

“Gharseva:” Web Household Services

**Mr. Vaibhav Ramasane¹, Mr. Deepak More², Mr. Rizwan Shaikh³, Mr. Chetan Khandre⁴,
Prof. S.B.Dhadake⁵**

*1.2.3.4.Last Year Student, Department of Computer Engineering, Smt. Kashibai Navale College of Engineering,
Pune, Maharashtra, India*

**5Professor, Department of Computer Engineering, Smt. Kashibai Navale College of Engineering, Pune,
Maharashtra, India*

Abstract - The current situation has led to a strong work culture where people have to work hard and have busy schedules, causing them to neglect their families. If an unforeseen problem arises, they become distracted and focus on other activities instead of the work they are supposed to do. Managing your personal and business life is important. People who have difficulty finding reliable professionals to handle various household tasks can find a quick and easy solution through online homework help platforms. Users can find advanced photography, pest control, maintenance, wood, plumbing, and electrical contracts on the platform. The platform has an easy-to-use interface and a time booking system that primarily ensures on-time service and quality control. Responsive customer support, transparent pricing, and clear terms ensure customer satisfaction. The platform's success stems from its emphasis on convenience, reliability, and trust for those seeking home help.

Key Words: SQL, services, employment, database, connectivity

1. INTRODUCTION

Problems may arise if a person needs small but important help at home, there are no competent employees, or it is not possible to find a reliable person who can provide the wrong service. Our online house cleaning services provide the fastest and hassle-free way to complete your house cleaning tasks. We strive to provide the best answers to all your questions at home, with better performance, more comfort, and most importantly, better work. Qualified domestic workers can be hired with just one click and your services will be completed instantly. Painting, pest control, cleaning, plumbing, electrical work, carpentry services and more are processes designed to create a happy, healthy home based on clients' needs.

Users can view the list of home services and contact them when necessary, while users can learn more about them by providing their phone numbers. The previously mentioned groups and services constitute the online home service. Problems arise when appropriate staff is not available or reliable service providers cannot be found to provide excellent service when someone needs help. Homework is small but important. Our online cleaning services provide the fastest and least disruptive way to complete your cleaning tasks. Booking is a click system. Hiring qualified in-house professionals is just a click away and your services will be completed in no time. The customer's willingness to pay in full is important and beneficial in terms of understanding the "pay what you get" concept and expecting the best service at the best price.

2. Objective

This article explains the main purpose of online home delivery services, which is to provide a click-home delivery service. It introduces the concept of online home improvement services by focusing on the various services available and the ordering and delivery process. Authorized users, including service providers, customers, and managers, are said to be able to access home services through mobile applications or smart computers. The mobile application is designed to provide a user-friendly interface to select home services and provide the credentials and authorization required for access. When registering, users must provide the necessary credentials for verification. The app also has an interactive search function to help users find services easily. It also includes a secure online payment gateway for payment of selected services and tracking services to ensure accurate delivery.

These services will include everything from plumbing and electrical work to landscaping and interior design. The ordering and delivery process of these services has been simplified and can be accessed through platforms such as mobile applications or smart network connections.

Authorized users, including platform administrators as well as service providers and customers, can access these services through mobile applications. To gain access, users must have

valid credentials and permissions to ensure that only authorized users can interact with the platform.

During registration, users, especially service providers, must provide certain certificates or evidence to verify their identity and eligibility. This authentication step is necessary to maintain the trust and reliability of the services provided by the platform.

The mobile application is designed to provide an intuitive and interactive search interface so that users can easily browse and select door-to-door required services. This streamlined interface enhances the user experience and facilitates efficient service selection.

One of the main features of the app is its secure online payment gateway that allows users to pay for their options hassle-free and securely. This ensures a seamless transaction for both customers and service providers.

