Project Part 3: Refactoring

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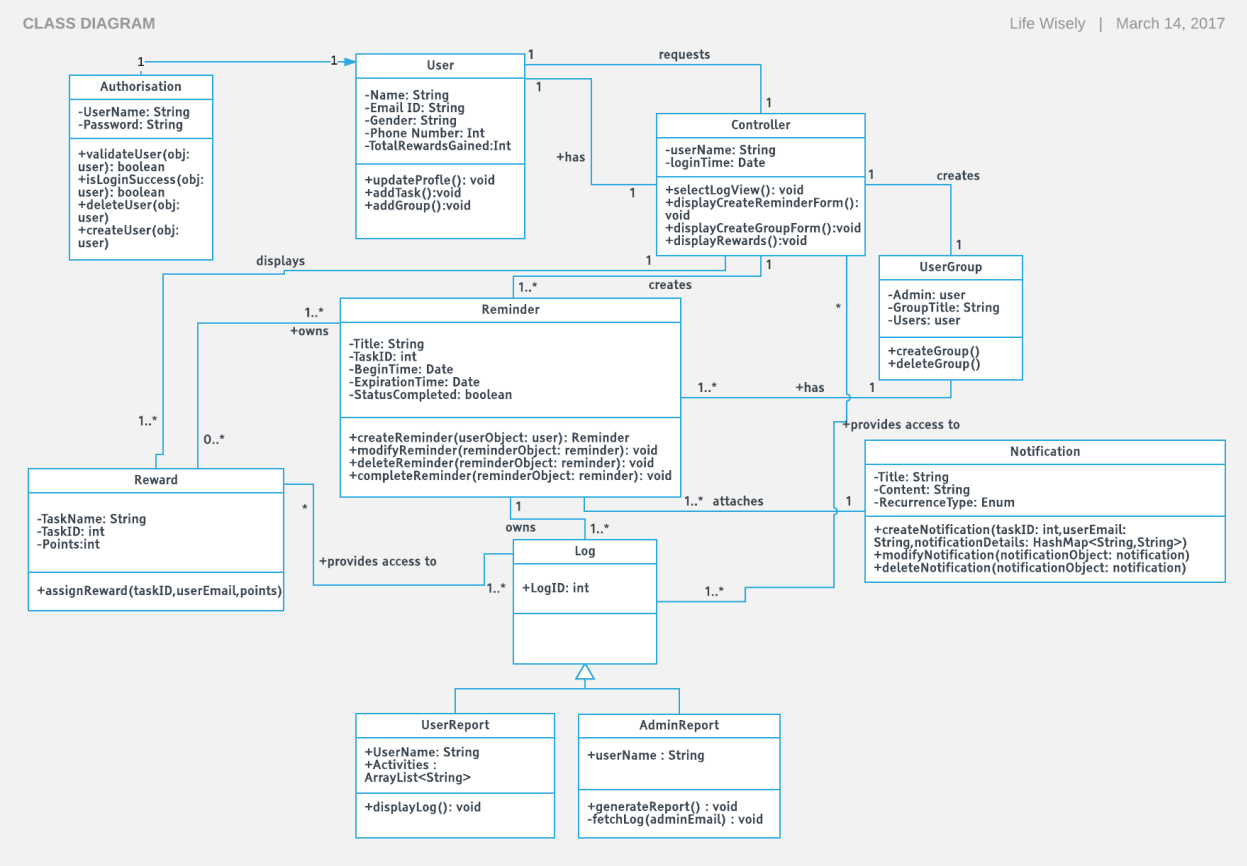
Title: Life Wisely

Project Summary:

