5. System Design and Implementation

5.1. Architectural Design

In this section you should:

- Choose your architecture, describe it, and explain why you chose it.
- Explain why you did not choose any of the other architectures.
- Show a diagram of the architecture you have chosen and make sure it has all the elements and that it reflects the main functions.

5.2. Class Diagram

- In this section, show your class diagram.

5.3. Data Design

In this section you should show the following:

- ER Diagram
- Schema
- Data dictionary: List and describe fields, and entity relationships

5.4. Component Level Designs

Each subsection of this section should contain a detailed description each software component in your system *(e.g., add, delete, etc.)*. The discussion provided for each component should cover the following attributes:

Classification

The component kind, such as a subsystem, module, class, package, function, file, etc.

Definition

The specific purpose and semantic meaning of the component.

Constraints

Any relevant assumptions, limitations, or constraints for this component. This should include constraints on timing, storage, or component state, and might include rules for interacting with this component (encompassing preconditions, post-conditions, invariants, other constraints on input or output values and local or global values, data formats and data access, synchronization, exceptions, etc.)

Pseudocode

A complete and concise pseudocode for this component.

Note that you can choose between doing pseudo code, flowchart, or activity diagram, as you have learned during the lectures.

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