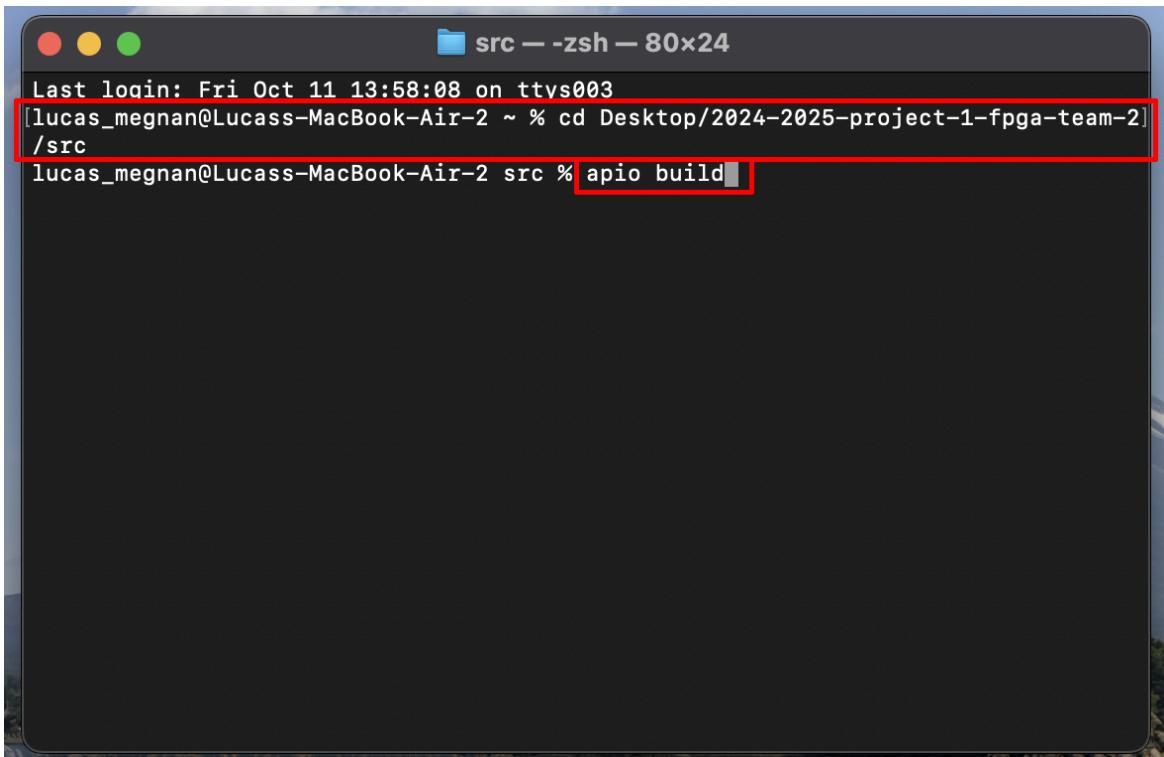
Installation & Setup

First installation

When your Go-board it's ready, you need to install the source code of the game in this one. To do that, you need to go to our [GitHub](#) project and use the button download [ZIP](#).

The screenshot shows a GitHub repository page for '2024-2025-project-1-fpga-team-2'. The 'Code' tab is selected. On the right side, there is a 'Clone' section with options for 'Local' and 'Codespaces', and links for 'HTTPS', 'SSH', and 'GitHub CLI'. Below this, a 'Clone' input field contains the URL <https://github.com/algosup/2024-2025-project-1-fpga-team-2>. At the bottom of the clone section, there is a red box around the 'Download ZIP' button. The repository's main branch is 'main', and it has 7 branches and 0 tags. The repository was created by 'GuillaumeDespaux' and has a commit titled 'Final version (#7)'. The README file is also visible.

After that, Unzip the folder and slide it on your desktop. Now you need to launch your command prompt and use the command “apio build”. **Be careful** to be in the good path “.../Desktop/2024-2025-project-1-fpga-team-2/src” **and** have your Go-board connected on your computer.



A screenshot of a macOS terminal window titled "src — zsh — 80x24". The window shows the following text:

```
Last login: Fri Oct 11 13:58:08 on ttys003
[lucas_megnan@Lucass-MacBook-Air-2 ~ % cd Desktop/2024-2025-project-1-fpga-team-2]
[src
lucas_megnan@Lucass-MacBook-Air-2 src % apio build]
```

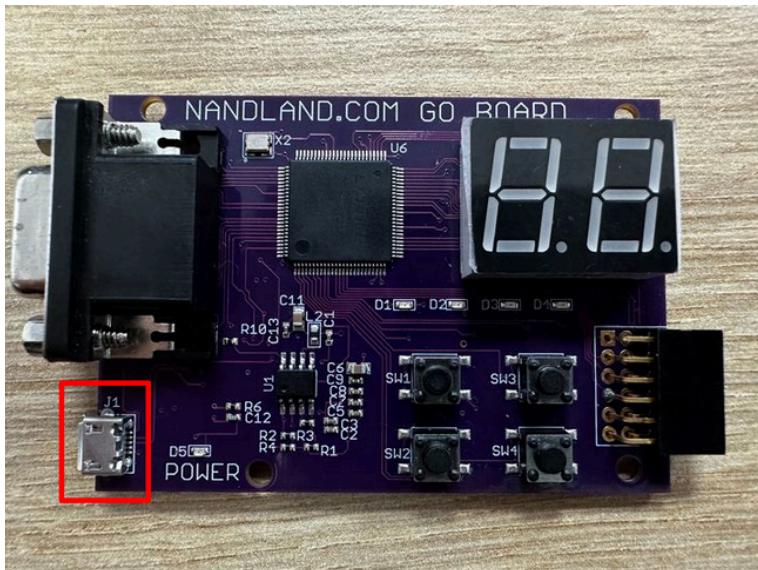
The command "apio build" is highlighted with a red box.

