

AN APP TO PROVIDE A UNIVERSAL APP ON SERVICES FOR UNGUIDED (WIRELESS) MEDIA AND INTERNET/WIFI ROUTING DEVICES

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ABSTRACT

This project is an app designed to connect local internet service providers (ISPs) with customers in a streamlined, user-friendly platform. The app enables users to explore, compare, and subscribe to internet services by providing a single interface where they can view various plans, prices, and service options from local ISPs. For providers, the platform offers tools to create and manage profiles, showcase services, and reach a broader customer base without extensive marketing. Users benefit from easy service comparison, coverage checks, and reviews, helping them make informed decisions. Additionally, features like service request tracking, online payments, and customer support enhance the experience, empowering local ISPs to thrive in a competitive digital market while supporting better connectivity within communities..

Keywords: Service Comparison ,Customer Support, Subscription Management, Online Payments, User Reviews.

I. INTRODUCTION

With the increasing demand for reliable internet services, finding and selecting the right internet service provider (ISP) has become a crucial decision for individuals and businesses alike. However, the process is often complicated by limited visibility into local options, varying service plans, and unclear comparisons. This project introduces an app designed to serve as a unified platform where customers can discover, compare, and connect with local ISPs effortlessly. The app provides users with a comprehensive view of available ISPs, allowing them to compare offerings, check coverage areas, read reviews, and select the most suitable service for their needs..

For ISPs, the platform offers an efficient way to reach potential customers without extensive marketing efforts. Local providers can create profiles, manage service plans, and communicate directly with customers, fostering a transparent and accessible marketplace. Additional features such as service request tracking, online payments, and customer support enhance the user experience, aiming to simplify and modernize the process of selecting and subscribing to an ISP. By bridging the gap between customers and local ISPs, this app not only promotes better connectivity but also strengthens the presence of smaller providers in the competitive digital market, ultimately contributing to more robust and accessible internet services within communities..

This project addresses these challenges by introducing a dedicated app that serves as a platform to bridge the gap between users and local ISPs. This app enables users to easily discover, compare, and subscribe to internet services from local providers. By bringing together various ISPs on a single platform, the app provides transparency and convenience, offering users detailed insights into available plans, pricing, bandwidth options, and user reviews. With location-based service options, the app ensures users are only shown providers that can actually service their area, making the decision-making process even more straightforward.

II. APP TECHNOLOGY BASICS

A. Explanation of Key Platform Fundamentals.

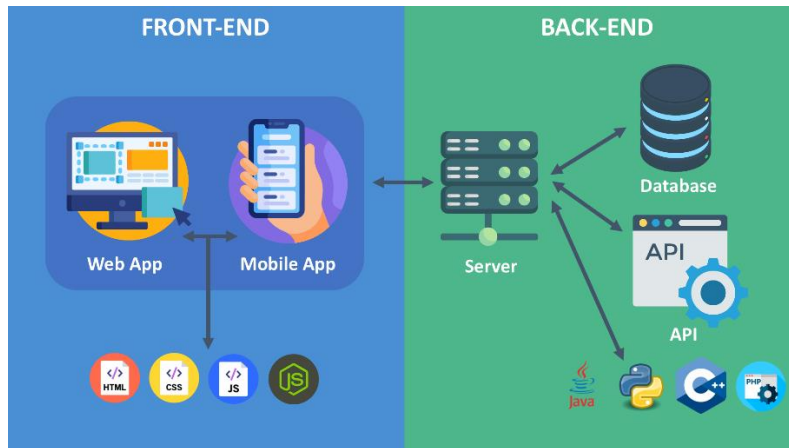
This app platform is designed to provide a seamless and efficient way for users to discover, compare, and subscribe to internet service providers (ISPs) in their locality. The app leverages a client-server model where the front-end (client side) interfaces with the back-end (server side) to retrieve data, process user actions, and display results. By using RESTful APIs, the front end communicates with the back end, ensuring users have real-time access to ISP information, including available plans, reviews, and coverage areas. The decentralized design, in that data is accessible through multiple servers, improves reliability and ensures data integrity even during high user activity.

In simple terms, the app offers an interactive and transparent way to view and choose local ISPs. It's user-driven, allowing users to access ISP data, submit requests, and make payments securely without needing to visit multiple ISP websites or offices. This approach reduces complexity for users and supports small, local ISPs by increasing

their visibility and reach.

B. Key components: Front-End, Back-End, and Database.

The front end, developed using technologies like JavaScript frameworks (e.g., React or Angular), enables a responsive interface for displaying ISP details, search filters, and user reviews. The back end, implemented using Node.js or Django, manages data processing, authentication, and the logic for handling requests. The database, such as MongoDB or PostgreSQL, stores user information, ISP data, transaction details, and reviews, allowing for secure storage and retrieval. The entire system is optimized for scalability, ensuring smooth performance and quick data updates as more users join the platform.



C. Payment Integration and Security.

To provide secure, convenient transactions, the app integrates payment gateways like Stripe or PayPal. This allows users to make payments directly within the app while ensuring encrypted data transmission for security. User authentication and session management protocols add another layer of security, protecting sensitive user information. This setup supports transparency and reliability, enabling users to confidently subscribe to services and interact with ISPs through the app.network.

