

MOUSTAFA ELSAYED

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<https://moustafay.github.io/>

Back-end developer with a solid grasp of fundamental OOP concepts such as encapsulation, inheritance, and polymorphism. My goal is to join a dynamic team where I can apply my knowledge, learn from experienced professionals, and make a meaningful impact in the field of software development. Currently, I am resident in Minnesota, USA, however I am willing to relocate.

EDUCATION

SEPTEMBER 2018-MAY 2023 SAINT CLOUD MN

B.S., COMPUTER SCIENCE - SAINT CLOUD STATE UNIVERSITY

RELEVANT COURSES:

- Data Structures
- Software Systems
- Fundamentals of Distributed Systems
- Programming Language Concepts
- Object Oriented Software Development
- Platform Based Development
- Database Design
- Expert Systems
- Intro to Artificial Intelligence

SKILLS

- **Programming Languages:** Proficient in Java and Python. Familiar with Javascript, HTML, CSS.
- **Object-Oriented Design:** Solid understanding of object-oriented principles and design patterns.
- **Software Development Tools:** Extensive experience utilizing GitHub for version control and collaborative software development. Proficient in utilizing Maven as a build automation and project management tool for Java-based applications.
- **Problem Solving:** Proficient in applying strong analytical skills and paying attention to detail to effectively solve complex software application problems.
- **Continuous Learning:** Strong commitment to keeping up with emerging technologies and industry trends to consistently enhance skills.
- **Database Management:** Familiar with SQL and relational database systems such as MySQL.

PROJECTS

Ecommerce Simulator [Github](#)

Developed Ecommerce Simulator project in Java using Maven for build automation and JUnit for testing. Implemented a console-based simulation of an ecommerce business, involving a supplier, a client, and a warehouse. Utilized design patterns like the factory design pattern to create products and abstract objects to facilitate object-oriented design. Implemented functionalities where the supplier creates and ships products to the warehouse, and the client can place orders from the warehouse.

Binary Search Tree [Github](#)

The objective of this project is to insert and order a list of integers in a binary tree, in order to access these integers in a short amount of time. The user can do the following through console inputs: add an item,

remove an item, search for an item, clears the list and re-initializes it, print contents of the list, print the size of the list. The items in this program are integers.

Expression Trees [Github](#)

The objective of this project is to use expression trees to calculate different forms of expressions. These forms are infix, post order, and pre order.

Queue Simulation [Github](#)

The objective of this project is to simulate the process of accepting customers in a queue with one teller. The project demonstrates the results of this simulation by printing the longest time a customer waited, average wait time for customers, and how many customers were still left in line, at the end of the simulation.

Library Management System [Github](#)

For this project, the objective was to use python and sqlite to maintain a database that has two tables. A table for the users and a table for the books in the library. A user can be either a student or a teacher, depending on the status of the user there will be different durations that the user is allowed to issue the book for, and different fine rates when the user exceeds the return deadline.