Use the QR code below to access our [GitHub project](#) and download the necessary files.



Power bank

Now that you have a Go-board setup, you don't need a computer anymore if you can't use it, you can just connect a power bank with a micro usb wire.



Display setup (VGA)

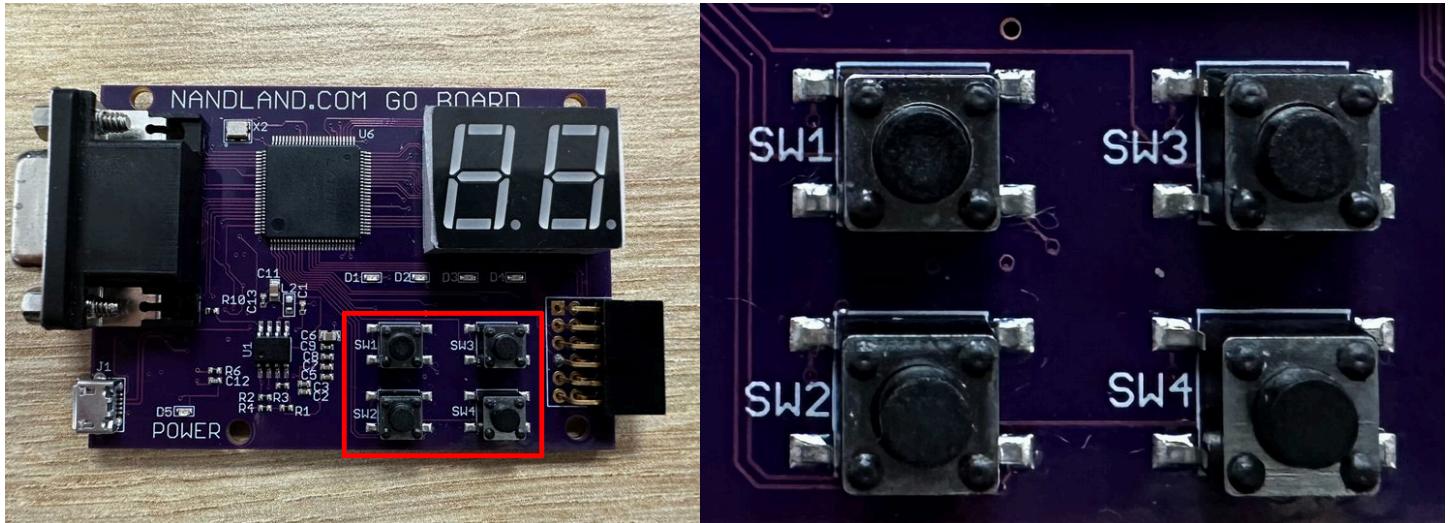
Our go board only supports VGA image transfer, so to connect your screen on the go board, you need a VGA wire, which looks like this. You can also use an VGA to HDMI adapter.



Game controls

Main menu

When the board is connected and ready to play, the game isn't directly launched. To start the game, you need to push simultaneously the 4 switches on the board. When you have a game over, the game stops and you need to do the same procedure to relaunch a game.



Player movement

The movements usable for the game are up, down, left and right. To move, you need to use the 4 switches of the board.

- **SW1** is used to move **UP**
- **SW2** is used to move **DOWN**
- **SW3** is used to move **LEFT**
- **SW4** is used to move **RIGHT**

Gameplay instruction

Game rules & Mechanics

During a game you have 3 lives, you can see how many lives you have left on the corner bottom left of the screen.



When a garbage truck hits the raccoon, you lose a life and you restart at the beginning of the level, so be careful and take your time.

To finish a level, you need to direct towards 5 raccoons in 5 different trashes at the top of the screen. Every time you succeed to put a raccoon in a trash, your score increases of 1, and you can see your score in the seven segments of the board (picture upper).

Game levels & difficulty

Every 5 of scores increases the level and when the level increases, the number of garbage trucks increase (up to 16 at the same time on the screen) and their movement speed also. You always have 60 seconds to put a raccoon in a trash. If you run out of time, you lose a life and the game continues until you run out of lives. When you reach a new level, you don't restore lives.

Be careful, if you hit a worksite barriers at the top of the screen you gonna loose a life, so take your time despite the time working against you.

Glossary

Hardware	The physical and electronic parts of a computer, rather than the instructions it follows.
Software	The instructions that control what a computer does; computer programs.
NandLand Go-board	Designed specifically to have an excellent balance of external peripherals, without bogging down someone who has never used an FPGA with complicated interfaces that are more advanced.
VGA	Video graphics array: a high-resolution standard for displaying text, graphics, and colors on computer monitors.
HDMI	High definition multimedia interface, a digital interface capable of transmitting uncompressed audio or visual data.
GitHub	GitHub is a cloud-based platform where you can store, share, and work together with others to write code.
ZIP	Is an archive file format that supports lossless data compression. A ZIP file may contain one or more files or directories that may have been compressed.

Contact Us

Contact Us

If you encounter any issues or have questions about the game, our team is here to help! Below are the ways you can reach out for assistance:

- **Email Support:** For technical problems, installation questions, or general inquiries, you can email us at lucas.megnan@algosup.com.
- **Social Media:** You can also contact us through our social media channels. We're active on [Linkedin](#) and [GitHub](#) (Use the QR code below to access to the profile Linkedin of the technical writer).



For additional resources like game updates and developer news, don't forget to check our GitHub page for the latest patches and improvements.