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FASTFIX GARAGE

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ABSTRACT

Fastfix Garage *is a web-based bike service management system designed to streamline the process of booking, tracking, and managing bike maintenance and repair services. The platform allows customers to register, log in, and book service appointments online based on their convenience. Users can view nearby garages, check service charges, and make online payments.*

Mechanics can accept service requests, update job status, and manage service history. The admin panel facilitates efficient oversight, enabling the management of users, services, and spare part inventory. By digitalizing the traditional service process, Fastfix Garage enhances customer experience, improves mechanic coordination, and ensures operational efficiency for service providers.

1. INTRODUCTION

Fastfix Garage is an online bike service management system that simplifies the process of booking and managing bike repair services. It offers a user-friendly platform for customers to register, book services, and track their service status in real-time. Mechanics can view and accept service requests, update progress, and manage service records. The system also supports online payments and feedback submissions. An admin panel ensures smooth operation by managing users, services, and inventory efficiently.

Existing System

In the traditional vehicle service management system, most processes are handled manually or through basic appointment systems, leading to inefficiencies and customer dissatisfaction.

Proposed System

The proposed Fastfix Garage is a web-based solution designed to automate and enhance the efficiency of vehicle servicing operations. This system overcomes the limitations of the traditional manual process by offering an intuitive platform for both customers and service providers. The objective is to improve service booking, tracking, inventory management, and overall customer satisfaction through digitalization.

2-REQUIREMENTS ANALYSIS

Functional Requirements

User Module

- User Registration
- Login & Logout
- Profile Management
- Service Booking
- Service Status Tracking
- Online Payments
- Service Reminders

Mechanic Module

- Login & Profile Management
- View Assigned Services
- Update Service Status
- Customer Interaction

Admin Module

- Dashboard Overview
- Manage Users
- Manage Services
- Assign & Track Mechanics

- Billing & Payments
- Notification System
- Emergency inventory spare parts

Non-Functional Requirements

- **Performance:** Service appointment bookings should be processed within 2 seconds.
- **Security:** Protection of user data and interactions.
- **Usability:** The platform should have a responsive UI for seamless use on desktops, tablets, and smartphones.
- **Maintainability:** The system should be built using a modular architecture to allow future feature enhancements.
- **Scalability:** It should be able to scale horizontally to support more users as demand increases.
- **Reliability:** Consistent operation with minimal errors.

Hardware Resources

- At least 8 GB of RAM and a multi-core processor for efficient processing.
- SSD storage (512 GB)

Software Resources

- **Operating System:** Windows 11.
- **Client Side Programming Languages:** HTML, CSS, Javascript.
- **Programming Languages:** PHP
- **Database:** MySQL for storing user data.
- **Hosting & Deployment:** Xampp Server.

