Artifact Description:

The artifact I chose for the database category is my Craps Game Project, originally developed as part of a game simulation assignment. The initial version did not include any form of data persistence. For this enhancement, I implemented a logging system using CSV files instead of a relational database. This approach allowed me to track game data—like player names, roll results, win/loss outcomes, and timestamps—without the complexity of integrating a full database.

Justification for ePortfolio Inclusion:

This artifact demonstrates my understanding of basic data management concepts using file I/O. While simple, logging data to a CSV file simulates the concept of structured data storage and retrieval. I chose this method because it is lightweight, easy to test, and platform-independent—making it ideal for showcasing in a portfolio. The enhancement shows that I can work with real-world data handling techniques even in environments without full database support.

Course Outcome Progress:

This enhancement supports the program outcome related to designing and implementing computing solutions using well-founded tools and techniques. It also aligns with industry goals of maintaining lightweight, readable logs for analysis or debugging. So far, I have achieved outcomes in software design, algorithm development, and now, basic database/data persistence handling. No updates to my outcome plan are needed at this time.

Reflection on Process:

I learned that even basic data storage methods like CSV logging can be powerful when applied correctly. I improved my skills in working with file streams, managing data formatting, and implementing error-handling for file access. One challenge was ensuring that data written to the file remained consistent after multiple sessions, especially when users quit the game midway. To fix this, I added checks to ensure all data is flushed and saved correctly after each round.