Leahu-Morie Robert-Andrei

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Education

Politehnica University of Bucharest College
Bachelor in Computer Science *Sep 2020 – Jun 2024*

Projects

Duck Hunt Game | *C++, geometric transformation, OpenGL* Dec 2022 – Jan 2023

- Implemented a 2D video game in **C++**, similar to **Duck Hunt**, where I had to build the scene from scratch, build the duck from scratch, deal with the movement and position of objects in the scene, and implement the game logic (score bar, lives, bullets, etc).
- Learned to use geometric transformation, **GPU processing**, linear algebra and learned to work with an interface.
- Learned to use **translation vectors**, rotation, 2D intersection of the points.

HTTP Client-Server Interaction | *C++,REST API,JSON* Mar 2022 – Apr 2022

- Implemented an **HTTP client** that interacted with an **HTTP Server**.The server simulates an online library and is already fully implemented and the client accepts keyboard commands and sends them, depending on the requests to the server.
- Learned to use **REST API** concepts, such as HTTP mechanisms for sending and receiving data from the server.
- Used **JSON** files for serializing various objects, such as users and messages, and to get responses from the server. In the implementation, I used **HTTP methods** like get, put, post, or delete between body data and query parameters.

Book Store | *OOP, Java* Dec 2021 – Jan 2022

- Worked with **Java** abstract data structures and custom functions for **storing**, sorting and comparing books in the library environment.
- Implemented **OOP basic concepts** such as **inheritance** and **polymorphism**, when creating different types of books and **encapsulation** to hide sensitive data such as publishing etc.
- Successfully shared information across classes, objects, and multiple files.

Online Library | *C, tree data structure, memory leaks* Apr 2021 – May 2021

- Worked with multiple book stats and chose to implement them using a **tree structure**.
- Built a desktop program in **C** that works with abstract **data structures** such as a **linked list** for storing authors and **binary trees** for storing books.
- Considered memory management, solved memory leaks.

Extracurricular

EESTEC Olympics marathon Apr 2022

- Participated in a **24-hour programming competition** to develop a trivia bot from scratch. The bot was to answer basic and general questions about history, famous people, science, etc.
- As a team, we built a **web scrapper** in python that gathered information from the best websites, and filtered names, numbers, dates, and formulas. We made a database from which we extracted only the fittest recordings.
- Learned the basic concepts of **Python**, different functionalities and how to work with a **database**.

Cisco Networking Academy. Python Programming 101 Oct 2021 – Jan 2022

- Learned **basic concepts**, **data structures** and **OOP** in Python.
- Participate in **teamwork** activities where students can practice their **soft skills**.
- Learned how to use **Pygame**, **Matplotlib**, **Numpy** and other modules. Together with my teammates, I used these modules to create a game similar to **Doodle Jump**.

Technical Skills

Programming Languages: C/C++, Python, Java, Bash, Haskell.
Technologies: Linux OS, SQL, REST API, OpenGL.
Programming Skills: Data Structures, Algorithms, Object-Oriented Programming, Bash Scripting.
Languages: English