Welcome to "*Froggy Ranck*", a thrilling remake of the classic arcade game ***Frogger***, created by the students at **ALGOSUP** in **VERILOG** by **TEAM 1**.

"Ranck" is a frog who has been separated from his love and needs to browse the city and its dangerous roads.

Players will guide our courageous amphibian hero, through a series of increasingly challenging levels, filled with fast-moving obstacles, perilous terrain, and unpredictable enemies.

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1) Safety precautions

a) Regulations

The rating suggested was proposed by our development team and is intended for informational purposes only. We do not, in any way, implement the rating system from pegi.info.	

b) Safety

1. **Bright Lights**: This game features intense flashing lights that may cause discomfort for individuals with photosensitivity or epilepsy. Please proceed with caution.

2. **Age Recommendations**: This game is suitable for players of all ages, but younger children may require assistance to understand the gameplay mechanics.

3. **Breaks Recommended**: To enhance your gaming experience and prevent fatigue, take regular breaks during gameplay.

4. **Health Advisory**: If you experience any discomfort while playing, please stop and rest. Your well-being is our priority!

2) Installation

a) Requirements

- FPGA board. (Game tested and working on “NANDLAND.COM GO BOARD”)
- Screen with a VGA port.
- VGA cable.
- Micro USB cable.

b) Install the game (Only if is not already installed on the board)

1. Install Verilog compiler like APIO (https://nandland.com/set-up-apio-fpga-build-and-program/)

2. Download all the source code on this link (https://github.com/algosup/2024-2025-project-1-fpga-team-1).

3. Plug the GO BOARD into your computer.

4. Open a command line prompt inside the game repository.

5. Type “apio upload” inside the prompt.

6. Done!

c) Setup

1. Plug the Micro USB cable in a power source, then plug it into the FPGA board.
2. Connect your screen to a power source.
3. Connect the screen to the FPGA board with the VGA cable.
4. Power up the screen.
5. Enjoy!

3) Rules & Scoring

It’s simple,

The objective is to pass all the obstacles without being touched.

You start with 4 lives.

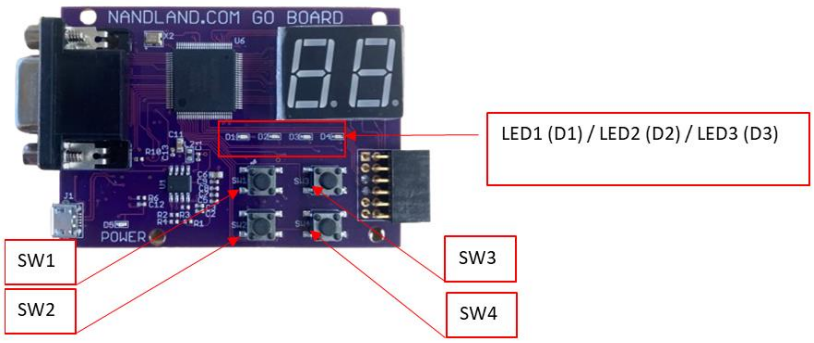
When you finish a level, you gain 1 point and the speed of the obstacle increases.

And when you touch an obstacle, you lose 1 life, and you restart from the bottom.

If you lose 4 lives your point reset to 0, you restart from the bottom too and the speed of the obstacle decreases.

Good luck!

4) Controls



Button 1 (**SW1 on board**) press to make 1 step forward.

Button 2 (**SW2 on board**) press to make 1 step backward.

Button 3 (**SW3 on board**) press to make 1 step right.

Button 4 (**SW4 on board**) press to make 1 step left.

All buttons can be maintained to make automatic step every 0.5s.
Press all buttons at the same time to reset the game.

LED1 / LED2 / LED3 / LED4 (**D1/D2/D3/D4 on board**):

D1 - D2 - D3 - D4 turn on: **4❤️ remaining**

D1 - D2 - D3 turn on: **3❤️ remaining**

D1 - D2 turn on: **2❤️ remaining**

D1 turn on: **1❤️ remaining**

SEGMENT SCREEN: **01 equal level 1, 02 equal level 2, 10 equal level 10**