3. Literature Survey

Door to door service on demand is beneficial for anyone who wants to resort to door to door services such as electrical repair, gas repair, plumbing, electrical repair, reverse osmosis. When someone moves, it's because everyone wants a job that's quick, easy, and time-saving. For this reason, people can benefit greatly from online home renovation services. Our system has only two users: one is the home service provider and the other is the user. Home service providers can register on the site by explaining their role and any additional services they provide. These are very important for the project.

Users can provide their phone numbers to know more about their home service providers or even check the list of services and contact them as they wish. The Web Home offering has many categories and services mentioned earlier.

4. Proposed system

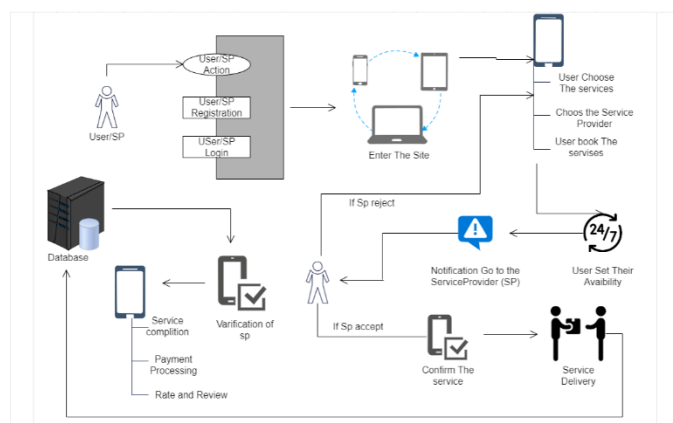


Fig 4 User And Service Provider Architecture

4.1 User System Architecture

4.1.1 User Registration

The user will process and enter all the necessary information. After registering, the user goes to the login section and proceeds to the next step.

4.1.2 Booking System

After logging in, users go to the registration section and select the service they want at home and the date and time the service provider will arrive to provide the service.

4.1.3. Verification

The verification process takes place when the doctor visits your home. The service provider will call the user's home and reach a reliable location. When the service provider enters the ezer number for verification, if the verification is successful, the service is provided; Otherwise, the complaint will be sent to the administrative department.

4.1.3 Payment

Payment will be made after the service is completed. Once the payment process is completed, the service is provided and the user rates and reviews the performance of the service provider. Users can pay online and offline.

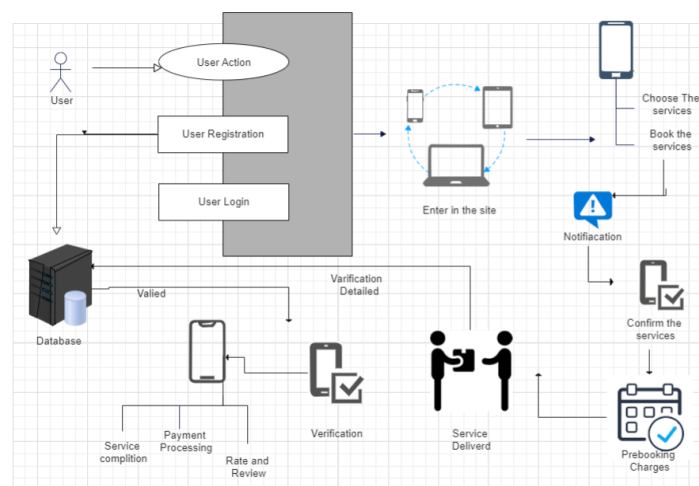


Fig 4.1 User System Architecture

4.2 Service provider (SP) System Architecture

4.2.1 Service provider Registration

The service provider works and has access to all necessary information. After registering, the user goes to the login section and proceeds to the next step.

4.2.2 Availability

When the user selects a service provider for his business, he first finds out the suitability of the customer for the business and the service provider, then the people who use the premises to perform the service. The service provider will accept or reject if ready.

4.2.3 Payment

Payment will be made after the service is completed. Providers only process online payments. Payment must be made upon completion of the service. The provider only pays online.