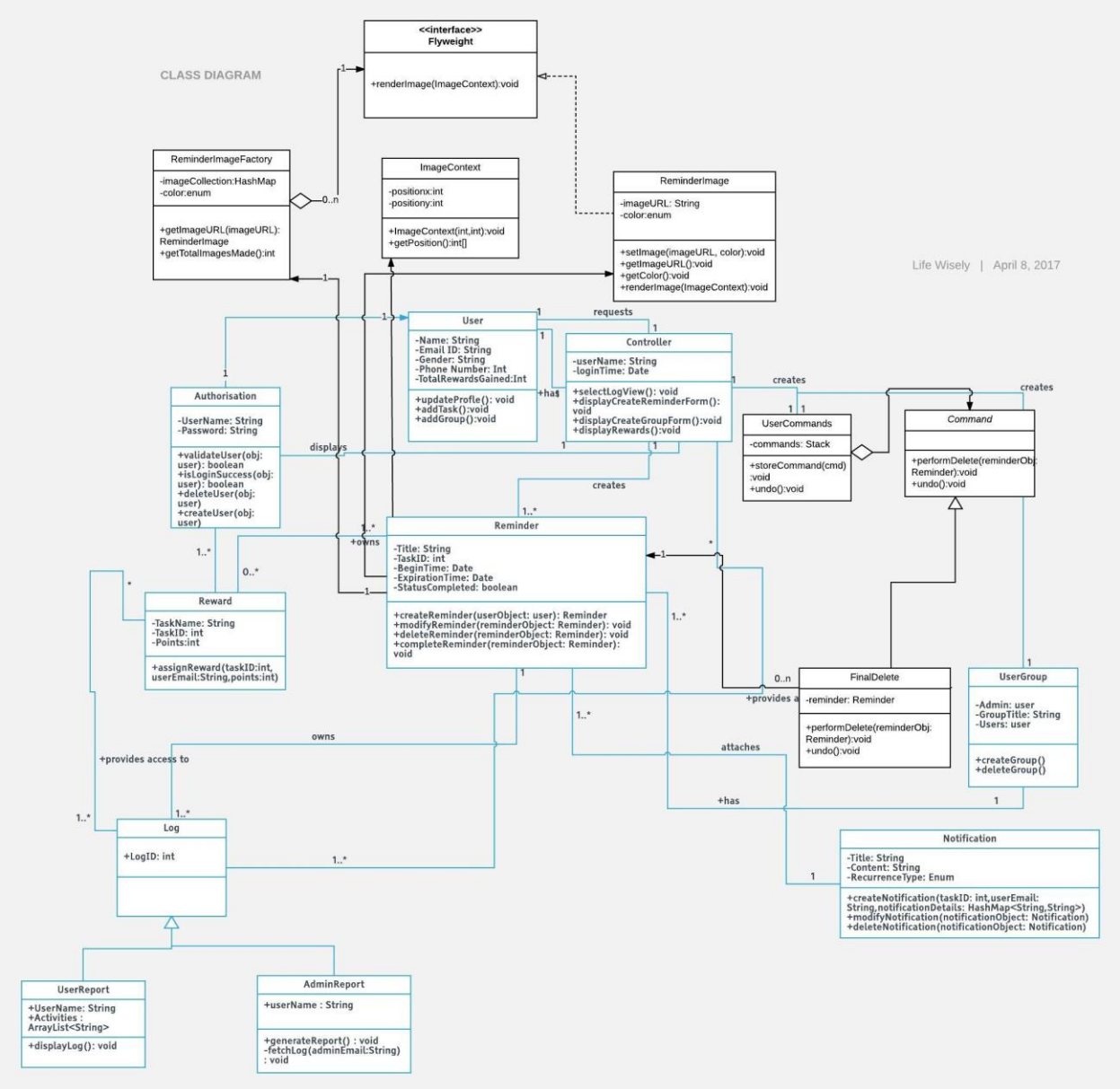
A web application to manage life wisely. The application provides reminders on things which are often neglected, including diet, medication, hygiene, stress buster etc. Besides the reminder function, a log system is in place to keep track of the achievements and a reward system is in place to encourage completion of tasks.