3-DESIGN

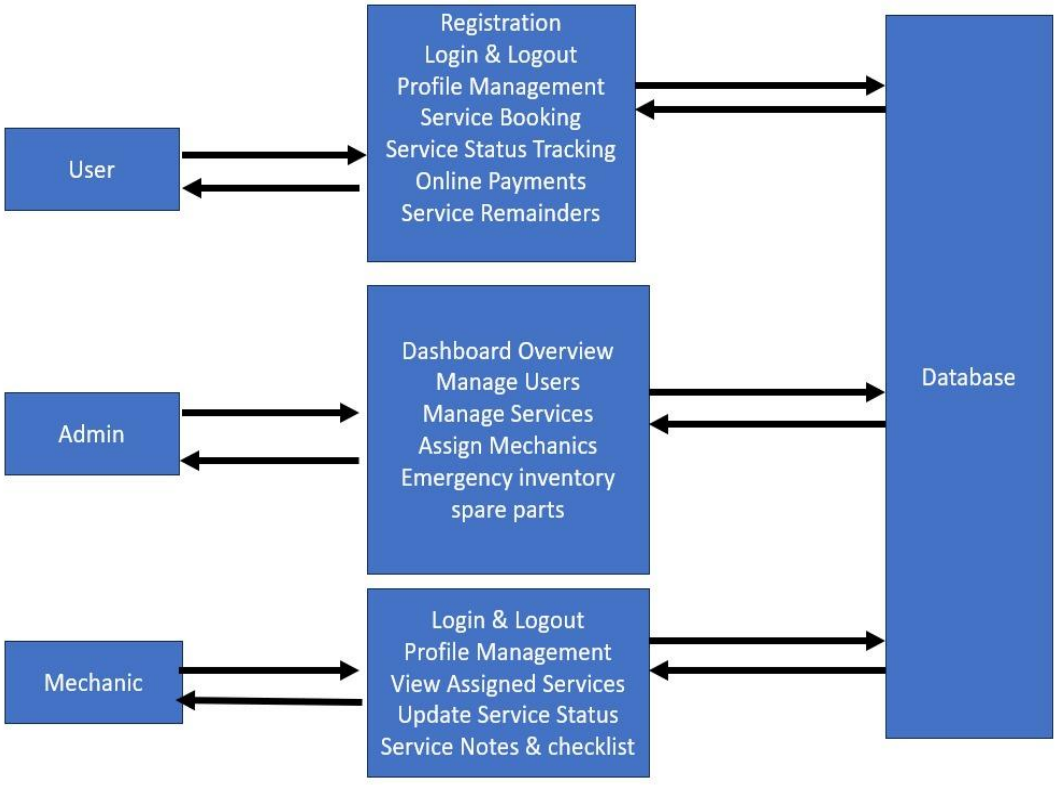


Fig: Software Architecture

TECHNICAL ARCHITECTURE

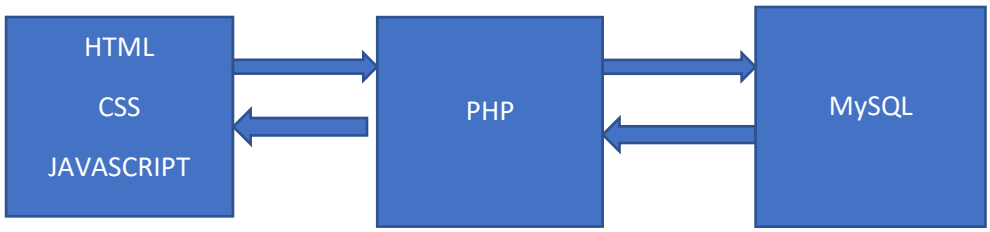


Fig: Technical Architecture

4-IMPLEMENTATION

The **Fastfix Garage** platform is a web-based solution designed to streamline the bike servicing process for both customers and service providers. It incorporates intuitive interfaces, real-time booking, intelligent garage assignment, and service tracking to enhance user experience and operational efficiency.

1. User Interface:

Developed using **HTML, CSS, JavaScript (Frontend)** and **PHP or Django (Backend)**, the UI supports:

- **Secure Login/Signup** for customers, mechanics, and admins.
- **User Dashboard** to book services, view service status, and make online payments.
- **Admin Panel** for managing users, bookings, and payments.

2. Service Booking & Scheduling:

Customers can choose from multiple bike-related issues (engine, brake, tire, etc.) and schedule services:

- **Quick Booking**: Select problem type, preferred garage, date, and time.
- **Service Calendar**: Shows available slots at selected garages.
- **Reminders**: Sends confirmation and reminder alerts via SMS/email.

3. Mechanic Workflow and Tracking:

Mechanics and garages get real-time updates of new service requests:

- **Accept/Reject Service** functionality.
- **Live Status Updates**: Indicate progress like "Accepted", "Servicing", "Completed".

4. Payments:

- **Online Payment Integration** via UPI, Card, or Wallets.

TECHNOLOGIES

- **Frontend:**

  HTML, CSS, JavaScript – Used to create a responsive and interactive user interface for users, mechanics, and administrators.

- **Backend:**

  PHP – Serves as the server-side scripting language to handle business logic, form submissions, database interactions, and session management.

- **Database:**

  MySQL – Used to store user profiles, service bookings, mechanic data, and payment records.

