HomeServe: A Digital Booking and Scheduling System for Home Services with Integrated E-Payment

Chapter I: THE PROBLEM AND ITS SCOPE

Introduction

In many communities today, home-service providers such as cleaners, plumbers, electricians, and repair technicians still rely on walk-in inquiries, phone calls, or social media messaging to accommodate client requests. This traditional approach to securing home services is often associated with inefficiencies, miscommunication, and a lack of transparency, making it difficult for customers to find reliable providers or secure guaranteed appointments(Kaur & Kaur, 2024).

Technological advancements have made digital booking systems increasingly accessible, yet small and independent home-service providers often lack modern digital tools to promote their services or manage their schedules. Research shows that implementing digital platforms to enhance appointment scheduling systems can significantly improve operational efficiency and help meet customer expectations, though many smaller enterprises still face barriers to adoption without ready-made tools (Hui & Teo, 2024). This creates a gap between customers seeking fast, convenient bookings and service providers who require efficient methods to receive, manage, and confirm appointments.

Furthermore, traditional payment methods such as cash-on-service can cause issues for both clients and providers, including last-minute cancellations, unrecorded transactions, and lack of financial transparency. With the rise of digital payment systems like GCash and PayMaya, integrating e-payment capabilities can greatly enhance transaction accuracy, security, and convenience for both parties.

To address these challenges, this study proposes **HomeServe: A Digital Booking and Scheduling System for Home Services with Integrated E-Payment**. The system aims to streamline the process of finding home-service providers, scheduling appointments, and securing payments through an accessible, user-friendly platform. By digitizing service transactions, HomeServe intends to improve efficiency, provide transparency, and connect customers to trusted professionals.

Statement of the Problem

This study aims to develop a digital booking and scheduling system that simplifies the process of connecting customers with home-service providers while offering an integrated e-payment feature. Specifically, the study seeks to answer the following questions:

1. How can the system provide an efficient platform for customers to browse and book home-service providers?

2. In what ways can the system assist service providers in managing schedules, confirming appointments, and tracking transactions?
3. How can the integration of e-payment improve transaction security, convenience, and financial monitoring?
4. What features can be implemented to ensure a user-friendly experience for both customers and providers?
5. How effective is the developed system in addressing the common issues found in manual or traditional booking methods?

General Objective

The general objective of this study is to develop **HomeServe**, a digital booking and scheduling system designed to facilitate service reservations for home-service providers and integrate secure e-payment features for improved transaction handling.

Specifically, this project aims to:

1. Specific: To design and develop a web-based platform where customers can browse available home services, book appointments, and process payments digitally.

2. Measurable: To implement and evaluate system modules—user registration, service listing, booking scheduler, provider dashboard, admin panel, and e-payment integration—based on functionality, accuracy, usability, and responsiveness.

3. Achievable: To create the system using accessible technologies such as PHP/Laravel, MySQL, HTML, CSS, and JavaScript, ensuring that student developers can complete the system within the given academic timeframe.

4. Relevant: To provide a digital solution that addresses common issues in traditional booking methods such as scheduling conflicts, miscommunication, and lack of payment transparency among home-service providers and customers.

5. Time-bound: To complete the system development, testing, and documentation within one academic semester (or the timeframe set by the institution), including revisions and final project defense preparation.

Significance of the Study

Customers – This system provides a convenient way to find, book, and pay for home services without the hassle of phone calls or face-to-face arrangements. It ensures transparency in service availability, pricing, and scheduling.

Home-Service Providers – The system helps providers manage appointments, track payments, and reduce scheduling conflicts. It also offers a digital presence that enhances visibility and potential customer reach.

Business Owners / Micro-entrepreneurs – Small home-service businesses can use the platform to organize operations, minimize manual errors, and increase customer satisfaction through reliable digital processes.

Researchers and Developers – This study serves as a reference for future research related to digital booking platforms, scheduling systems, and e-payment integrations.

Academic Community – The study demonstrates the practical application of Information Technology in solving common real-world service management problems, contributing to academic learning and innovation.

Scope and Limitations

Scope

- The system allows customers to register, browse services, select providers, and book appointments.
- Service providers can manage profiles, set availability, approve or reject bookings, and monitor payments.
- The platform includes an integrated e-payment module (GCash/PayMaya or simulated payment).
- The administrator can oversee user accounts, services, and system activity.
- The system will be developed as a web-based platform accessible via desktop or mobile browser.

Limitations

- The system does not include real-time GPS tracking of service providers.
- The availability of actual payment API integration may depend on access to third-party services; simulations may be used if needed.
- The platform does not handle disputes between customers and providers.
- Internet connectivity is required to access the system.
- The system does not guarantee the professional legitimacy of service providers; verification depends on the admin or client.

References:

Hui, L. Y., & Teo, P.-C. (2024). An Implementation of Digital Platform to Enhance the Appointment Scheduling System. *INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS AND SOCIAL SCIENCES*, *1*(2).

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