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CS 499

Milestone Four Narrative

**Briefly describe the artifact. What is it? When was it created?**

The artifact is a software development project, from CS 320, focusing on contact information management, including record addition, updating, retrieval, and deletion. To illustrate the use of object-oriented programming concepts and database integration, it was first developed during a software development course.

**Justify the inclusion of the artifact in your ePortfolio. Why did you select this item? What specific components of the artifact showcase your skills and abilities in software development? How was the artifact improved?**

Because it shows that I can design and develop a functioning application with organized data processing and validation, this artifact will be included in my ePortfolio. It demonstrates my proficiency with a database interface, object-oriented design, and unit testing. In order to conform to software development best practices, the artifact has been improved by adding strong validation techniques, organized logging, and concern separation.

**Did you meet the course outcomes you planned to meet with this enhancement in Module One? Do you have any updates to your outcome-coverage plans?**

By adding database-backed storage to the artifact and refining its design to adhere to software engineering principles, I did meet the course objectives. This allowed me to show that I am capable of developing scalable and maintainable systems. Although I haven't made any major changes to my outcome-coverage plans, I still want to improve other artifacts similarly.

**Reflect on the process of enhancing and modifying the artifact. What did you learn as you were creating it and improving it? What challenges did you face?**

Improving the artifact made me realize how important it is to follow principles like the separation of concerns and the Single Responsibility Principle. I became more knowledgeable about how to include database operations in a project and make sure that testing is thorough. The primary difficulty was striking a balance between design enhancements and functional requirements. For example, reorganizing the ContactService to efficiently manage database interactions while preserving testability.