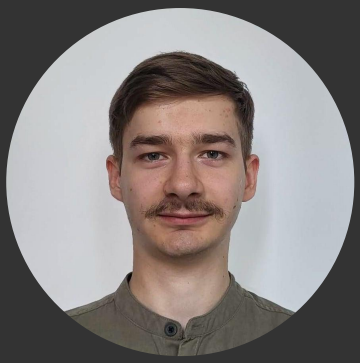

Robert Manc

Programmer

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2002.04.25

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Romania, Baia Mare

Introduction

I consider myself a passionate programmer owning knowledge over different programming languages used in windows applications. For instance, recently I have developed a labyrinth game from scratch with C++ 20 using a lightweight graphics library. I have also contributed to open-source projects out there. These opportunities gave me the starting point in learning git, windows bash, unit testing, clean code principles and issue tracking.

Programming languages:

- C++ (from 11 to 20)
- Web: PHP, CSS, Javascript
- Scripting: Python, bash
- Database: MySql, SQLite

Education

Oct 2021 - July 2024

Bachelor of Applied Science (B.A.Sc.)
Technical University of Cluj Napoca - Centrul Universitar Nord, Baia Mare

Attended events

Nov 2022 — **XGEN International Conference** — Organization volunteer

Sep 2023 — **DevTalks IT Conference Cluj-Napoca** — Participant

Nov 2023 — **XGEN International Conference** — Organization volunteer

May 2024 — **XGEN International Conference** — Organization volunteer

Personal projects

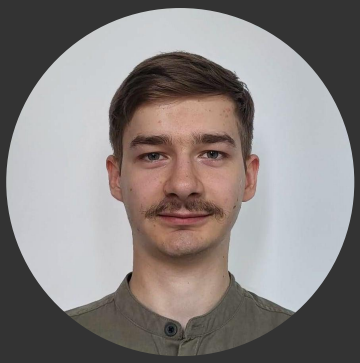
Labyrinth C++ game

Link: https://github.com/CoderLorant/Labyrinth-Magnum

I was developing a C++ labyrinth game with the intention to learn about computer graphics and how certain mechanics are implemented in the background. The goal was to have a performant playable complete game which is running smoothly without crashes or delays.

I chose the Magnum graphics library over a game engine because I wanted to do my own research on how to use math calculations in implementing the algorithms for collision detection, movement, defining 8 directions (Right, Left, Top, Down, RightTop, LeftBottom, etc), a customizable coordinate system and the hardcoded level editor. The game included sound effects and background music as well as a defined winning condition.

Technologies used for the game: C++ 20, Magnum(graphics library built on OpenGL), OpenAL (sound library), Git version control.



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University web project:

This web project aimed to include all the relevant aspects that goes on the way such as database interaction, encoding and decoding sensitive user information, handling user permissions using sessions and web design.

I had to develop a complete solution in 2 months including setting up a real world scenario, designing the database structure and generating the data for it from scratch, setting up a dynamic page loading mechanism, abstracting the PHP code in classes and functions and taking care about security concerns (SQL injection, encryption).

Database: MySQL, Web Server: Apache, Backend: PHP, Frontend: jQuerry (ajax), CSS library (Zurb), Version control: Git

Programming puzzle pieces:

Link: https://cyberdani.github.io/Programming-puzzle-pieces/

This project is a public site containing visual illustrations and book quotes covering famous programming books such as clean code and design patterns. In the background it consists of a html generator tool developed from scratch in python.

I joined this project as a contributor with the motivation of familiarizing myself with a larger project. I wrote unit tests for the new features of the generator tool. My work included setting up the local development environment, understanding the features I have worked on, coming up with different test scenarios, and talking with the main developer to discuss the progress. My git commits now are present in the repository so the generator tool includes my added code as well.

Technologies and methodologies: Python 3, Unit-testing, windows bash, Issue tracking via GitHub, Git