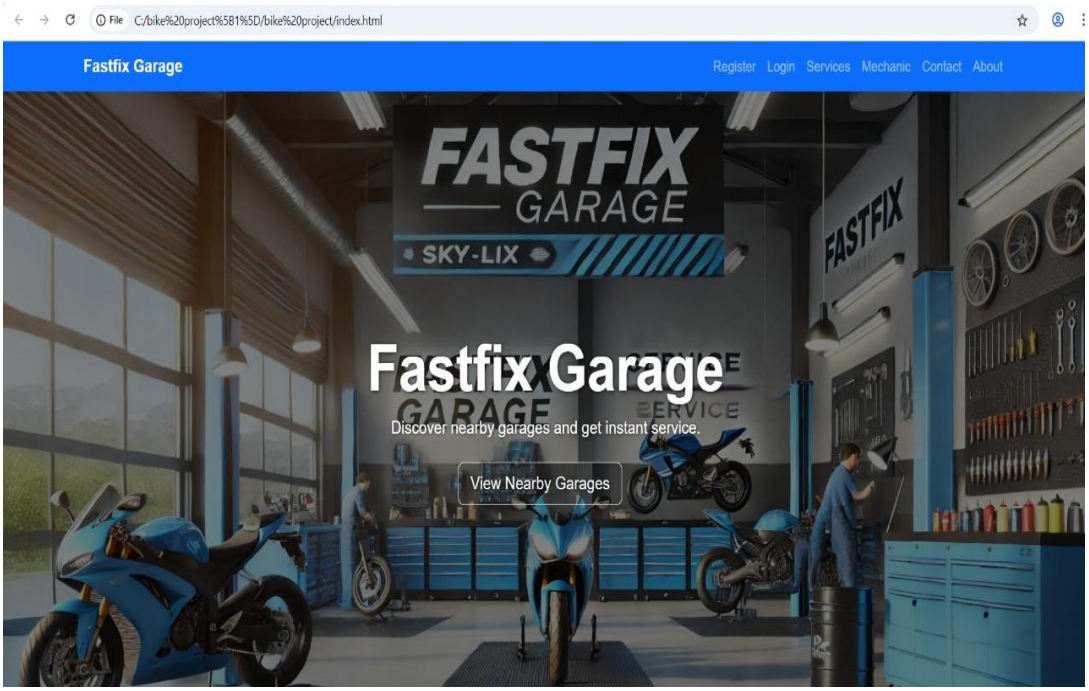
- **Deployment:**

  XAMPP Stack – For local development and testing.

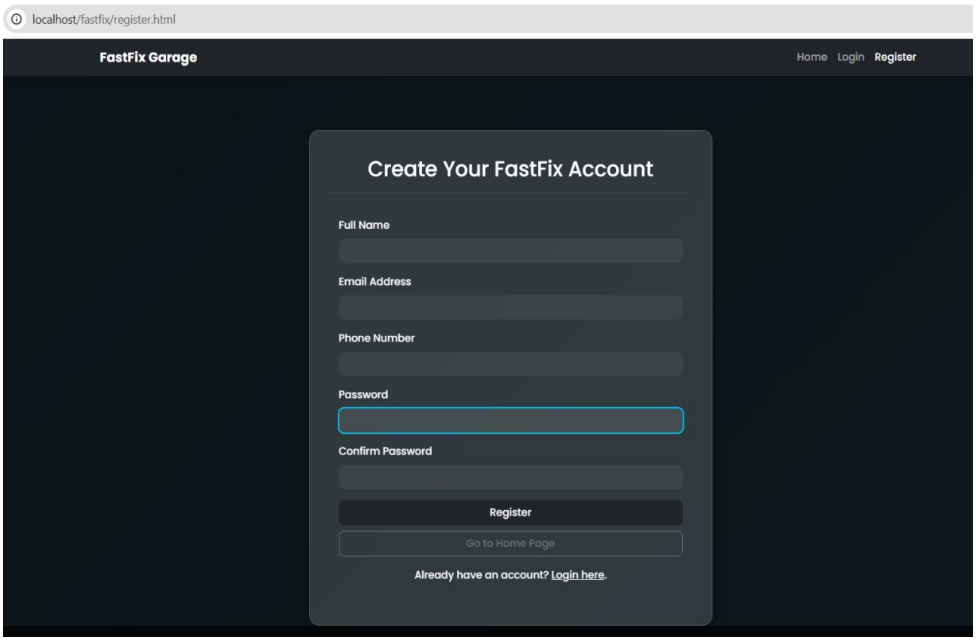
Apache Server – To serve the PHP application files.

