**Besker Telisma**

**CS 499**

**3-2 Milestone three Narrative**

**09/27/2024**

This artifact was the project that I did for my 340 Database class, where I tried to express further knowledge of data structures and algorithms applied in real life. It is shown in this project that I could optimize CRUD operations by using MongoDB, enhancements such as memory usages with generators and lookup times by means of sets. This is indicative of the fact that I know how to deal with big data efficiently by optimizing data flow from O(n) to O(1). Along with improvements in indexing for query optimization, this demonstrates my ability to design efficient algorithms and to handle typical challenges of working with data in real-world database management.

I included this artifact in my ePortfolio because it reflects my ability to apply algorithms and data structures to solve real-world problems. In this project, the necessity to optimize every form in both time and space complexities was learned, especially for big datasets. This challenge of balancing memory usage and retrieval speed taught me a lot about efficiency in designing algorithms. This artifact will demonstrate my progress toward course outcomes through practical techniques that deliver high-performance solutions.