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COMPUTER SCIENCE AND ENGINEERING
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Completed the project named as
Phase 3
ANGULAR JS WITH SQL INTEGRATION
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Project Report: AngularJS with SQL Integration (Phase 3 – MVP Implementation)

1. Project Setup

The project setup involves initializing the AngularJS application structure and connecting it with the SQL database. The following steps were carried out during the setup phase:

- Installed Node.js and AngularJS framework for frontend development.
- Configured SQL database (MySQL) for backend storage.
- Set up project directory with proper structure for controllers, views, and services.
- Installed required dependencies and libraries for database connectivity.

2. Core Features Implementation

The core features of the AngularJS application integrated with SQL were implemented to provide essential functionalities. Key features include:

- User authentication and login using SQL database.
- Data fetching and display using AngularJS controllers and services.
- CRUD operations (Create, Read, Update, Delete) on SQL tables.
- Dynamic UI updates using AngularJS two-way data binding.

3. Data Storage (Local State / Database)

The application uses both local state management in AngularJS and SQL database for permanent storage. The approach is as follows:

- Local State: Temporary data is managed using AngularJS scope and services.
- Database: MySQL is used to store permanent records of users, transactions, and application data.
- Backend API ensures secure communication between AngularJS frontend and SQL database.

4. Testing Core Features

Testing was performed to ensure all features function correctly. The testing strategy included:

- Unit testing of AngularJS controllers and services.
- Integration testing between AngularJS frontend and SQL backend.
- Validation testing for data input forms.
- User acceptance testing to verify usability and correctness.

5. Version Control (GitHub)

Version control for the project was managed using GitHub. The following practices were followed:

- Created a GitHub repository for centralized code management.
- Used branches for feature development and bug fixing.
- Committed changes with meaningful messages for tracking.
- Pull requests and code reviews ensured collaborative development.

Conclusion

In this phase, the AngularJS with SQL integration project was successfully set up, core features were implemented, data storage was handled using both local state and SQL, and core functionalities were thoroughly tested. Version control through GitHub ensured smooth collaboration and proper tracking of development progress.