5-SCREENSHOTS

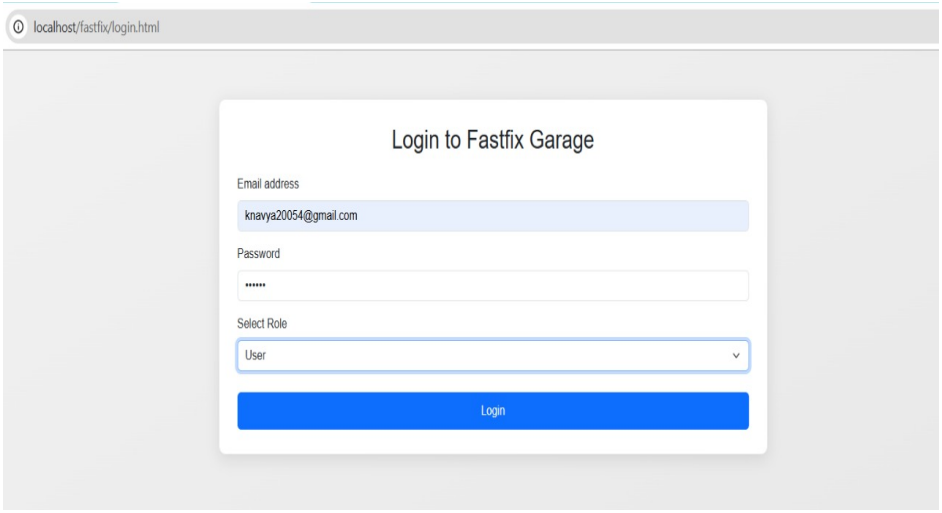
HOMEPAGE :



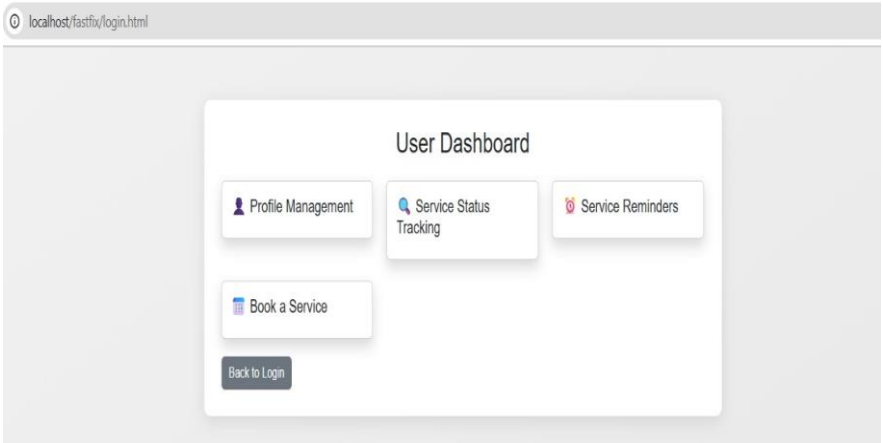
REGISTER PAGE:



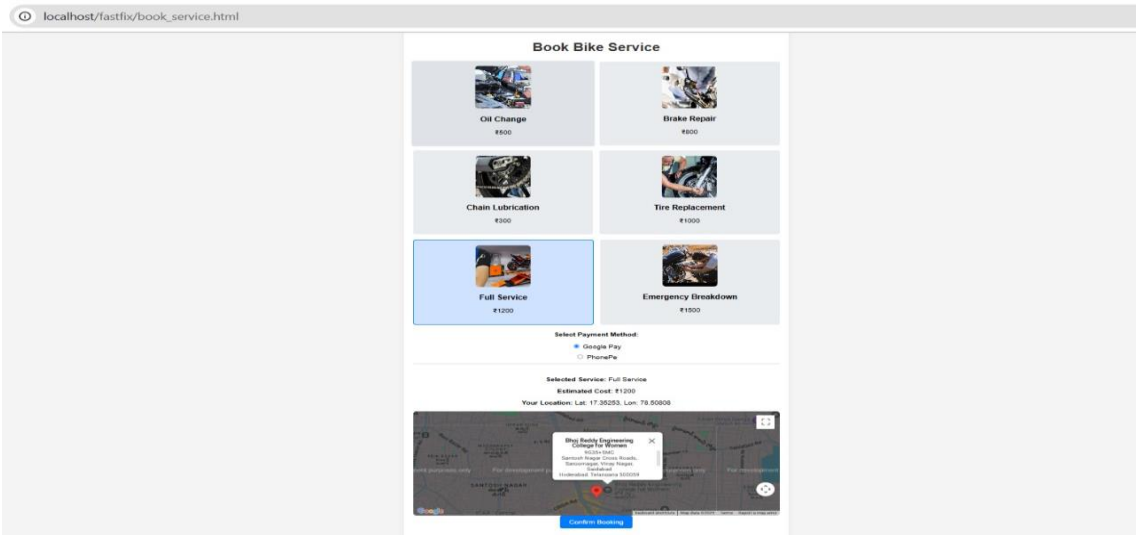
LOGIN:



