

TeaFarmPro Project Status Update

1. Project Overview

1.1 Project Description

TeaFarmPro is a comprehensive farm management system tailored for tea farms. It is designed to streamline various aspects of farm operations, including task management, production tracking, inventory management, expense tracking, and employee management. The system aims to enhance operational efficiency, improve data accuracy, and facilitate better decision-making for tea farmers.

1.2 Key Features

- **Farm Overview Dashboard:** Provides an overview of production and workforce statistics.
- **Task Management:** Allows assignment and tracking of tasks.
- **Production Management:** Facilitates daily production recording and historical data viewing.
- **Inventory Management:** Manages inventory items and tracks usage.
- **Expense Tracking:** Logs and manages operational expenses.
- **Employee Management:** Handles employee details and task assignments.
- **Reporting:** Generates various operational reports.
- **Profile Management:** Updates farmer profile details.

1.3 Team

- **Emmanuel Odenyire Anyira:** Project Lead
- **Daniel Kipkosgei:** Developer
- **David King'asia:** Developer
- **Joy Wanjiru Muchemi:** UX/UI Designer

1.4 Objectives

- **Automate Farm Operations:** Streamline farm management tasks and processes.
- **Improve Data Management:** Enhance accuracy and accessibility of production, inventory, and expense data.
- **Facilitate Efficient Task Management:** Optimize task assignment and tracking for better labor management.

2. Progress

2.1 Progress Rating

- **Rating:** 7/10

2.2 Explanation of Progress

Week 2 has seen significant progress in developing core features of the TeaFarmPro system. The initial setup, including the project structure and database configuration, was successfully completed. Key functionalities such as task management, production recording, and inventory management have been implemented.

- **Completed Parts:**
 - **Task Management Forms:** Implemented forms for assigning and tracking tasks.
 - **Production Management:** Developed forms for recording daily production and viewing historical data.
 - **Inventory Management:** Created forms for adding/editing inventory and tracking usage.
 - **Expense Tracking:** Established forms for logging operational expenses.
 - **Employee Management:** Added functionality for managing employee details.
- **Incomplete Aspects:**
 - **Advanced Reporting Features:** Some advanced reporting functionalities are still under development.
 - **Integration Testing:** Comprehensive integration testing is yet to be fully conducted.
 - **User Feedback Implementation:** Incorporation of user feedback into the system's design and functionality is ongoing.

2.3 Completed Parts

- **Database Tables Setup:** All necessary database tables (`employees`, `farmers`, `labours`, `market_value`, `plucking_outputs`, `transport_costs`, `weeding_outputs`) have been created.
- **Basic Forms Implementation:** Key forms for task management, production recording, and inventory management have been implemented and are functional.

2.4 Incomplete Aspects

- **Advanced Reporting:** Some reporting functionalities are still in development and require further refinement.
- **Full Integration Testing:** Complete integration testing to ensure all components work together seamlessly is still pending.

- **User Feedback:** Gathering and integrating user feedback for further improvements is ongoing.

3. Challenges

3.1 Technical Challenges

During Week 2, several technical challenges were encountered:

1. **Integration Issues:** Integrating various forms and functionalities with the database posed challenges. Ensuring that all forms interact correctly with the database required careful mapping and validation, which led to delays in form functionality testing.
2. **Debugging Complex Logic:** Implementing and debugging the logic for calculating payments based on labour types (plucking and weeding) was complex. Ensuring accuracy in payment calculations involved detailed debugging and testing.
3. **Data Consistency:** Maintaining data consistency across different modules (e.g., ensuring that production data and inventory usage are synchronized) required rigorous validation and error handling.

3.2 Non-Technical Challenges

Several non-technical challenges were also faced during this period:

1. **Team Coordination:** Effective coordination among team members, especially in a remote setting, was challenging. Ensuring that everyone was on the same page regarding project updates and deadlines required improved communication strategies.
2. **Resource Constraints:** Limited access to development resources and tools impacted the efficiency of the development process. This included constraints related to software tools and testing environments.
3. **Feedback Loop:** Establishing a feedback loop with potential users to gather insights and incorporate them into the design was time-consuming. Coordinating feedback collection and implementing changes in a timely manner proved challenging.

4. Screenshots

Here are screenshots showcasing key functionalities of the TeaFarmPro application:

1. **Farm Overview Dashboard:**
2. **Assign Task Form:**
3. **Record Production Form:**
4. **Inventory Management:**
5. **Log Expense Form:**
6. **Employee Management:**