Class Diagram:

Part 2 Class Diagram :

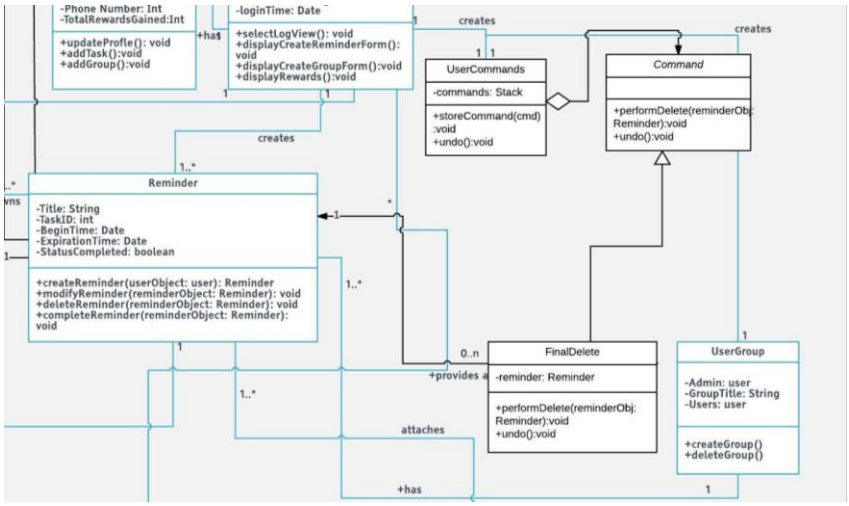


Updated Class Diagram :

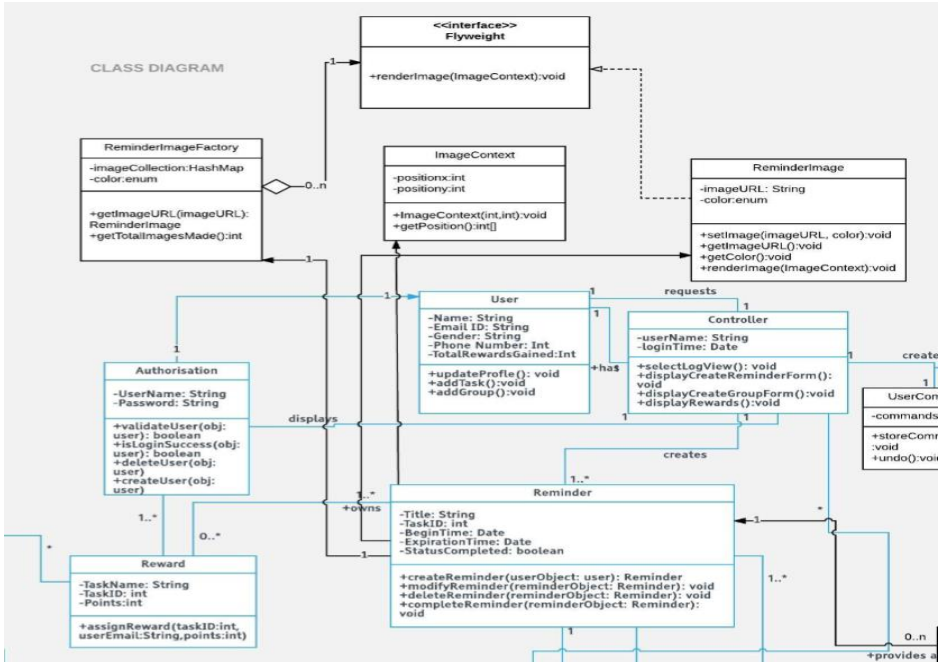


Design Patterns applied:

1. **Command** design pattern is applied to Reminder class to facilitate undo operation when user deletes a reminder. The purpose is to allow undo specific delete operations where each user command is stored in a stack and necessary operations are implemented in the concrete class method ‘performDelete(reminderObj)’



2. **Flyweight** design pattern is applied to avoid overhead of displaying image for each category in reminder list of user. In reminder list, instead of loading n different images for each of reminder category, we will be using the factory class called ‘ReminderImageFactory’ to cache images. A concrete flyweight class named ‘ReminderImage’ is implemented to render image based on extrinsic property like position(x and y coordinates). To render an image, along with extrinsic(non shared attribute) intrinsic attributes like color, imageURL(stored as HashMap of Category as String and imageURL as String) are used.



Refactoring:

Refactoring principles have been applied to our class diagram to identify appropriate design patterns. Class names, methods and attributes are consistent with general design principles. As we are at the initial phases of coding, no refactoring for code management has been applied yet.