Physics Engine Development Log

Emil Motrøen

Project Start: December 21st, 2024

Contents

1   Introduction

This document serves as a development log for the project. It includes notes on progress, decisions made, and any issues encountered.

2   Project Setup

2.1   Initial Setup

- Created project repository.

- Set up initial directory structure.

- Added basic CMake configuration.

2.2   Tool Installation

- Installed necessary tools: `cmake`, `g++`, `clang`, `glad`, `glfw`, `doxygen`.

- Verified installations and versions.

3   Development Log

3.1   2024-12-21

- Created basic project files, directories and basic files setup.

- Added support for using either g++ or Clang when compiling.

- Added additional compiler flags and a file for pre-compiled headers.

- Implemented basic triangle on the screen using OpenGL.

- Fixed an issue where g++ and Clang have a few different compiler flags by removing the non-shared ones.

- Added a bash script for building and running the code, build_and_run.sh.

3.2   2024-12-22

- The build_and_run.sh script now can produce verbose output.

- The build_and_run.sh script converts input to lowercase to make comparisons easier.

- Added a bash script to run Doxygen to create documentation easier, gen_docs.sh.

3.3   2024-12-23

- Implemented basic build script.

- Added error handling to the build script.

- Integrated Doxygen for documentation generation.

3.4   2024-12-24

- Updated CMakeLists.txt to include custom targets.

- Fixed issues with cache loading in CMake.

- Started writing LaTeX document for development log. Earlier entries in this section are based on the git messages created before this document.

3.5   2024-12-29

- Made a commit of the new devlog after a Christmas break.

4   Issues and Resolutions

4.1   Issue: Cache Loading Error

- **Description:** Encountered "could not load cache" error when adding custom target in CMake.

- **Resolution:** Ensured proper order of commands in CMakeLists.txt and verified script paths.

4.2   Issue: Compiler Flags Compatibility

- **Description:** Some compiler flags were not compatible with both `g++` and `clang`.

- **Resolution:** Remove all compiler flags that were not compatible with both compilers.

5   Future Work

- Continue updating the development log with daily progress.

- Finish the OpenGL stuff relatively quickly so that work on the actual physics engine can start.