

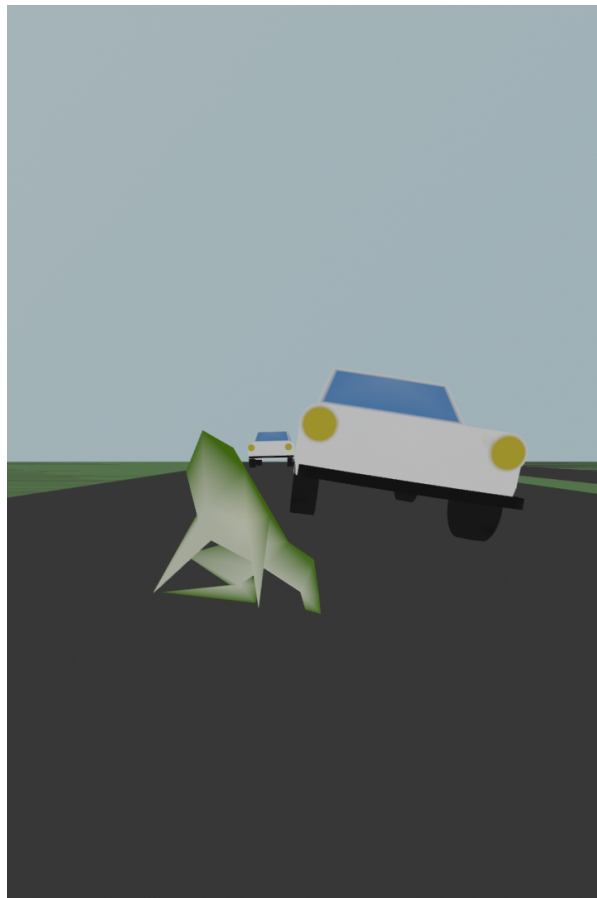
TÖL105M - 3D Frogger

Bence Koczogh

November 2024

1 Introduction

This game is a very basic clone of Frogger in 3D, using three.js. It can be found on this link: <https://classy-marigold-4a7eb7.netlify.app/>



2 Implementation

2.1 threejs

I originally wanted to write my own simple 3D engine to run the game, but I quickly realised I did not have the time to write an engine *and* make a game. I ended up using threejs to handle all the intricacies of 3D rendering and model loading.

2.2 Models

The environment, cars and logs were made by me in Blender. The car is loosely based on the East German Trabant 601, which has a very simple shape that I think fits the game. The frog model was taken from opengameart.org. Most models use only vertex colours, with the exception of the logs. The log textures were taken from a custom Minecraft texture pack to give them a bit of detail. For those curious, the original .blend files are included in the website's source under `models/`.

2.3 Gameplay

There is a 150 second timer on the game. During that time, points can be earned by reaching the end of the level with the frog, and by collecting the periodic bonus points in the middle of the level. For every 500 points earned, an additional 60 seconds are added to the timer. Each frog is worth 100 points, and the bonus awards 300. Once the timer runs out or the player runs out of lives, the game ends.