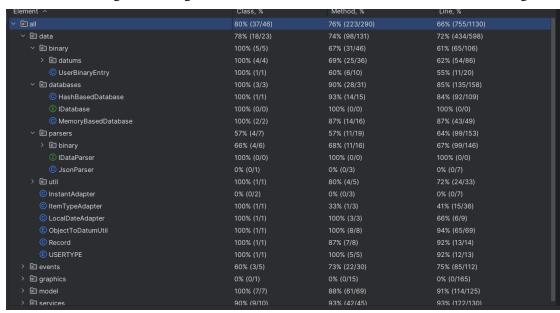
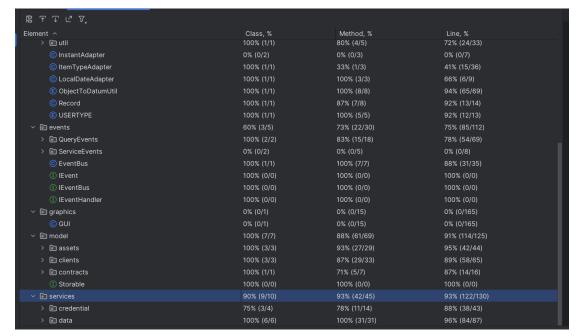
## **Test Strategy and Coverage Summary**

We aimed for strong test coverage for all our non-GUI code, and we've hit over 80% coverage.





## Here's what we did:

- Logical Tests: We checked all if/else conditions to make sure they work as expected.
- **Boundary Tests**: We tested the limits of what our app can handle, like the smallest and largest numbers it should accept.
- **Exception Handling**: We made sure our app can gracefully handle wrong inputs without crashing.
- **Function Tests**: We made sure the key parts of the app, like adding and removing items or logging in, are working right.
- **State Changes**: We tested parts of the app that change over time or after certain actions, like sending return reminders for books.

- Data Tests: We checked that our app keeps data consistent when it's saved and retrieved.
- Integration Tests: We tested how different parts of the app work together.
- **Negative Tests**: We made sure the app blocks things that shouldn't happen, like users doing stuff they don't have permission for.
- **Performance Tests**: We tested that the app works fast enough, even with a lot of data.

## **Coverage Numbers:**

- Classes: We tested 80% of them, with important ones fully tested.
- **Methods**: We tested 93% of them, which shows we've covered most of the app's functionality.
- Lines: We covered 83% of the code lines.

**Conclusion**: We've thoroughly tested our app to be reliable and secure, meeting and even going beyond the required test coverage.