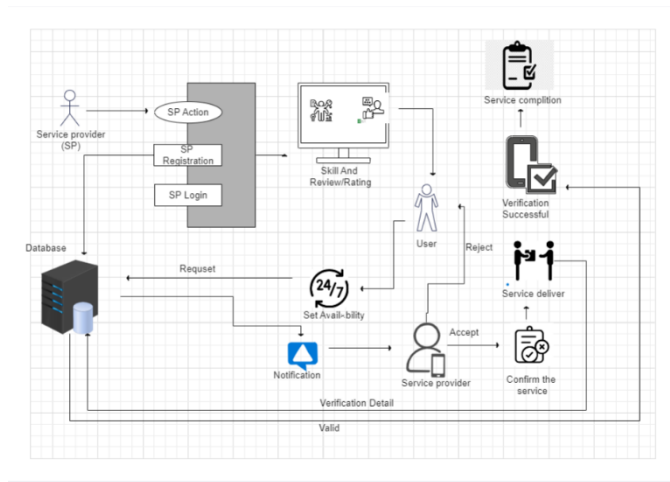


Fig 4.2.1 Service Provider Architecture

5. System Requirement

5.1. Hardware Requirement

- OS: Windows/Linux
- System Architecture: 32/64 bit
- Ram: 2 GB RAM (Minimum)
4 GB RAM (Recommended)
- HDD: 256 GB Minimum

5.2 Software/Frameworks

- Backend: Node.js / JavaScript
- Frontend: HTML & CSS
- Database: MySQL

6. Mathematical Model

1. Users and Service Providers:

- $(U(t))$: Total number of users at time (t) .
- $(SP(t))$: Total number of service providers at time (t) .

2. Services:

- (S) : Total number of services offered on Ghrseva.
- $(S_i(t))$: Number of users requesting service (i) at time (t) .

3. Demand and Supply Dynamics:

- Demand at time (t) :
$$D(t) = \sum_{i=1}^S S_i(t)$$
- Supply at time (t) :
$$P(t) = \min(SP(t), D(t))$$

4. Service Matching and Completion:

- $(M(t))$: Number of successful matches between users and service providers at time (t) , where $(M(t) \leq P(t))$.
- $(C(t))$: Number of services completed at time (t) .

5. User Satisfaction and Feedback:

$$\text{UserSatisfaction}(t) = \frac{\text{PositiveFeedback}(t)}{\text{TotalFeedback}(t)}$$

6. Revenue Generation:

- $(R(t))$: Revenue generated at time (t) based on completed services and service fees.

Now, let's define some dynamic equations to describe the evolution of these variables over time:

1. User and Service Provider Dynamics: - Users:

$$U(t+\Delta t) = U(t) + \text{NewUsers}(t) - \text{UserChurn}(t) \cdot U(t)$$

- Service Providers:

$$SP(t+\Delta t) = SP(t) + \text{NewSP}(t) - \text{SPChurn}(t) \cdot SP(t)$$

2. Service Request Dynamics:

- New service requests:

$$S_i(t+\Delta t) = S_i(t) + \text{NewRequests}(t)$$

- Service completion:

$$C(t+\Delta t) = C(t) + \text{CompletedServices}(t)$$

3. Service Matching and Revenue:

- Matching and revenue:

$$M(t+\Delta t) = \min(D(t+\Delta t), P(t+\Delta t))$$

$$R(t+\Delta t) = C(t+\Delta t) \times \text{ServiceFee}$$

4. User Satisfaction and Feedback:

- Feedback and satisfaction updates:

$$\text{TotalFeedback}(t+\Delta t) = \text{TotalFeedback}(t) + \text{NewFeedback}(t)$$

$$\text{PositiveFeedback}(t+\Delta t) = \text{PositiveFeedback}(t) + \text{NewPositiveFeedback}(t)$$

In these equations:

- Δt represents the time step (e.g., in hours or days).

- $\text{UserChurn}(t)$ and $\text{SPChurn}(t)$ are churn rates for users and service providers, respectively.

- ServiceFee is the fee charged per service.

