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ST.MOTHER THERESA ENGINEERING COLLEGE

COMPUTER SCIENCE AND ENGINEERING

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Completed the project named as

Phase-1

ANGULAR JS WITH SQL INTEGRATING

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Project Phase 1 Report

Topic: AngularJS with SQL Integration

Objective

The objective of this project is to design and develop a web application using AngularJS for the Frontend and SQL as the backend database.The integration will be achieved through RESTful APIs built with Node.js. The application will Demonstrate real-time data handling, responsive UI,And secure communication with the database.

Aim 1: To develop a responsive web application using AngularJS that interacts with SQL database seamlessly.

Aim 2: To perform CRUD (Create, Read, Update, Delete) operations through RESTful APIs and display data dynamically on the frontend.

Users & Stakeholders

- End Users – People who will interact with the web application to store and retrieve data.
- Developers – Team members building the AngularJS frontend and backend APIs.
- Database Administrator – Manages SQL database schema and ensures performance.
- Project Manager – Oversees development progress and ensures timely delivery.

User Stories

- As a user, I want to add new records through the web form so that data is stored in SQL database.
- As a user, I want to view data in a table format fetched dynamically from the database.
- As a user, I want to edit and delete records from the interface without page reload.
- As an admin, I want to validate input data before saving it to the database.

MVP Features

- Frontend built with AngularJS framework.
- REST API using Node.js/Express for data communication.

- SQL database integration for persistent storage.
- CRUD operations implemented with validation.
- Responsive UI with dynamic data binding.

Wireframe / API Endpoint List

Wireframe includes a navigation bar, data table, and a form modal for adding/editing data.

Sample API Endpoints:

- GET /api/records – Fetch all records
- POST /api/records – Add a new record
- PUT /api/records/:id – Update a record
- DELETE /api/records/:id – Delete a record

Acceptance Criteria

- User should be able to submit data through a form and view updated table instantly.
- Data should persist in the SQL database after refresh.
- System should handle invalid input gracefully.
- Application should be responsive on mobile and desktop.

Flowchart

User ->AngularJS Form ->REST API (Node.js) ->SQL Database ->Response sent back to AngularJS -> Table Update

Conclusion

This Phase 1 document provides a clear understanding of the problem statement, stakeholders, user requirements, MVP features, and solution approach. The proposed system ensures a smooth integration between AngularJS frontend and SQL backend through REST APIs, paving the way for a scalable and responsive web application