**Database Narrative – Event Daddy App (A. Logan)**

**Artifact Description**  
The artifact I selected for the databases category is the *Event Daddy* Android app, originally created in CS 360. It's an event-tracking app that allows users to register, log in, and manage a list of their upcoming events. The original version of the app already used an SQLite database with basic tables and queries for users and events, but it had limited data handling and tightly coupled logic between the UI and the database.

**Justification for Inclusion**  
I chose this artifact for my ePortfolio because it gave me an opportunity to deepen my understanding of database management in mobile applications. While SQLite was already implemented, the way it was integrated into the app left room for meaningful improvement in terms of usability, maintainability, and scalability.

Here’s what I enhanced:

* Replaced raw Cursor usage with a structured **Event class**, improving data encapsulation and readability.
* Created a new getUserEventsList() method that returns a **List**, making it easier to sort and manipulate events.
* Implemented **sorting logic** to display events in ascending order by date and time.
* Added a **real-time filtering feature** in the UI so users can search their events as they type.
* Modularized UI update logic and cleaned up code with comments and structure.
* Integrated **SharedPreferences** to persist login state and ensure data consistency between sessions.

These updates brought the database implementation in line with best practices and made the app more user-focused and maintainable.

**Outcome Alignment and Updates**  
This enhancement aligns with the following CS 499 course outcomes:

* *Demonstrate an ability to use well-founded and innovative techniques, skills, and tools in computing.*
* *Develop a security mindset that anticipates vulnerabilities and protects stored data.*
* *Design and evaluate computing solutions using appropriate computer science practices.*

Through these updates, I demonstrated how to design clean data models, manage relational data through SQLite, and connect persistent data storage with user interactions in an Android app.

**Reflection on the Enhancement Process**  
This enhancement felt like a big step forward in taking an academic project and making it feel more like a real-world app. Moving from raw database queries to structured data handling with classes and live UI updates made the app easier to work with and more enjoyable to use. Sorting and filtering added polish to the user experience.

One of the biggest challenges was decoupling the UI logic from the database queries in a way that still respected the Android lifecycle and didn’t introduce memory issues. Another was ensuring user data remained separate and secure, especially across login sessions.

In the end, the enhancements made the app more dynamic, maintainable, and user-specific, and they helped me strengthen both my SQL and Android development skills.