**🔹 4. Description of Mock Objects**

In the AirPulse project, we **did not use automated mocking tools** (like Moq or FakeItEasy).  
Instead, we followed a **manual mocking approach**, where **test data was directly inserted into the real MySQL database** for testing purposes during development.

This approach helped us test functionalities without relying on real-world data or fully completed features.

**✅ Examples of Manual Mock Data We Used:**

| **Mock Data Type** | **How It Was Used** | **Purpose** |
| --- | --- | --- |
| **Mock Admin Users** | We inserted test records into the Users table with roles like **Monitoring Admin** and **System Admin**. | To test the **login functionality** and verify **role-based access** to dashboard features. |
| **Mock Sensors** | We added sample sensors (e.g., Colombo 07, Colombo 05) with baseline AQI values into the Sensors table. | To test **map markers**, **simulation updates**, and **sensor management features**. |
| **Mock Simulation Data** | AQI values and pollutant levels (e.g., PM2.5, CO, NO2) were generated based on simulation logic. | To verify if **simulated data updates the map, historical tables, and dashboard** correctly. |
| **Mock Alert Settings** | We used sample AQI category values (e.g., Good = 0–50, Moderate = 51–100) in the alerts configuration page. | To test **threshold updates** and alert previews without needing live environmental data. |

**❌ Why We Didn't Use Automated Mocking Tools**

Since our project was focused on **manual testing and real-time simulation**, we didn’t require complex mocking frameworks. Using **direct MySQL inserts** made it easier and faster to verify how the system behaved with test data, especially when simulating multiple roles and scenarios.