### **Wayne Norman** **Final Sprint – Winter 2025 – JAVA** **SD12**

### **Individual Report**

#### **Contributions**

Since I worked solo on this project, every aspect of the development was my responsibility. I tackled tasks like designing the database schema, writing backend functionality in Java, and debugging features like user deletion and membership handling. A lot of my time was spent refining the database structure to ensure all dependencies were handled correctly and writing detailed Javadoc to improve code clarity—though this was harder than I expected!

I managed everything on a single branch, which made sense for this project, but it highlighted how important it is to use multiple branches for better organization in team environments. This is something I’d do differently in a collaborative project.

#### **Challenges Faced**

1. **Mastering Javadoc Documentation**:  
     
    One of the hardest parts was getting the Javadoc right. It’s not just about writing comments; it’s about explaining every method, parameter, exception, and purpose clearly. It was tricky to keep it complete and error-free, especially during compilation—but I learned a lot about why it matters.
2. **Handling Errors in the Program**:  
     
    Error handling was another big challenge. Managing database exceptions like *SQLException* and providing meaningful error messages was more complex than I anticipated. I ended up creating custom exceptions (like *DatabaseException*), which made things cleaner in the long run but took time to get right.
3. **Resolving Database Constraints**:  
     
    The database setup was a learning curve for sure. Figuring out how cascading deletes worked and ensuring dependencies (like memberships and enrollments) didn’t block user deletion took a lot of trial and error. I had to adjust the schema multiple times before everything worked smoothly.
4. **Balancing All Responsibilities**:

Being the only developer meant I was doing everything—database design, backend logic, testing, debugging, and more. It taught me a lot about time management, but it was overwhelming at times, especially when testing edge cases and ensuring all features worked as expected.

This project pushed me out of my comfort zone and taught me the importance of clear documentation, thorough error handling, and structured workflows. It wasn’t perfect, but I’m proud of how much I learned and how I overcame the challenges along the way.