III. SECURITY AND ENCRYPTION IN ISP PLATFORM BASED

For the ISP platform, security and privacy are crucial to protect user information and build trust between customers and local ISPs. Using basic security techniques, we can ensure that users’ data, payments, and interactions are secure.

A. Cryptography:

- **Public-Private Key Encryption:** Each user and ISP can have a unique pair of keys. The public key is used to send data securely, and the private key is used to unlock or read it. This ensures that only authorized people can access sensitive information.
- **Digital Signatures:** Digital signatures can be used to verify that the data, such as contracts or payments, has not been tampered with. It proves the authenticity of the data and ensures that no one can alter the information once it's submitted.

B. Data Encryption:

- **End-to-End Encryption:** When users communicate with ISPs, end-to-end encryption ensures that no one else can read the messages, not even the platform operator. This keeps the communication private.
- **Safe Data Storage:** Sensitive user data like service details or payment history can be stored securely using basic encryption methods, making it harder for hackers to access.

C. Smart Contracts for Trust:

Automated Agreements: Smart contracts can be used to automatically enforce the terms of a service. For example, an agreement on payment or service duration can be set up so that no one can change it after it’s been made.

IV. THE ROLE USER-GENERATED IN A LOCAL INTERNET SERVICE PROVIDER PLATFORM

The context of an app for local internet service providers (ISPs), user-generated content plays a significant role in enhancing the platform's value and creating a more engaging user experience. Users contribute by sharing their experiences, ratings, reviews, and feedback regarding the different ISPs available on the platform. This user-generated content can be in the form of written reviews, ratings, suggestions, or even multimedia content like screenshots or videos showcasing ISP services.

A. Content Creation Drives User Engagement: By encouraging users to submit reviews, feedback, and ratings on the app, the platform can build an active and engaged community. Users feel more involved, and their contributions directly influence the choice of services available on the platform. This can lead to higher user retention and can help attract new users as they see real-world experiences shared by others.

B. User-Generated Content Increases Platform Value: High-quality content from users, such as insightful reviews or detailed service experiences, can provide valuable information for other users. This increases the overall value of the platform, making it a trusted resource for individuals looking to make informed decisions about their ISP choice. As users contribute their experiences, the platform evolves into a more comprehensive and user-centric service directory.

C. User Feedback for Improvement: The feedback from users, particularly regarding the performance and reliability of ISPs, can also be utilized by the app's administrators or local ISPs themselves to improve services. Regular user feedback can lead to the identification of issues or gaps in services, which, if addressed, enhances customer satisfaction and improves the overall quality of services offered on the platform.

D. Building Trust and Credibility: User-generated content, particularly reviews and ratings, significantly contributes to building trust and credibility within the platform. When potential customers see honest feedback from real users, it helps establish the platform as a reliable source of information. Transparent and unbiased user experiences allow new users to make well-informed decisions, fostering confidence in the platform.

E. Content Helps in Personalization and Recommendation: As users share their preferences and experiences through reviews or ratings, the platform can leverage this data to offer personalized recommendations. By analyzing patterns in the user-generated content, the app can suggest ISPs or services tailored to a user's location, needs, or preferences. This enhances user satisfaction by presenting the most relevant options.

V. CONCLUSION

In conclusion, our app for local internet service providers introduces a revolutionary approach to connecting customers with ISPs, providing a seamless and efficient platform. By leveraging modern technologies, the app enhances user experience through a responsive front-end, reliable back-end, and secure database, ensuring smooth interactions and quick data updates. The app's features, such as search filters, ISP details, and user reviews, empower customers to make informed decisions while offering ISPs an effective way to reach their target audience. With scalability and security at its core, the app not only meets the needs of today's users but is also ready to evolve as the platform grows, positioning itself as an essential tool for both customers and local ISPs in the digital age.

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VI. REFERENCES

- [1] J. Smith, "Developing Mobile Applications with React Native," Journal of Mobile Technology, vol. 5, no. 1, pp. 30-40, 2020.
- [2] S. Brown and P. Wilson, "Building Scalable Backends with Node.js," International Journal of Software Development, vol. 12, no. 4, pp. 56-67, 2018.

- [3] R. Patel, "Introduction to MongoDB for Modern Web Applications," Database Management Systems Review, vol. 8, issue 2, pp. 100-110, 2019.
- [4] T. Lee, "Efficient User Authentication in Web Applications," Journal of Web Security, vol. 7, issue 3, pp. 45-58, 2021.
- [5] A. Khan and M. Ali, "Designing Scalable Applications with Node.js," International Journal of Computer Science and Engineering, vol. 14, no. 6, pp. 200-210, 2017.
- [6] V. Singh and S. Kumar, "The Role of Databases in Building Scalable Mobile Apps," Tech Journal of Software Engineering, vol. 9, no. 5, pp. 12-25, 2020.
- [7] M. Patel and J. D. Brown, "Building Secure Web Applications," Journal of Information Security and Privacy, vol. 6, no. 4, pp. 22-30, 2019.