Work Reflection – Chinook Music Store

Project Overview

In my Windows Programming in C# course, I was tasked with developing a concept music store using the WPF Application framework. This was to help learn about XAML and build upon my C# knowledge in topics such as events/event handlers, databinding, and LINQ queries. For this project, I utilized the Chinook database as a backend, enabling my app to display information about Artists, Albums, Tracks, Music Catalogs, and Customer Orders. I implemented data retrieval using Entity Framework and leveraged WPF's data binding capabilities to dynamically display and update content in the user interface. This was my first big project developing a WPF application and I learned a lot about XAML and C#.

Key Decisions & Actions Taken

To generate my project models, I utilized connection strings and the Package Manager Console to connect to a local database on my computer and automatically generate models based on the DB schema.

For this project I wanted to push a uniform UX and UI design across all my application pages. I decided to go with a darker theme of black and grey with an orange highlight for contrast. I also implemented a static search bar that users can use to quickly navigate different data more quickly, helping to improve the user experience for my app.

This was my first project utilizing LINQ queries and partial classes, I primarily used LINQ queries for my search bar functionality. I only created one partial class for my Track model however this partial class did not add any new or unique events and was primarily used for displaying model data in a desired format such as "N0" or display "NA" or "Not found" for null data.

Skills Applied & Developed

Before my Windows Programming course I had never learned XAML let alone developed a UI with it. I found it very satisfying learning the syntax and component attributes and was proud of the project's outcome.

This was my first time using LINQ queries in any of my projects, primarily they were used for search bar functions and pulling the desired data from my local database.

I gained a deeper understanding of events and event handlers in this project, most of which were used to help load data on page load and when a user made a search request.

Project Outcomes

Overall, I am very proud how the application turned out. I was able to create 6 unique pages (Home, Artists, Albums, Tracks, Music Catalogs, and Customer Orders). Each page had a functional search bar that users could use to search for their desired

information, and I was able to keep a consistent UX & UI design throughout my entire application.

Areas Of Improvement

In the future I plan on further enhancing my application. Firstly, I plan to implement some form of data limiting search since sometimes the application can slow down as it is pulling too many records from the database. Secondly, I want to create user accounts so that users can only save details and personalize their experience more. Right now the application has a customer orders page where users can view all customer purchases with the introduction of user accounts users would only be able to view their own purchases and not others helping with privacy and security. Finally, I plan on updating some of the earlier developed pages specifically on the tracks and artists page as currently they use the basic data grid display. I want to update the UI of these pages and make them more unique.

Conclusion

Developing the Chinook Music Store application was a valuable learning experience that deepened my understanding of WPF, XAML, and C#. Through implementing data retrieval with Entity Framework, structuring the UI with XAML, and using LINQ queries for efficient data processing, I gained hands-on experience in building a functional and user-friendly application. Overall, this project strengthened my skills in Windows development and provided insight into real-world application design challenges.