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The artifact I chose to enhance for my ePortfolio was a linked list implementation I developed for my CS-300 class. These enhancements included the implementation of a hashmap data structure, refactoring for improved modularity, and the addition of comprehensive documentation. These improvements reflect a commitment to mastering data structures and algorithms while also emphasizing best practices in software design and development.

This artifact will be included in the ePortfolio because of its substantial enhancements and its demonstration of data structure implementation. By extending the project to include a hashmap and refactoring the codebase, the artifact shows that I have the capability to adapt and expand upon existing code to meet evolving requirements and relates to the course objectives of demonstrating computer science techniques and using them effectively. The emphasis on comprehensive documentation highlights the importance of communication and documentation practices in software development, aligning with the course objectives of building cooperation and communicating professionally.

Refactoring the codebase provided an opportunity to deepen my understanding of code organization, readability, and maintainability. Implementing the hashmap required consideration of data storage and retrieval strategies, leading to improvements in efficiency. The addition of comprehensive documentation not only enhanced clarity and accessibility for developers and users but also shows the importance of effective communication in software engineering. Overall, the enhancement process helped to build a deeper understanding of data structures and essential software engineering skills.