Zenia Lau

Year 2, Combined Major Mathematics and Computer Science

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Technical Skills

- <u>Programming</u>: Java, C, Python*
- <u>Tools/Environment</u>: IntelliJ, CLion, PyCharm, Visual Studio Code
- <u>Testing</u>: Junit
- <u>Version Control</u>: Git, GitHub
- <u>DBMS</u>: MySQL*

still acquiring

Technical Personal Projects

<u>Profit calculator</u>   (Oct 2023 – present)
- Developed a Java application on IntelliJ that keeps track of the customers and suppliers of a small business, and calculates profit by utilizing Java's built-in classes (HashMap, ArrayList, etc.) through Object-Oriented Development
- Implemented data persistence through JSON with automatic saving/loading to enhance user experience
- Built a GUI with Java Swing that allows user to conveniently navigate between windows and panels and interact with the program's functionalities
- Ensured the accurate functionality and stability of the program through Test-Driven Development with the JUnit framework, including the implementation of simple to complex test cases
- Integrated the observer and iterator design pattern for an immediate update responding to user action

<u>Simple journal entry revamped</u>   (Jan – Apr 2024)
- Developed a Java application that simplifies the action of recording a financial journal entry to an Excel file
- Implemented program by utilizing external Java libraries from Apache POI
- Designed a user-friendly GUI with Java Swing that translates a simple user action to an update of the intended Excel file
- Set up guards and constraints with Java Exceptions to check for possible typos or errors in inputted values

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Personalized work timer   (Jul – Aug 2023)
- Developed a simple Java application that takes user input and starts a timer that counts down to the specified time of the same day
- Utilized Java's Timer class to create a personalized timer that fits my work style

Work Experience

Student mentor   (Oct 2022 – Apr 2023)
Math4me, Port Coquitlam BC
- Engaged with a group of 3 – 4 students ranging from grade 4 – 11
- Communicated and explained complex topics and concepts to students by clearly demonstrating ideas with visual assistance like drawings/diagrams
- Worked with a partner in coordinating an engaging and comfortable learning environment

Education

University of British Columbia, Vancouver BC   (Sep 2022 – expected graduation May 2027)
- Mathematics and Computer Science, Combined Major
- Bachelor of Science