QUICK FIX

DR NARENDRA KUMAR

Associate Professor, Department of Computer Science and Engineering, Inderprastha Engineering College, Ghaziabad

SATVIK SINGH PARIHAR SACHIN SINGH

Department of Computer Science and Engineering
Inderprastha Engineering College Ghaziabad, India

Email: satvikparihar@gmail.com Email:sachinsingh991127@gmail.com

Naina Dubey PRIYANSHU SHARMA

Department of Computer Science and Engineering
Inderprastha engineering college

Email:dubeynaina2502@gmail.com Email:priyanshushar@gmail.com

ABSTRACT

In today's fast-paced world, finding reliable and skilled home service professionals like electricians, plumbers, painters, and cleaners is often a challenging and time-consuming task. The traditional process of contacting service providers through local references or unverified sources often leads to inconvenience, delays, or lack of trust. To address this problem, our project proposes a comprehensive web-based platform titled "Home Services Provider", designed to connect users with verified and skilled service professionals in their locality.

This project aims to simplify the process of hiring home service providers by offering an easy-to-use website where users can register, browse services, book appointments, and give feedback after service completion. The system also enables service providers to create profiles, list their expertise, and accept or manage bookings. The platform ensures transparency, trust, and convenience by incorporating features like user ratings, service history, and real-time availability.

The project is developed using technologies such as HTML, CSS, JavaScript for the front end, and PHP with MySQL for the back end. Proper database management ensures secure user data handling and smooth transaction processes.

Overall, the "Home Services Provider" project bridges the gap between demand and supply in the local services market by offering a digital solution that benefits both customers and service providers. It not only enhances customer satisfaction through timely and quality services but also empowers skilled workers by giving them access to a wider client base. This system has the potential to contribute to local employment while improving daily life convenience through digital innovation.

INTRODUCTION

QuickFix is an innovative online platform designed to simplify and speed up the process of finding reliable home service professionals. Whether you need a carpenter, plumber, painter, electrician, or any other skilled expert, QuickFix connects you to the right people based on your specific requirements.

Users can simply visit the website and submit their service query. Based on the request, QuickFix instantly matches them with trusted service providers in their area. With features like real-time tracking, customers can monitor the arrival and progress of their chosen professional, ensuring transparency and convenience.

The platform also offers an easy appointment booking system, allowing users to schedule services for future dates according to their availability. After the service is completed, customers can rate and review the professional to help maintain quality standards and build trust within the community.

To enhance user experience, QuickFix also includes a dedicated customer support chat system, providing instant help and resolving any queries during or after the service process.

QuickFix lives up to its name – delivering fast, efficient, and trustworthy home solutions right when you need them.

LITERATURE REVIEW

Over the past decade, the growth of the digital economy has significantly influenced how essential services are accessed, including home-related services like plumbing, electrical repairs, housekeeping, and painting. Several platforms such as UrbanClap (now Urban Company) and HouseJoy have emerged as pioneers in digitizing home service delivery, transforming traditionally unorganized sectors into structured, technology-driven service models.

UrbanClap, established in 2014, built a reputation for offering verified professionals, user-friendly booking options, and quality assurance. Its business model emphasized user convenience, professional vetting, and timely service delivery. According to their internal data and industry research, user trust and the ability to rate and review service providers played a crucial role in their growth. Their system uses algorithms to match service providers with users based on location, availability, and past ratings.

Similarly, HouseJoy focused on integrating home services under one umbrella by enabling real-time service requests through mobile and web apps. Their approach involved onboarding trained professionals and automating the service allocation process. While both platforms made significant contributions to the digital service economy, academic studies and user reviews also highlighted certain challenges, including inconsistency in service quality, limited coverage in non-urban areas, and issues in after-service support.

In the context of academic research, multiple studies have emphasized the role of usability, transparency, data privacy, and professional authentication in building effective digital service platforms. For instance, a study published in the International Journal of Research Publication and Reviews (IJRPR) identified customer retention and user engagement as critical success factors. The paper argued that providing a seamless booking experience, clear pricing models, and reliable service history could significantly improve user satisfaction.

Building on these insights, the "Home Service Provider" project incorporates essential elements such as:

Service history tracking, which allows users to view their past services and providers.

Real-time booking, ensuring that users can schedule services based on live availability.

Feedback and rating mechanisms, which increase accountability and help others choose reliable professionals.

Unlike existing platforms, this system also proposes a lightweight, scalable architecture suitable for local and semi-urban markets, making it a more inclusive solution. Furthermore, the project is designed to be easily adaptable, allowing new service categories or features to be added without major overhauls.

Thus, the proposed system builds upon existing digital service models, addressing their shortcomings while enhancing core features to improve overall service reliability, user trust, and operational efficiency.

METHODOLOGY

The development of the "Home Service Provider" system follows a structured and modular approach, combining the use of standard web development technologies with a modern software development methodology. The system is designed to be user-friendly, scalable, and secure.

