
 Marwadi University <small>Marwadi Chandarana Group</small> 	Marwadi University Faculty of Engineering & Technology Department of Information and Communication Technology	
Subject: CP		
Exp-5	Date:23-09-25	Enrollment No:92200133007

1. Introduction

- Brief recap of the project (3-Phase Electrical Items Web Application).
- Explain that this section focuses on implementation and integration.

2. Code Structure and Organization



- Show **file hierarchy** (React frontend, Node.js backend, MySQL DB).
- Describe each major folder/module:
 - frontend/ → UI in React (components, pages, services).
 - backend/ → Express.js routes, controllers, models, middleware.
 - database/ → MySQL schema, migrations, seed data.
 - config/ → Environment variables, DB connections.

3. Implementation Details

- **Frontend (React.js):** UI/UX, state management, forms, validation.
- **Backend (Node.js + Express):** REST APIs, authentication, error handling.
- **Database (MySQL):** Schema for products, categories, users, orders.
- **Cloud Layer (if used):** Deployment on AWS/Azure/Vercel.

4. Testing Procedures & Results

- **Unit Testing:** Example of testing API endpoints with Jest/Postman.
- **Integration Testing:** Frontend calls backend → database interaction.
- **Performance Testing:** Example metrics (API response times, load test).

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5. Instructions for Running the System

- **Setup Guide**
 - Clone repo from GitHub.
 - Install dependencies (npm install).
 - Configure .env file (DB credentials, API keys).
 - Run backend (npm run dev).
 - Run frontend (npm start).
 - Import database schema (mysql < schema.sql).
- **Dependencies:** Node.js, MySQL, React, Express, dotenv.

6. Integration Across Components

Explain how frontend communicates with backend APIs.

- Backend routes interact with MySQL.
- Error handling + validation ensures robustness.
- Mention middleware for authentication (JWT if included).

7. Contribution Statement (for group projects)

- Example:
 - Student A: Frontend React UI.
 - Student B: Backend APIs + DB schema.
 - Student C: Testing + Integration.
 - Student D: Deployment + Documentation.