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**Faculty of Technology and Engineering**

**Chandubhai S. Patel Institute of Technology**

**Department of Computer Science & Engineering**

Project Problem Statement for Project-III

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| Project Group ID: CSPIT/CSE/B1/23CS022/23CS028/23CS033 | | | |
| Student ID: | 23CS022 | 23CS028 | 23CS033 |
| Name: | Manan Ghoniya | Shaurya Juneja | Krish Kapuriya |
| Project Title: | ForgeFlow: A Factory Management Web System | | |
| Domain of Project Definition: | The project falls under the domain of **Industrial Process Management** and **Web-based Enterprise Solutions**. It specifically targets **Manufacturing Workflow Automation**, focusing on streamlining employee work logging, delivery tracking, and administrative oversight in an auto-parts production environment using lightweight, real-time web technologies. | | |
| Technology/Methodologies to be used in project: | The project uses Firebase (Auth, Firestore, Hosting), HTML/CSS/JS (or Flutter), multilingual support, and an agile methodology with RBAC and real-time data handling. | | |
| Project Objectives | To develop a lightweight, real-time, and web-based application that enables seamless logging and monitoring of factory operations across multiple user roles—specifically administrators, workers, transporters, and customers—in order to improve transparency, accuracy, and efficiency within an auto-parts manufacturing organization, all while maintaining zero-cost infrastructure and broad device compatibility. | | |
| Brief Description about project: | A lightweight, web-based application designed for an auto-parts manufacturing unit to simplify work logging and delivery tracking. It supports four user roles: admins, workers, transporters, and customers. Admins monitor productivity and manage users; workers log daily part quantities; transporters record dispatches with remarks; and customers confirm deliveries with optional feedback. The system is mobile-friendly, real-time, and runs without paid infrastructure. | | |
| SWOT analysis chart for the Project |  | | |
| Project Deliverables |  **Responsive Web-Based Factory Management System** A cross-platform web app with dedicated panels for Admin, Employee, Transporter, and Customer, offering role-based interfaces and access controls.   **Secure Authentication & Role Management** One-time signup with username-password and auto-login, displaying employee roles post-login, supporting multiple admins and multilingual options (Hindi/Gujarati/English).   **Work Logging & Delivery Confirmation** Employees log daily work by selecting part types and quantities, while transporters and customers confirm deliveries with optional remarks—data syncs instantly for admin visibility.   **Firebase-Powered Backend & Deployment** Uses Firebase Auth, Firestore DB, and Hosting for real-time, secure, and scalable operations, optimized for mobile devices (Android 6+), with complete documentation and Gantt chart support. | | |
| Gantt chart with Project Timeline and Team Roles |  | | |
| Name of the Company | Prince Engineering & Auto Parts | | |
| Name of Client | Rajnibhai Ghoniya | | |
| Designation of Client | Product Manager | | |
| Contact No. | 9979858092 | | |
| Email | princeautopart@gmail.com | | |

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| **Student 1 Sign** | **Student 2 Sign** | **Student 3 Sign** |

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| Assessment Rubric to evaluate Difficulty level of Project:   |  |  |  |  | | --- | --- | --- | --- | | Criteria | 23CS022 | 23CS028 | 23CS033 | | Scope and Complexity |  |  |  | | Technical Challenges |  |  |  | | Resource Requirements |  |  |  | | Quality level of Gantt Chart |  |  |  | | Quality level of SWOT analysis chart |  |  |  | | Innovation and Creativity |  |  |  | | Total (Out of 30) |  |  |  |   Assessment Rubric to evaluate quality of Project Problem Statement:   |  |  |  |  | | --- | --- | --- | --- | | Criteria | 23CS022 | 23CS028 | 23CS033 | | **Clarity of Problem Statement** |  |  |  | | **Relevance to Project Objectives** |  |  |  | | **Clarity of Language and Presentation** |  |  |  | | **Overall Impression** |  |  |  | | ****Total (Out of 20)**** |  |  |  |   **Mentor’s Comments:**  **Mentor’s Sign:**  **HOD’s Sign with Comments:** |
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