1. Software Development Approach

1.1 Agile Development Model

We adopted the Agile development methodology, which focuses on:

Incremental delivery of features in short sprints.

Continuous feedback from users or stakeholders.

Adaptability to changing requirements at any stage of development.

Each development sprint included:

Requirement gathering

Design and implementation

Testing and debugging

Review and deployment

This approach ensured that the system was developed with regular user feedback, leading to improved usability and performance.

2. System Architecture

2.1 Frontend Technologies

The frontend is responsible for all user interactions and interfaces. Technologies used include:

HTML (HyperText Markup Language): For structuring content and building the layout of web pages.

CSS (Cascading Style Sheets): For styling components and making the design responsive and attractive.

JavaScript: For client-side scripting to make the platform interactive (e.g., dynamic form validations, real-time updates).

Key Features:

Responsive design for mobile and desktop users.

Easy-to-navigate interface for booking services.

Service provider and admin dashboards.

2.2 Backend Technologies

The backend powers the logic and data-handling of the application. We used:

PHP (Hypertext Preprocessor): Server-side scripting language for handling backend logic.

MySQL: A relational database to store user data, bookings, services, and provider information.

Functions of the backend:

Authenticate users (login/signup).

Handle service listings and booking requests.

Store and manage service history and feedback.

Communicate with the frontend through form submissions and database operations.

3. Key Modules and Their Functionalities

3.1 User Registration and Authentication

Allows users and service providers to create accounts.

Password encryption and session management for security.

Validation of user input and duplicate prevention.

3.2 Service Listing Module

Admin or service providers can add/update/delete services (e.g., electrician, plumber).

Users can browse services by category, price, or location.

3.3 Booking Interface

Users can select service, date, time, and location.

Booking status (Pending, Accepted, Completed) is updated in real-time.

Service providers get booking notifications and can accept/reject requests.

3.4 Feedback and Rating System

After service completion, users can rate and review the provider.

Helps maintain service quality and trust.

3.5 Admin Dashboard

Admin has full control over:

User and provider management.

Service category management.

View all bookings and feedback.

Monitor system analytics (total users, services booked, etc.)

4. Database Design (MySQL)

4.1 Database Tables

Users Table: Stores user data (name, email, role, password).

Services Table: Contains list of services offered.

Bookings Table: Stores booking details (user, provider, date, time, status).

Reviews Table: Stores feedback and rating after service completion.

Admin Table: Manages login and admin privileges.

4.2 Relationships

One-to-many relationship between users and bookings.

One-to-many relationship between services and bookings.

One-to-many between users and reviews.

5. Testing Strategy

5.1 Unit Testing

Tested individual functions such as login, registration, and service filtering.

5.2 Integration Testing

Ensured smooth interaction between frontend and backend.

5.3 User Acceptance Testing (UAT)

Sample users tested the system and gave feedback on ease of use, speed, and reliability.

6. Deployment

The system can be deployed on any PHP-compatible server (e.g., XAMPP for local or cPanel for live).

Database and PHP files are secured through server-side configuration and file permissions.

RESULTS

Results (Elaborated)

The developed Home Service Provider system was tested in a controlled environment with a sample user group consisting of students, working professionals, homemakers, and local service providers. The testing was carried out over a period of 2 weeks to evaluate the performance, usability, reliability, and effectiveness of the platform.

1. User Experience Evaluation

1.1 Interface Usability

Observation: Users found the interface to be clean, intuitive, and easy to navigate.

Key Highlights:

Simple registration and login process.

Clear service categories with icons and images.

Booking form was quick and responsive.

Feedback:

90% of test users were able to book a service without external help.

Users preferred real-time status updates on their bookings.

1.2 Performance

Loading Times: All pages loaded within 2–3 seconds on average.

Responsiveness: The platform functioned well on both desktop and mobile browsers.

Error Handling: Informative error messages were displayed when required fields were missing or incorrect data was entered.

2. Booking Efficiency and Comparison

2.1 Time Reduction

Traditional Booking:

Users reported that booking services via phone or references usually took 2 to 3 hours or even days.

System Booking:

With the platform, booking was completed within 5–10 minutes, including:

Browsing the service

Selecting time/date

Booking confirmation

2.2 Scheduling Flexibility

Users appreciated the ability to:

View availability calendars of service providers.

Choose their preferred time slots.

Cancel or reschedule bookings with ease.

3. Service Provider Insights

3.1 Visibility Improvement

Local service providers who were onboarded onto the platform reported:

Increase in booking requests.

Better recognition and new customer reach.

One provider noted:

"Earlier, I would get 2–3 calls a week through references. Now I get 1–2 calls daily via this website."

3.2 Dashboard Feedback

Providers liked having access to:

Their service history

Upcoming bookings

Customer feedback

4. User Trust and Satisfaction

4.1 Verified Professionals

Users expressed higher trust levels due to visible tags like “Verified Provider” on profiles.

