

Home Services Booking Platform

Project Abstract | K-1228

1. Introduction / Background

Finding a reliable plumber or electrician remains a referrals-and-prayer process for most households: no fixed prices, no-shows, haggling after the work, and no recourse when the repair fails a week later. This project builds the platform that professionalises home services — a 40+ service catalogue with fixed upfront pricing, verified professional profiles with ratings, day-and-slot booking, pay-after-job collection and a 30-day service warranty tracked per booking.

2. Problem Statement

Unorganised home services suffer from price opacity, unreliable availability, no quality accountability and no after-service support. Customers need fixed prices before booking, verified professionals with track records, confirmed time slots, and warranty coverage. Professionals need bookings that arrive with the issue description and address in advance. A structured two-sided platform is required.

3. Objectives

- Provide a service catalogue of 40+ services across 8 categories with fixed upfront pricing.
- Onboard verified professional profiles with ratings and completed-job counts.
- Implement day-and-slot booking with slot inventory preventing double-booking.
- Track a 30-day service warranty per completed booking.
- Enable pay-after-job recording with rating capture.

4. Proposed Methodology

The platform is developed as a full-stack web application. Services are catalogue rows with fixed prices; professionals are profile rows with verification flags; slots are inventory keyed by professional, day and time; bookings link all three and carry warranty windows; ratings aggregate from completed bookings. The methodology covers requirement analysis, marketplace schema design, implementation of customer and professional interfaces, testing of slot conflicts and rating aggregation, and documentation.

5. System Architecture / Working

- Customer layer: service search, pro profiles, booking flow with issue capture, bookings management.
- Professional layer: booking list with issue details, profile management.
- Booking engine: slot inventory with conflict rejection, warranty window tracking.
- Rating engine: aggregation from completed bookings only.
- Backend: REST API with role-based access.
- Database: services, professionals, slots, bookings, ratings, warranties.

6. Hardware / Software Requirements

Item	Specification
Processor	Any modern dual-core processor (development)
RAM	4 GB minimum
Storage	500 MB for code, database and media
Operating system	Windows / Linux / macOS
Backend	Node.js with Express framework
Database	MySQL
Frontend	HTML5, CSS3, JavaScript (ES6)
Browser	Modern Chrome / Firefox / Edge / Safari (expected)

7. Expected Outcomes

- A working home-services marketplace with catalogue, pros, slots and bookings.
- Conflict-free slot booking with a tracked 30-day warranty per job.
- Rating profiles computed from completed bookings.
- Full documentation: schema, guides, report, PPT and viva Q&A.;

8. Applications

- On-demand home services startups in any city.
- Appliance-brand authorised service networks.
- Facility-management companies serving housing societies.
- Salon-at-home and wellness service businesses (adapted categories).

9. Limitations

- Payments are recorded as pay-after-job; online collection is a documented extension.
- Professional verification is a badge workflow; real background checks are operational.
- Real-time pro location tracking is not included; arrival windows are slot-based.
- One city per deployment; multi-city operations are future scope.

10. Future Scope

- Online payment collection with split payouts to professionals.
- Real-time professional tracking on the day of service.
- Subscription-based home maintenance plans.
- AI-assisted issue diagnosis from customer photos.
- Multi-city operations with city-level pricing.