- $\text{NewFeedback}(t)$ and $\text{NewPositiveFeedback}(t)$ represent new feedback received during the time step.

This model captures the dynamics of user and service provider growth, service demand and supply, service matching, revenue generation, and user feedback on the Gharseva platform over time. Adjustments and refinements can be made based on specific data and requirements.

7. Software Development Life Cycle (SDLC)

This website uses the V standard. The V standard is a software development standard that emphasizes the importance of testing and verification throughout the development lifecycle. It is called the V model because of its V-shaped representation, where the left side of the V represents the development phase and the right side represents the connection and implementation phase.

In software engineering, the V-model is a method that introduces analysis and analysis of each phase of the software development life cycle. Below is a detailed

description of each V-model point: customer. By specifying goals, you lay the foundation for development.

System Analysis: To create the proposed system, the system engineer analyzes and understands the trade-offs that need to be made in this step. It is necessary to study the user's requirements and translate them into specific procedures.

Software architecture design: The team will consider factors such as list, functionality, relationships, and dependencies when choosing a software architecture. Creating test models, kiosks, and diagrams is part of this phase.

Module Design: The system is divided into small, well-designed components, each unique. To help with the coding process, here is a low-level design document.

Coding: Establishing specifications as the basis for development. Coding complies with accepted standards and standards, and code reviews are accurate and effective.

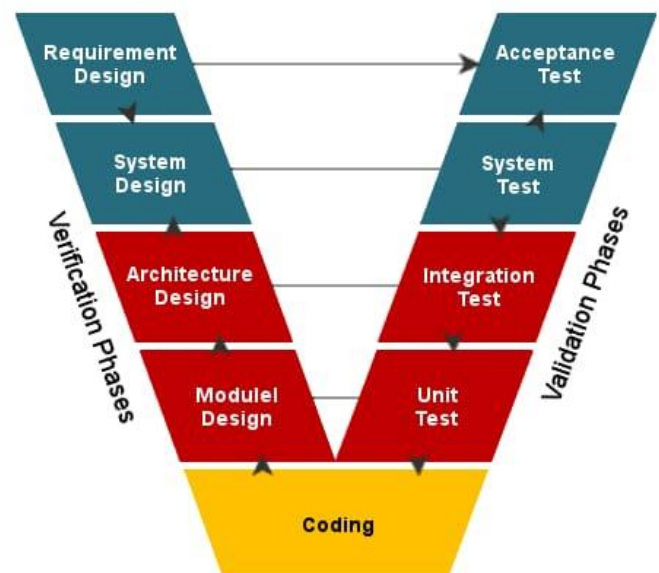


Fig 7 SDLC Model

Research Phase:

Unit Testing: In this phase, individual programs are tested to ensure that they work well when put together. It

focuses on the smallest areas, such as program modules, to find code-level errors.

Integration Testing: The testing phase of the test plan is developed during the architectural design phase and performed during integration to ensure that the integrated components work as expected.

System Testing: The test plan created during the design phase will be implemented to ensure that the system meets the application developer's expectations. It ensures that the program meets the customer's business needs.

Acceptance Testing: In order to make sure the software lives up to customer expectations, it is tested in this phase against business requirements. In the actual user environment, it also detects non-functional problems like load and performance flaws.

8. Advantages

1. **Convenience and accessibility:** Users can easily access various home services from the comfort of their homes through the website or mobile application.
2. **Many services:** These platforms often have many services and allow users to search and organize everything from maintenance and maintenance to installation and repair.
3. **Choose and Compare:** By comparing different service providers based on reviews, ratings, and prices, customers can find the service provider that best suits their needs and budget and make informed decisions.
4. **Save time:** Customers can save time by quickly finding and scheduling services online instead of long phone calls and research.
5. **Booking and Scheduling:** Online booking platforms facilitate easy and frequent scheduling of services at convenient times
6. **Reviews and Ratings:** Before choosing a service provider, customers can evaluate its reputation and reliability by reading reviews and ratings.