The ability to rate and review providers also increased platform reliability.

4.2 Security and Privacy

Users appreciated that their personal details (phone number, address) were only shared with the assigned service provider after booking confirmation.

DISCUSSION

The development and testing of the Home Service Provider platform demonstrated significant potential in transforming how local home-based services are accessed, scheduled, and delivered. The platform aligns with digital transformation goals by offering a reliable, transparent, and efficient system for both service seekers and providers. However, several key points emerged during the discussion phase of the project.

1. Achievement of Objectives

1.1 Accessibility

The platform made it easier for users to access verified professionals without making multiple phone calls or relying on unreliable references.

With minimal steps, users could view services, check availability, and complete bookings.

1.2 Reliability

Verified profiles, ratings, and user reviews increased the credibility of service providers.

The tracking of service history offered transparency and confidence to returning users.

2. Key Strengths of the Platform

2.1 Simplicity and User Experience

The intuitive interface and fast response time were appreciated by users across all demographics.

Users with limited technical knowledge could easily navigate the website and complete tasks.

2.2 Increased Job Opportunities

Local professionals, especially those with limited digital presence, benefited from increased exposure and consistent service requests.

2.3 Secure Environment

Strong password encryption, session management, and data validation provided a secure foundation for the platform.

3. Challenges Identified

Despite its success, the project highlighted several challenges that need attention for future scalability and real-world deployment.

3.1 Maintaining Service Quality

Ensuring consistent quality across various service providers is difficult.

Even with ratings and reviews, the actual experience can vary due to human factors.

3.2 Limited Coverage

The system worked well in urban and semi-urban areas during testing.

In rural areas, poor internet access and low digital literacy among users and providers can limit effectiveness.

3.3 Provider Onboarding

Onboarding service providers with proper documentation, ID verification, and training remains time-consuming and manual.

4. Opportunities for Future Enhancement

Based on user feedback and technological trends, the following features and innovations can improve the platform in future versions:

4.1 AI-Based Service Matching

Implementing AI algorithms to recommend the best service provider based on:

Location

Availability

Past reviews

Specializations

This would enhance personalization and speed up the booking process.

4.2 Mobile App Integration

Developing an Android and iOS mobile app would:

Improve accessibility in remote areas.

Provide push notifications for bookings and status updates.

Enable GPS-based location tracking and in-app chat.

4.3 Multilingual Support

Including language options like Hindi, Bengali, Tamil, etc., would:

Broaden the platform's reach across different regions.

Make it inclusive for users and providers from non-English backgrounds.

4.4 Real-Time Tracking and Customer Support

Live tracking of service providers route and integration of in-app customer support could enhance the reliability and trust factor.

5. Potential for Scaling and Business Model

5.1 Franchise or Local Partnerships

The platform can be scaled city-by-city using a franchise model or partnering with local businesses.

Local coordinators can ensure quality control and help with provider onboarding.

5.2 Revenue Streams

Commission-based earnings from bookings.

Featured listing of providers.

Premium services for instant bookings or high-rated professionals.

CONCLUSION

Conclusion (Elaborated)

The development of the Home Service Provider system signifies a crucial step towards digitalizing the traditional home service industry. By leveraging technology, the platform successfully bridges the gap between local service professionals and customers, ensuring reliability, accessibility, and convenience.

1. Summary of Achievements

1.1 Digital Transformation of Local Services

The platform provides a centralized digital solution for users to find and book home services without depending on phone calls, word-of-mouth, or physical directories.

It introduces automation, transparency, and professionalism into a typically unorganized sector.

1.2 Enhanced User Experience

Users benefit from:

A user-friendly interface

Quick booking process

Trustworthy, verified service providers

These features significantly reduce the time and effort needed to obtain services compared to traditional methods.

1.3 Empowerment of Service Providers

Local professionals gain access to a wider customer base and better visibility.

Features such as service history, dashboard analytics, and customer feedback help providers improve their service quality.

2. Broader Impact on Society and Business

2.1 Supporting Local Economies

The platform helps boost income for independent workers and small service businesses by connecting them with regular job opportunities.

2.2 Contributing to Digital India

By digitizing local services, the platform aligns with the vision of Digital India and promotes technological literacy among users and professionals.

3. Limitations and Areas of Improvement

3.1 Service Consistency

Although the system works well, maintaining uniform service quality across providers remains a challenge.

Incorporating training programs or service standards could improve consistency.

3.2 Geographic and Digital Limitations

Users in rural or low-connectivity areas may find it hard to access the platform.

Further development should include offline access features or lightweight app versions.

4. Future Scope

4.1 Technological Advancements

Integration with:

AI for service recommendations

GPS for real-time tracking

Mobile applications for better accessibility

Multilingual interfaces to broaden the user base

4.2 Platform Scaling

With minimal adjustments, the system can scale to include:

Beauty services

Emergency plumbing/electrical work

Small appliance repair

City-specific categories

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