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CSS 545 - Mobile Computing
HW2 - Basic Storage
Due: 04/21/2024

Various approaches to storage management on your platform of choice and Pros AND cons of each approach for your project

- User Defaults - UserDefaults is a storage mechanism provided by Apple allowing developers to store and retrieve small amounts of user data, such as preferences, settings, and simple pieces of information, across app launches.
    - Pros:
        - Easy to use
        - Lots of online examples
        - It is fairly simple to use and only requires adding a few commands to the lines of code where your variable is being set/updated
    - Cons:
        - Made for small bits of data and we want to store images/a large amount of texts (it’s just not going to work)
        - Does not support complex data types (tricky with image integration)
        - Data is stored in the app’s sandbox with is no thar secure

- SQLite / Core Data - SQLite is a relational database management system that helps manage structured data. Core Data, is a higher-level framework that offers features like object graph management, data validation, and support for SQLite. (This is my “use a database” answer)
    - Pros:
        - SQLite is commonly used in iOS applications for local data storage when more advanced features than UserDefaults are required, or when dealing with larger datasets or complex relationships between data.
        - iOS provides built-in support for SQLite through the SQLite library, making it easy to integrate into iOS applications.
        - Core Data makes using SQLite easier and allows for more relationships to be stored
    - Cons:
        - I don’t have any experience with SQLite or Core Data and from my research it takes time to learn these tools and I don’t have a lot of time left in the quarter

- SQLite requires writing SQL queries and managing database connections

- Json file (linked photos saved in camera roll) - in this approach I would add user input to a json file that is saved locally on the app and have that file written to and saved every time the user saves input. I would also have the photos saved to the phone’s camera roll and reference them in the application.
  - Pros:
    - Keeps the app smaller because the photos will be stored on the camera roll and only text will be stored in app
    - I already have experience with a similar process
    - Probably the easiest to use if we switch to ReactNative
  - Cons:
    - If the user deletes the app, they will lose all their data
    - If the user deletes a photo from their camera roll, it will not be stored in the app