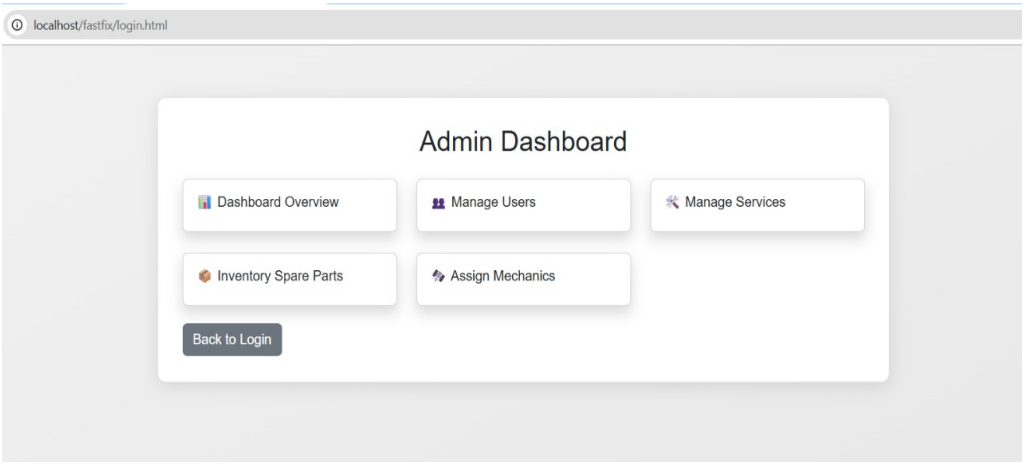
USER DASHBOARD:



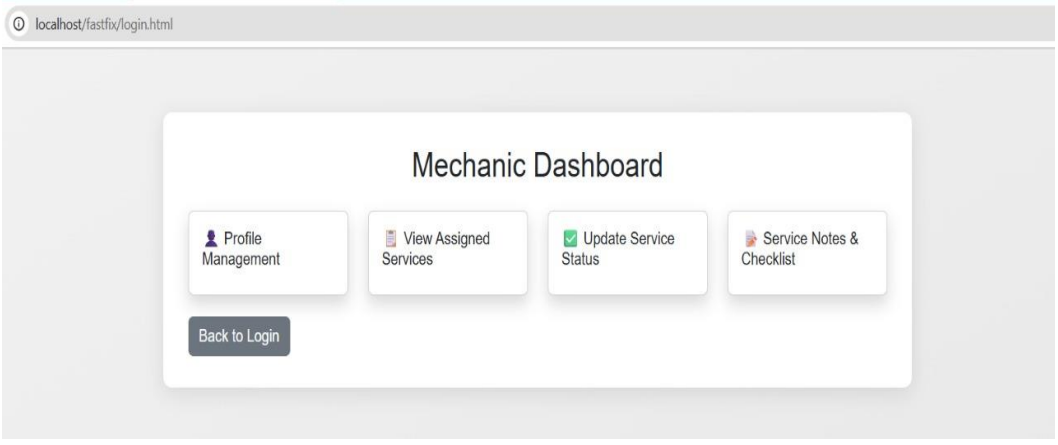
SERVICE PAGE:



ADMIN DASHBOARD:



MECHANIC DASHBOARD:



6-CONCLUSION

Fastfix Garage is an innovative platform designed to simplify and modernize vehicle servicing. It allows users to easily book bike services online from anywhere, anytime. The system spports real-time service tracking and transparent communication. Secure payment integration ensures hassle-free transactions for users. Mechanics and admins can manage bookings, updates, and inventory efficiently. It eliminates the need for manual processes and reduces operational delays. User roles are well-defined, making the system organized and scalable. The platform improves trust by offering status updates and timely feedback options. By automating key workflows, it reduces overhead for service providers. Overall, Fastfix Garage offers a smart, reliable, and future-ready solution for vehicle maintenance.

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