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Journal: Unit Testing Approach and Writing JUnit Tests

In this journal, I reflect on my experiences working on the Contact Service in Module Three and the Task Service in Module Five. These assignments were crucial steps in preparing for the final reflection report in Project Two. Throughout these milestones, I focused on creating a clear unit testing strategy, ensuring the quality of my tests, and writing efficient and technically sound code.

For both services, my testing approach was designed to align closely with the software requirements. For the Contact Service, I ensured that operations like adding, updating, and deleting contacts adhered to constraints such as unique IDs and proper validation for fields like names, phone numbers, and addresses. Similarly, in the Task Service, I focused on key requirements like ensuring tasks had valid descriptions and IDs. By translating each requirement into specific test cases, I was able to confirm that the software met the expectations outlined in the project guidelines.

The quality of my tests was reflected in their thoroughness. I achieved high coverage by testing normal operations, edge cases, and invalid inputs. For instance, I made sure that invalid data, such as an overly long task description or an improperly formatted phone number, was correctly rejected. This comprehensive approach gave me confidence that my tests effectively covered the functionality and handled potential issues that could arise.

To ensure the code was technically sound, I took a careful and methodical approach, ensuring my tests were meaningful and aligned with best practices. I also focused on writing efficient code, choosing data structures that supported smooth and fast operations, even as the data size increased. This made my implementation not only correct but also scalable and responsive.

Looking back, I’m proud of how these milestones helped me grow as a developer. They allowed me to bridge the gap between requirements and implementation, ensuring that I created reliable and efficient code. This reflection has also given me valuable insights that will guide me as I prepare for the final phase of this project.