

FixEasy - Find, Book, and Fix with Ease

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ABSTRACT

FixEasy is an online platform that offers a simple and effective way to schedule home maintenance and repair services, bridging the gap between consumers and qualified specialists. Electricians, plumbers, air conditioners, auto mechanics are among the verified experts that the network links users with. FixEasy is a reliable and scalable solution that is built on a three-tier design with React.js for the frontend and Node.js for the backend.

By utilizing cutting-edge web technologies, FixEasy hopes to give consumers a dependable, easy, and convenient experience while empowering knowledgeable professionals to reach a wider audience. The project ensures a service marketplace that is both user-friendly and efficient by showcasing the practical implementation of full-stack development.

INTRODUCTION

It's frequently a stressful and time-consuming procedure to find trustworthy specialists for house maintenance and repairs. Inconsistent pricing,

unclear service providers, and a lack of transparency are problems for many users. In order to address these issues, FixEasy is an online platform that easily links consumers with qualified and vetted professionals for necessary services including plumbing, AC, electrical, auto mechanics, and more.

With a three-tier architecture that uses React.js for the frontend and Node.js for the backend, FixEasy guarantees a scalable and effective solution. The platform's organized and intuitive layout makes it simple for users to browse services, schedule appointments, and handle orders. While administrators manage platform operations, verify technicians, and guarantee service quality, technicians can register, offer their services, update availability, and accept task requests.

FixEasy aims to offer a hassle-free, reliable, and effective solution for all of your home maintenance requirements. It provides technicians with an organized marketplace while improving accessibility and convenience for users by utilizing contemporary online technologies. FixEasy makes

it easier to locate qualified experts, guaranteeing high-quality work, prompt repairs, and a seamless user experience—all of which help to close the gap between clients and service providers.

METHODOLOGY

A methodical approach was used in the development of FixEasy to guarantee a smooth, effective, and expandable platform for scheduling home maintenance services. The first step in the process is a comprehensive requirement analysis, which identifies key features including order tracking, booking administration, technician availability, service search, and user registration. This guarantees that all features are in line with user requirements and aids in defining the project's scope.

Three tiers make up the system's architecture, which adheres to the Model-View-Controller (MVC) pattern to preserve scalability and modularity. A responsive and engaging user experience is offered by the frontend, which is constructed with React.js. The backend, which was created using Node.js and Express.js, controls business logic, authentication, and service activities. To effectively store and retrieve user, technician, and service-related data, a MongoDB database is utilized.

The agile methodology used in development enables iterative implementation and ongoing enhancements. The frontend and backend can communicate more easily thanks to RESTful APIs.

To guarantee dependability and security, the system is put through a rigorous testing process that includes unit, integration, and user acceptability testing. The platform is made available to users by being placed on a cloud-based server after testing. Performance, security, and user experience are all improved with ongoing monitoring and feedback integration. FixEasy's methodical methodology guarantees a reliable and effective way to link users with knowledgeable specialists.

MODULES

1. User Module

People can register, log in, and manage their profiles using the User Module. Customers may schedule technicians, look for services, and monitor orders in real time. In order to guarantee a smooth and easy service experience, they may also manage appointments, see booking history, and update personal information.

2. Technician Module

Technicians can register, list their services, and control availability with this module. Technicians have the ability to track their performed services, accept or reject bookings, and alter work statuses. By ensuring that only recognized professionals offer services, the system enables qualified technicians to reach a wider audience and effectively manage numerous service requests.

3. Service Booking Module

Based on customer preferences, the Service Booking Module makes it easier to book technicians in real time. It manages booking confirmations, service availability checks, and appointment scheduling. Customers can browse technician profiles, choose preferred time slots, and specify service details, guaranteeing accessibility and transparency for home maintenance and repair services.

4. Admin Module

Verifying technician credentials, managing user and technician accounts, and supervising platform operations are all done via the admin module. Admins can manage complaints, keep an eye on service quality, and make sure there is no fraud. Additionally, they conduct platform performance analysis and apply upgrades to guarantee FixEasy runs effectively while upholding high service standards.

5. Feedback & Review Module

Technicians can be rated and reviewed by users according to timeliness, professionalism, and service quality. This module promotes accountability and openness, which aids in upholding high standards. Based on prior customer experiences, new customers can choose service providers with confidence, and technicians receive feedback that helps them do better.

