Code Review Report

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1. Changes made:
2. **Long Method:** The registerUser method in the UserManager class performs multiple tasks: input validation, user creation, database interaction, and sending emails. This was refactored to adhere to SRP.

Refactoring:

* The authenticateUser method was extracted.
* The registerUser method was extracted.

1. **Large Class:** UserManager handles multiple responsibilities (user registration and authentication). This was refactored to adhere to SRP and cohesiveness.

Refactoring:

* 1. Identify respondibilities:
* User registration
* User authentication
* Input Validation
* Checking email format
  1. Create new classes:
     + UserValidator class: handle validation logic
     + UserRepository: manages database interaction
  2. Delegate Task: Relevant logic was moved to the newly created classes

1. **Feature Envy:** The UserManager class seems more interested in the details of Database and EmailService.

Refactoring: Feature envy was addresses when extracting the class, features where moved to other classes.

1. **Data Clumps:** Parameters like firstName, lastName, email, password, and age are often used together, indicating a potential for encapsulation. This is used to comply with the DRY principle.

Refactoring: The user’s info was frequently passed together. Therefore, a UserRegistrationDetails struct was created to hold user information. Method signatures where modified to accept the new parameter object instead of individual parameters.