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CS 499

Databases Enhancement

The artifact I chose for Enhancement Three: Databases is my Inventory App, which I developed during my previous course, CS 360. This app is designed to track items in a warehouse using SQLite databases to store inventory items, as well as user logins and passwords. I selected this artifact for enhancement because I want to polish this app even further, including its usage in SQLite database.

The first enhancement that I made for this artifact is adding the capability to remove items. Previously, my Inventory app supported adding and updating categories and items, but it lacked the functionality to delete items. While this might seem like a straightforward feature, implementing it required significant changes to the database handling code. To address this, I added a deleteItemData function to the InventoryDatabase class. This function utilizes the SQLite database's delete method to remove an item from the Items table based on its unique identifier. By updating the database class with this function, I ensured that when an item is deleted, it is correctly removed from the database. This involved passing the item's ID to the method, executing the deletion query, and closing the database connection to finalize the operation. This enhancement ensures that the database remains consistent with the changes made to the inventory. Next, I also added additional functions such as readItemsByCategory and readAllData that use cursors to read the database in specific ways such as filtering and querying items based on category or retrieving all items from the Inventory table without any filters and showing the entire list which will be essential for future features such as generating reports.

While working on the Inventory App, I gained valuable experience with database management and keeping data consistent. Adding the deletion feature required a better understanding of SQLite operations and how they connect with the app's user interface. One challenge was making sure that changes in the database were correctly shown in the app, which meant updating several parts of the app

and making a ton of adjustments. This process improved my skills in handling database queries and maintaining data accuracy, setting me up well for future improvements and features.