



Laboratory Management System

Team Member : Nikhil R. Lathiya

Mentor :
Prof. Dr Madhav Astik

Outline

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Brief Description

❖ **Problem Statement:**

- ❖ Inefficient and time-consuming traditional laboratory processes.
- ❖ Limited accessibility to test reports and appointment booking.

❖ **Project Description:**

- ❖ Develop a Laboratory Management System providing online test reports, appointment booking, home testing, and detailed test descriptions.

Value proposition

❖ **Online Test Reports:**

- ❖ Instant access to test reports online, eliminating the need to visit the laboratory.

❖ **Test Availability and Pricing:**

- ❖ Transparency in displaying available tests and their respective prices.

❖ **Online Appointment Booking:**

- ❖ Convenient online booking with the ability to choose specific time slots.

Value proposition

- ❖ **Home Testing:**

- ❖ Facilitates home testing services for user convenience.

- ❖ **Test Descriptions and Results:**

- ❖ Detailed information about tests and easy access to results.

Market Survey

❖ **Existing Systems:**

- ❖ Traditional laboratory processes.
- ❖ Online health platforms.

❖ **Distinguishing Features:**

- ❖ Transparent pricing and test availability.
- ❖ Home testing services.
- ❖ Detailed test descriptions.

CURRENT STAGE & NEXT STAGE

Current Stage

❖ **Identified Core Features:**

- ❖ Defined essential features for the Laboratory Management System, covering online test reports, appointment booking, home testing, and detailed test descriptions.

❖ **Chose Technology Stack:**

- ❖ Selected the technology stack for development, including server-side language, web framework, and database.

❖ **Initiated Coding and Development:**

- ❖ Started the coding and development process, laying the foundation for the Laboratory Management System.

Current Stage

❖ **Implemented Core Functionalities:**

- ❖ Successfully incorporated fundamental functionalities, such as online test reports, appointment booking, and home testing.

❖ **User Testing and Feedback Collection:**

- ❖ Conducted user testing sessions to evaluate system performance.
- ❖ Collected valuable user feedback for areas of improvement.

Challenges and Approaches:

- ❖ **User Understanding of System Responses:**
 - ❖ Challenge: Users faced difficulties understanding certain system responses.
 - ❖ Approach: Collected detailed user feedback to pinpoint confusion instances and analyzed chat logs for patterns.
- ❖ **Investigation into Reminder System Issues:**
 - ❖ Challenge: Users reported sporadic issues with the reminder system.
 - ❖ Approach: Investigated the reminder system's codebase, addressed bugs, and implemented tests for reliability.
- ❖ **New User Onboarding Improvements:**
 - ❖ Challenge: New users found the initial setup challenging.
 - ❖ Approach: Revised onboarding processes, providing clearer instructions and considering interactive tutorials.

Next Stage

- ❖ **User Feedback Analysis:**

- ❖ Ongoing analysis of user feedback to understand challenges and prioritize improvements.

- ❖ **Iterative Improvements:**

- ❖ Planned and implemented iterative updates based on user feedback, focusing on user experience enhancements.

- ❖ **Bug Fixes:**

- ❖ Conducted a review of reported bugs and prioritized fixes based on severity.

Next Stage

- ❖ **Backend Development:**

- ❖ Continued server-side programming, ensuring integration with databases and relevant services.

- ❖ **User Satisfaction Surveys:**

- ❖ Planned user satisfaction surveys to gather insights and inform further refinements.

Proposed solution

❖ **System Components:**

- ❖ Online Test Reports
- ❖ Test Availability and Pricing
- ❖ Online Appointment Booking
- ❖ Home Testing
- ❖ Test Descriptions and Results

Proposed solution

- ❖ **Development Phases:**
- ❖ Project Setup and Planning
- ❖ Backend Development
- ❖ User Authentication
- ❖ Laboratory Test Logic
- ❖ Appointment and Home Testing Logic
- ❖ Frontend Development

Detailed Explanation of Proposed solution

❖ **Project Setup and Planning:**

- ❖ Define the project's scope, objectives, and key features.
- ❖ Establish a timeline and milestones.
- ❖ Select development tools and technologies suitable for the project.

❖ **Backend Development:**

- ❖ Develop the server-side logic to handle user requests and manage laboratory test data.
- ❖ Implement the backend APIs and endpoints for seamless communication with the frontend.
- ❖ Choose and integrate a database for storing user data and test information.
- ❖ Set up cloud services for scalability.

Detailed Explanation of Proposed solution

❖ **User Authentication:**

- ❖ Implement a secure user authentication system
- ❖ Ensure the secure handling of user credentials.
- ❖ Establish a user registration and login flow.

❖ **Laboratory Test Logic:**

- ❖ Define the data model for laboratory tests, including attributes such as test types, descriptions, and prices.
- ❖ Implement CRUD operations for laboratory tests and related functionalities.

Detailed Explanation of Proposed solution

❖ **Appointment and Home Testing Logic:**

- ❖ Develop the logic for appointment scheduling, allowing users to book specific time slots.
- ❖ Implement the logic for home testing services, enabling users to request tests to be conducted at their homes.

❖ **Frontend Development:**

- ❖ Implement the user interface, whether web-based or mobile, using HTML, CSS, and JavaScript.
- ❖ Choose a frontend framework like React or Angular for building dynamic and responsive interfaces.
- ❖ Integrate with backend APIs to ensure smooth data flow between the frontend and backend components.

FUND REQUIREMENTS

Component Name	Where it will be used ?	Total Amount
Custom system Design	Designing a unique UI for system	30000
Security Audit	Security Audit	8000
User training Programing Development	Creating training material	4000
Total		42000

Non Recurring/Non Consumables

Item	Price
Hoisting Services	2000
API Subscription	30000
Continuous Integration/Deployment Service	10000
License Renewal	5000
Marketting and promotion	10000
Total	57000

Path forward

- **Feature Expansion:**

- Real-time Report Access
- Test Availability Dashboard
- Enhanced Appointment Booking
- Mobile Application Development

- Customization Options
- Enhanced Security Measures
- Performance Optimization
- Advanced Analytics and Reporting
- User Training and Support

References

<https://.google.com/>

Thank You