Title: Extended Abstract for AllFound App

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Abstract: Household chores and appliance maintenance can be stressful and time-consuming, especially when finding reliable service providers is difficult. To address this problem, our team developed the AllFound app, which will connect service providers with customers aiming to provide accessible and affordable household services. The app is built with Flutter, offering a high-performance UI toolkit and cross-platform capabilities. It connects users with verified service providers and offers a rating system to ensure quality service. It is expected to provide job opportunities for skilled workers in local communities. The household services app has the potential to bring about change in the way people access and manage household services, providing convenience, reliability, and safety for users

Key words: Affordable; reliable; evolving; lifestyle development; convenient

Introduction

Finding reliable service providers within a preferred affordable range for maintenance of household utility problems is a common issue faced by most families and individuals. The inconvenience of scheduling appointments, taking time off work, and the fear of hiring unverified contractors can be a significant source of stress. To overcome these issues, our team has developed the AllFound app, a one-stop solution for all household utility problems. The app seeks to give customers a quick and easy way to locate trusted service providers in their neighborhood and offer a variety of services, including carpeting, electrical work, plumbing, cleaning, laundry, and more. Developed with Flutter, the app offers a high-performance UI toolkit, cross-platform capabilities, and a rating system to ensure quality service.

This report details the process of developing the Household Services app and outlines its objectives and expected results. The app is designed to provide convenience, affordability, and reliability to users. With a built-in rating system, users can provide feedback on service providers, encouraging them to maintain high-quality standards and has the potential to revolutionize the way people access and manage household services.

Content

1. Problem statement and research questions:

Currently, the system in use for contacting service providers and receiving service is mostly manual. This means that most people have to look up contact details of service providers in manual phonebook or records and dial them to request for a service. A list of all services and service providers is difficult to find without a centralized platform. Some of the key problems from both the customers side and service providers side are summarized below:

Customers side:

- Finding service providers manually is inefficient
- Service providers may monopolize the prices of service in a particular area and the customer don't have the power of baraainina
- Customers do not have a convenient way to assess the service provider, especially that such services require strangers coming into the customer's house.

Service providers side: People such as technician, electrician, plumber etc. who provide door to door utility services do not have a proper medium to reach their customers. Most of them rely on word of mouth and are mostly limited to a certain area. Introducing an app for them to connect with people who are in need of their services could be solution to this issue.

2. Solutions and the impact of innovation

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The solution is a mobile application where regular users and service providers can sign up. The regular users would be customers in need of household utility services. They can upload about their problems and look for service providers in the required domain. Once a request is made it will be visible to the service providers who are willing to provide their service and have signed up on the app on the specific domain. This will allow for the customers to be connected to multiple different service providers and they can choose to accept anyone based on their preferences of pricing and the rating and feedbacks of providers. With a built-in rating system, users can provide feedback on service providers, encouraging them to maintain high-quality standards.

The service provider will also have a much easier access to anyone who needs their service and they can negotiate the price for their service. To ensure the safety and security of users, the registration process will require the users to provide their official identity.

Impact of Innovation:

- Convenience is guaranteed and both sides can benefit from the other.
- All household services are under one place.
- It is a way to get amount of income if someone is experienced in providing such seservices.

3. Research Methodology

- a) Conduct focus group discussions: Focus group discussions will be conducted with potential users of the app to gather insights on the features that they would like to see in the app.
- b) Conduct market analysis: A market analysis will be conducted to identify the current gaps and opportunities in the market. The analysis will examine the existing apps in the market and identify their strengths and weaknesses.
- c) Analyze the data: The data collected from the survey, interviews, and focus group discussions will be analyzed using statistical software. The findings will be presented using tables, graphs, and charts.
- 4. Result / Expected Result
 - Improved customer convenience & satisfaction as uncertainty with finding reliable service provider decreases.
 - Higher customer retention as the app becomes a one-stop-shop for all household utility problems.
 - Increased trust and improved safety & security due to the app's verification features
 - Increased job opportunities for local technicians and workers
- 5. Finding and discussion of the project or innovation
 - a) Most needed household services:

The research results showed that the most needed household services were electrical repairs, plumbing, and carpentry. These services were also confirmed as essential during the interviews and focus group discussions.

b) Key features of the app:

The research and focus group discussions revealed that customers look for features such as a user-friendly interface, easy navigation, clear service descriptions, transparent pricing, ability to schedule appointments, and real-time communication with service providers.

c) Current gaps and opportunities in the market:

The market analysis revealed that the existing apps in the market lacked certain features such as easy scheduling of appointments and real-time communication with service providers. This presented an opportunity for the developed app to fill the gap.

d) User testing results:

The app was tested by a small group of users, and the results showed that it was user-friendly, efficient, and met customers' needs and expectations. However, some minor bugs were identified and addressed.

e) Marketing strategies:

Based on the research findings, effective marketing strategies were developed to promote the app. These strategies included social media advertising, targeted email campaigns, and partnerships with relevant service providers.

f) Evaluation of the app:

The app was evaluated periodically to ensure that it continues to meet customers' needs and expectations. Feedback from users was taken into account, and updates were made accordingly.

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References (Please use 6th edition APA referencing style))

- 1. Alessandria, S., Pecorari, P., & Giordano, S. (2019). Flutter Development with Dart: Building Mobile Apps. Packt Publishing.
- 2. Academind. (2021, February 12). Flutter Crash Course for Beginners 2021 Build a Flutter App with Google's Flutter & Dart. [Video]. YouTube. https://www.youtube.com/watch?v=x0uinJvhNxl
- 3. Flutter. (n.d.). Retrieved March 1, 2023, from https://flutter.dev/docs
- 4. Flutter. (n.d.). Widgets Catalog. Retrieved March 1, 2023, from https://flutter.dev/docs/development/ui/widgets
- 5. Flutter. (n.d.). Samples. Retrieved March 1, 2023, from https://flutter.dev/docs/cookbook
- 6. Waple, M. (2019). Flutter in Action. Manning Publications Co.
- 7. Flutter. (n.d.). Layouts in Flutter. Retrieved March 1, 2023, from https://flutter.dev/docs/development/ui/layout
- 8. Flutter. (n.d.). FlutterFire. Retrieved March 1, 2023, from https://firebase.flutter.dev/
- 9. Flutter. (n.d.). Flutter packages. Retrieved March 1, 2023, from https://pub.dev/
- 10. Flutter Docs. (n.d.). Building layouts Flutter. Retrieved March 1, 2023, from https://flutter.dev/docs/development/ui/layout
- 11. Google Developers. (2021, August 31). Flutter for web. Retrieved March 1, 2023, from https://developers.google.com/web/flutter
- 12. Hussen, A., & Andargie, B. (2021). An integrated mobile app for livestock breeding management using Flutter. BMC Research Notes, 14(1), 1-6. https://doi.org/10.1186/s13104-021-05790-w
- 13. Flutter.dev. (n.d.). Animations Flutter. Retrieved March 1, 2023, from https://flutter.dev/docs/development/ui/animations
- YouTube. (2022, February 17). Flutter Summit 2022. Retrieved March 1, 2023, from https://www.youtube.com/watch?v=GfE9X6BvU_c
- 15. Freitas, R., & Ximenes, J. (2021). Development of a cross-platform application for mobile devices using Flutter. Advances in Science, Technology and Engineering Systems Journal, 6(1), 369-375. https://doi.org/10.25046/aj060145
- Google Developers. (2022, February 16). State management in Flutter with Provider. Retrieved March 1, 2023, from https://developers.google.com/codelabs/provider-intro
- 17. Dart.dev. (n.d.). Dart programming language. Retrieved March 1, 2023, from https://dart.dev/guides
- 18. Flutter Community. (n.d.). Flutter community. Retrieved March 1, 2023, from https://fluttercommunity.dev/
- 19. Flutter.dev. (n.d.). Flutter for desktop. Retrieved March 1, 2023, from https://flutter.dev/desktop