LITERATURE REVIEW

The way people engage with qualified specialists for home maintenance and repairs has changed as a result of the growing reliance on digital platforms for service booking. Numerous studies highlight the necessity of an effective and user-friendly system that makes it easier to locate and hire professionals. According to research, by providing structured booking and service management capabilities, online service platforms increase customer happiness, decrease response times, and improve accessibility.

Real-time availability tracking, open communication, and verified service providers are crucial for ensuring confidence and dependability in digital service marketplaces, according to literature on the subject. According to studies, user satisfaction and engagement are greatly increased by platforms that have structured technician profiles, automatic scheduling, and customer feedback systems. Furthermore, customers need to be able to search and filter effectively in order to identify the best service providers for their particular needs.

Users frequently encounter discrepancies in professionalism and cost, making it difficult to guarantee service quality and technician verification in digital service platforms. According to research, structured workflow automation, review procedures, and admin monitoring can all successfully handle these issues. These ideas are intended to be implemented by FixEasy, which

makes use of contemporary online technologies to provide a scalable, effective, and dependable platform for home maintenance and repair services.

EXISTING SYSTEM

Conventional home service scheduling techniques depend on local service providers, personal recommendations, or manual searches; these approaches frequently result in delays, unreliability, and a lack of certainty regarding the quality of the services. Inefficient and time-consuming, users usually telephone technicians or visit nearby service centers to speak with technicians. Finding qualified experts, confirming their experience, and ensuring fair pricing are frequently difficult tasks for clients. In addition, evaluating service quality is challenging in the absence of a systematic feedback system.

Though they frequently lack real-time availability updates and smooth booking handling, certain current web platforms offer service listings. It could be challenging for users to follow service status, compare different technicians, or get prompt support. A significant additional constraint is the absence of a centralized monitoring mechanism to confirm that technicians guarantee service dependability.

Since they depend on word-of-mouth advertising or outside agencies, technicians find it difficult to obtain clients through traditional means, which lowers their earning potential. They find it difficult to effectively manage schedules, collect payments,

and establish a trustworthy reputation in the absence of a suitable platform.

A centralized, transparent, and user-friendly platform like FixEasy is necessary to guarantee verified technicians, real-time service booking, and a flawless client experience. The inefficiencies of the current system underscore this necessity.

PROPOSED SYSTEM

An inventive online platform called FixEasy was created to provide a centralized, transparent, and effective service booking system in order to close the gap between consumers and knowledgeable technicians. By doing away with the inefficiencies of conventional service-finding techniques, the suggested approach guarantees real-time service availability, verified professionals, and smooth booking management. The interface is easy to use, allowing users to register, book technicians, search for services, and track their orders. To help users make educated judgments, the system offers comprehensive technician profiles that include availability, skills, and client feedback. In order to guarantee prompt service delivery, automated booking and scheduling removes delays.

An orderly job management system helps technicians by enabling them to post services, change their availability, and approve or disapprove task requests. In addition to expanding their reach, this offers steady employment prospects without depending on outside organizations.

By confirming technicians, keeping an eye on service quality, and settling conflicts, the admin panel protects platform integrity. To uphold service standards, the system additionally has a review and rating mechanism.

FixEasy is a scalable, three-tier design that guarantees secure data processing and seamless speed. It was built with Node.js and React.js. In addition to improving accessibility and service reliability, this technology-driven strategy offers an organized solution for home maintenance and repair services.

CONCLUSION

FixEasy aims to transform how consumers get in touch with knowledgeable professionals for home repair and maintenance services. FixEasy offers a structured, transparent, and user-friendly platform that improves accessibility and service reliability by tackling the inefficiencies of conventional repair booking procedures. A smooth experience is guaranteed for both customers and service providers through the integration of real-time service availability, technician verification, and an effective booking system. FixEasy aims to transform how consumers get in touch with knowledgeable professionals for home repair and maintenance services. FixEasy offers a structured, transparent, and user-friendly platform that improves accessibility and service reliability by tackling the inefficiencies of conventional repair booking

procedures. A smooth experience is guaranteed for both customers and service providers through the integration of real-time service availability, technician verification, and an effective booking system.

Using cutting-edge web technologies like Node.js and React.js, FixEasy has an effective and scalable architecture that ensures secure data management and seamless performance. In addition to making the hiring of specialists easier, the platform helps service-based enterprises undergo a digital transformation.

To summarize, FixEasy is a creative and dependable way to connect specialists and users, guaranteeing effectiveness, convenience, and high-quality home maintenance and repair services.