

Enhancement Three: Databases

The artifact used for this enhancement was a bot I made to run in Discord. The bot uses text commands and direct messages to play Texas Hold'em with other Discord users. I call this bot Poker Bot and I created it about 2 years ago as a side project. I selected this artifact because it was a project that I never finished but always wanted to. I also chose this because it was something I created before I had many of the skills I have now and would be able to easily find enhancements that would display my growth. Specifically, in the category of databases, this project has no data persistence between rounds or games. You are given 100 money at the beginning of a game and it is all lost after you leave the game. The addition of a database would allow the players to keep their winnings and give an actual reason to play the game.

I believe the enhancements I made in this artifact will display the course objectives I planned to meet. Databases are common tools used to store large amounts of structured data in a business environment. This makes database knowledge important to display to your potential future employers. This enhancement shows that I have knowledge of SQL databases and how to manipulate their data. The code uses strings of MySQL queries that could be used outside of the code. The enhancement also displays my ability to manipulate the data in code in a safe manner. I implement error handling to ensure that the database connection is closed in case of an error and the programs continues to behave in a predictable manner. I also expanded the use of dependency injection in this enhancement that is useful in many situations.

This enhancement allowed me to add database manipulation to a project that had no previous data persistence. This allowed me to take the experience I have gathered from working with projects that had previously implemented databases and work from a clean slate. Getting a fresh start on the implementation has allowed me to gain insight into the choices one has to make

when adding data persistency, such as how the data will be organized, how to configure the database, and when to add or update the data that is stored. This enhancement also gave me some insight into the importance of error handling. The Discord.NET library that I used suppresses exceptions that occur, making debugging more of a guessing process. I was able to add my own try-catch-finally blocks at a lower level in my code that allowed me to find the issues I was having, which were related to private properties being inaccessible to the database ORM. I was also able to add useful error messages that could be used by others in the future.