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CS-499 Computer Science Capstone

9/21/2024

Category One – Software Design and Engineering Narrative.

**Artifact Description**

The artifact is my CS-320 Final Project, created in October 2023. It showcases my ability to develop a robust contact management application using Java, which involves creating, updating, and deleting contact information.

**Justification for Inclusion**

I selected this project for my ePortfolio because it encapsulates key skills I acquired throughout the course, including object-oriented programming, exception handling, and unit testing. Specific components that highlight my skills include the implementation of a ContactService class, which utilizes data structures effectively, and a comprehensive suite of JUnit tests that ensure functionality and robustness. The artifact was improved through iterative testing and refinement, which enhanced both its performance and usability.

**Course Outcomes**

I successfully met the course outcomes I planned to address with this enhancement. The project allowed me to demonstrate my understanding of software design principles, coding best practices, and the importance of rigorous testing. I do not have any updates to my outcome-coverage plans, as I believe I have adequately covered all necessary areas.

**Reflection on the Enhancement Process**

While enhancing and modifying the artifact, I learned the importance of iterative development and the value of incorporating feedback into my work. I faced challenges related to ensuring the code was both efficient and maintainable, particularly when refactoring for clarity and performance. Creating and improving this project reinforced my problem-solving skills and taught me the significance of testing in the development process.