On Demand Home Services Website

Tejas Mandhyani[1], Atharva Waghmare[2], Toha Haddadi[3], Mrs Pournima Kamble[4]

Students, Department of Computer Technology[1,2,3]

Faculty, Department of Computer Technology[4]

Bharati Vidyapeeth Institute of Technology, Kharghar, Navi Mumbai, India

Abstract: *This research presents the development of an on-demand home services website built using PHP and XAMPP, utilizing MySQL for database management. The platform provides users with an efficient and secure way to book and manage home maintenance, repair, and cleaning services. The website incorporates user authentication, real-time booking, and automated service matching to enhance the user experience. JSON is utilized to manage backend features and ensure seamless data exchange between the client and server.*

The system includes MySQL-based login and registration modules for secure authentication and storage of booking details. A structured PHP backend handles service requests, provider allocation, and dynamic pricing models. The website also features an intuitive user dashboard where customers can track service status, communicate with providers, and receive notifications. Security mechanisms such as encrypted passwords and role-based access control enhance data protection.

This study explores the technical challenges in developing a PHP-based service platform, including database optimization, API handling, and performance scaling. Future improvements will include AI-driven recommendations, integration with payment gateways, and enhanced automation for service scheduling and customer support. Additionally, expanding the platform to support mobile applications will ensure greater accessibility and convenience for users across multiple devices..

Keywords: PHP, XAMPP, MySQL, JSON, User Authentication, Booking System, Secure Transactions, Web Services, Home Maintenance

I. INTRODUCTION

On-demand home service platforms have become essential for users seeking professional home maintenance services online. Traditional service booking methods involve extensive searching and calling, leading to inefficiencies and delays. This research introduces a PHP and MySQL-powered web application that simplifies service booking and provider allocation.

Our system uses PHP for backend logic, MySQL for structured data storage, and JSON for seamless data transmission between the frontend and backend. The website allows users to create accounts, browse services, book professionals, and manage appointments efficiently. Security measures such as password hashing, session handling, and access controls are implemented to ensure data integrity.

The proposed solution aims to optimize home service management through real-time booking updates, provider availability tracking, and automated reminders. By leveraging PHP and XAMPP, this system ensures easy deployment and local development, making it a scalable and cost-effective solution. Additionally, the use of RESTful APIs enhances data communication between different components, ensuring smooth and efficient service operations.

Key Features of the AI-Driven On-Demand Home Services Website

1. User Authentication and Profile Management

- Secure login and registration using MySQL database with encrypted password storage.
- Session-based authentication to manage user access and prevent unauthorized logins.
- Profile customization for managing user details, preferences, and service history.
- Forgot password and account recovery options to enhance user experience.

2. Service Listings and Search Functionality

- Categorized service listings (plumbing, electrical repairs, cleaning, appliance repair, etc.).
- Search and filter options to find the nearest and highest-rated providers based on user location.
- Service availability indicators to help users choose the best time slots for bookings.

3. Real-Time Booking and Scheduling

- Users can request and schedule services dynamically, with instant confirmation via email.
- Admin panel for managing service providers, appointments, and customer queries.
- JSON-powered backend for seamless data exchange and reduced server response time.
- Automated appointment reminders through email or SMS notifications.

4. Secure Payment and Transaction Management

- MySQL-stored transactions with encrypted payment data to ensure security and privacy.
- Integration with third-party payment gateways for cashless transactions (future enhancement).
- Payment status tracking integrated into the booking system, allowing users to verify payments.
- Refund and dispute resolution module to handle cancellations and service complaints.

5. Provider Ratings and Feedback System

- Users can rate service providers and leave detailed feedback after service completion.
- Automated reviews system to enhance service credibility and transparency.
- AI-based fraud detection to filter out fake reviews and prevent biased ratings.
- Sentiment analysis of reviews to help providers improve service quality.

6. Dynamic Pricing Model

- Pricing adjustments based on service type, provider experience, and demand fluctuations.
- Discount management and promotional offers for new and returning customers.
- Cost comparison feature allowing users to choose services based on budget constraints.
- AI-driven predictive pricing for peak hours and high-demand services (future enhancement).

7. Admin Dashboard for Service Management

- Provider registration and verification system to ensure service quality and security.
- Role-based access control for managing users, service providers, and system administrators.
- Graphical analytics dashboard for tracking service trends and business performance.
- Automatic report generation for bookings, revenue, and customer engagement metrics.

III. TECHNOLOGY STACK OF ON DEMAND HOME SERVICES WEBSITE

- **Frontend:** HTML, CSS, JavaScript (for UI and responsiveness, supporting a user-friendly experience).
- **Backend:** PHP (Core scripting language for business logic and handling user requests).
- **Database:** MySQL (for login, registration, and booking management, ensuring structured and scalable data handling).
- **Server:** XAMPP (Apache, MySQL, PHP, and Perl for local hosting and efficient development environment).
- **Data Exchange:** JSON (for handling asynchronous requests and API responses, ensuring smooth client-server interaction).
- **Security:** Encrypted passwords, role-based authentication, session handling, and CAPTCHA-based login security.
- **API Integration:** RESTful APIs for communication between different system components and external services.

Copyright to IJARSCT
www.ijarsct.co.in

DOI: 10.48175/IJARSCT-23766

ISSN
2581-9429
IJARSCT

406

IV. FUTURE ENHANCEMENTS OF ON DEMAND HOME SERVICES WEBSITE

- **AI-Based Service Recommendations:** Using machine learning to analyze user behavior and suggest suitable service providers.
- **Mobile App Integration:** Developing an Android/iOS companion app to enhance accessibility and user engagement.
- **Automated Notifications:** SMS and email alerts for booking confirmations, service updates, and special promotions.
- **Payment Gateway Integration:** Secure online transactions via PayPal, Stripe, Razorpay, or other payment processors.
- **Multi-Language Support:** Enhancing accessibility by allowing users to navigate the platform in multiple languages.
- **Chatbot Assistance:** AI-powered chatbot to assist users with booking queries, service recommendations, and customer support.
- **Blockchain-Based Secure Transactions:** Implementing blockchain technology for transparent and tamper-proof transaction records.
- **IoT-Enabled Service Tracking:** Smart home integration to monitor appliance health and schedule predictive maintenance services.

By providing an easy-to-use and scalable solution, this project aims to improve the accessibility and efficiency of home service management, ultimately benefiting users and service providers alike. The successful implementation of these features will position this platform as a competitive solution in the growing market for digital home service platforms.