9. Limitations

1. **Dependency on technology:** Due to this dependence, the availability of services and user experience may be negatively affected by server difficulties or outages.
2. **Limited personal interaction:** Some users may prefer to communicate directly or face-to-face with service providers, which is often not possible on online platforms.

3. **Possibility of miscommunication:** When communicating online, service needs may be misunderstood or misinterpreted, which will reduce the quality of services provided.

4. **Differences in service quality:** Users may encounter different service providers on the same platform, and service quality may vary between service providers.

5. **Privacy and security concerns:** Sharing financial information and personal details online can raise privacy and security concerns, especially if the platform in question is not secure.

10. Conclusion

In general, customers seeking a variety of home services can enjoy the convenience and availability of online, web-based, app-based home service providers. The app optimizes user experience through modules that include user registration, service selection, booking, payment processing, and feedback/review. Maintenance and repair. By addressing these risks, the app can provide a reliable, secure, and easy-to-use platform for in-home needs. While the current project has established a solid foundation, there are many areas that need further research: Regional development: Consider expanding the platform to a larger area to enjoy a broad base of customers and service providers.

11. Future Scope

Some of the most popular home services are offered by online home services. The system can be adjusted according to the changing needs of customers. All systems can be designed to meet future needs and applications will be able to provide the necessary services abroad. The app can be further expanded by adding necessary services and more payment options. For example, the system now offers services such as packing and moving, house painting, house cleaning, plumbing and cleaning. The system can be expanded to meet users' needs. Computer and mobile phone repair, laundry, meals and similar additional services can be added to the system. The payment method issue is now an example of how our system works. The system only accepts online payments from Mastercard users. This can be improved by adding paid services. Also valid for Visa card holders.

12. Reference

- [1]. Apeksha Adekar¹, Aakash Dalvi, “Household Veritas - A platform that provides household services” International Journal of Engineering Research & Technology (IJERT), ISSN: 2395-0072, March 2023.
- [2]. Neelaveni, Tarun.S, Santhosh.M , Vignesh.R, “ON-DEMAND SERVICE SYSTEM USING SOA” , International Journal Creative research thought (IJCRT), ISSN: 2320-2882, June 2022.
- [3]. Kamakshi Gupta, Aniket Tewari , Rohit Basra, “Android App for Household Services” International Journal of Innovative Research in Technology (IJIRT), ISSN: 2349-6002, June 2021.
- [4]. Kunal Bhalgat, Sayali Desai, Rajeshri Mayanaikar, “MAZDOOR”- Online Application for Household Services”, International Journal of Scientific Research in Computer Science, Engineering and Information Technology ISSN : 2456-3307, June 2021
- [5]. Ms. Prachi S. Tambe, Nikam Poonam, Gunjal Trupt, “An Online System for Home Services” International Journal of Scientific Development and Research (IJS DR), ISSN: 24552631, September 2020.
- [6]. On Demand Home Service System” , Institute of Electrical [6]. K.Aravindhan, K.Periyakaruppan, “Web Application Based and Electronics Engineers(IEEE) , ISSN: 2469-5556, April 2020
- [7]. N. M. Indravasan, Adarsh G ,Shruthi.C, “An Online System for Household Service” , International Journal of Engineering Research & Technology (IJERT) ISSN: 22780181, 2018.
- [8]. Liutkevičius, Arūnas Vrubliauskas, “Smart Home Services Development, Provisioning, and Management Framework Agnius”, INFORMATION TECHNOLOGY AND CONTROL, ISSN 1392 – 124X, June 2011
- [9]. Ke Xu; Meina Song; Xiaoqi Zhang, “Home Appliance Mashup System Based on Web Service”, Institute of Electrical and Electronics Engineers(IEEE), ISSN : 2165-3836, June 2010
- [10]. Yusuke Nakano; Yoji Yamato; Michiharu Takemoto; Hiroshi Sunaga, “Method of Creating Web Services from Web Applications”, Institute of Electrical and Electronics Engineers(IEEE), ISSN: 2163-2871, July 2007