Empowering Rural Artisans: Developing and Implementing VCOM Mobile Application for Livelihood Improvement <----- Research Paper Title ----->

Abstract

This research aims to explore the challenges faced by rural artisans in marketing and selling their products, focusing on the limitations of local retail shops, lack of economic opportunities, and the growing consumer market in rural communities. It also seeks to propose solutions to facilitate the marketing and selling of craft products in rural areas, with a specific focus on the transformative role of mobile applications in empowering rural artisans. Additionally, the research emphasizes the potential of Self-Help Groups (SHGs) in addressing the challenges faced by individuals in rural settings, aligning with the proposed solution involving representatives from SHGs visiting villages to impart skills and the development of the VCOM mobile application. The software system design and architecture are essential for creating a user-friendly interface and ensuring the success, scalability, maintainability, and user experience of the application. Technologies such as Flutter, Dart, Node.js, and MySQL have been selected for their ability to develop visually appealing cross-platform applications efficiently and handle various operations, providing scalability and data integrity. The mobile application VCOM has been developed to address the challenge faced by individuals in rural areas who possess crafting skills but lack platforms to effectively sell their goods, especially those unfamiliar with complex mobile applications.

Introduction

This research focuses on the challenges faced by rural artisans in effectively marketing and selling their craft products. It emphasizes the potential of mobile applications to provide a platform for rural artisans to sell their goods and crafts, highlighting the importance of developing user-friendly interfaces tailored to accommodate individuals with varying levels of technological literacy. The role of Self-Help Groups (SHGs) in rural areas is also explored, emphasizing their potential to address the challenges faced by individuals in rural settings. The software system design and architecture for the village craftsmanship mobile application are discussed, with a focus on creating a user-friendly and intuitive experience. The software technologies used in the VCOM mobile application, including Flutter, Dart, Node.js, and MySQL, are also highlighted for their ability to develop visually appealing cross-platform applications efficiently.

Related works

This research explores the challenges faced by individuals in rural areas with valuable crafting skills in effectively marketing and selling their products. Specifically, the study focuses on the hurdles encountered by rural entrepreneurs who lack skills or familiarity with modern e-commerce applications. It aims to shed light on the unique challenges of the rural market, including limitations of local retail shops, lack of economic opportunities, and the growing consumer market in rural communities. Additionally, the research seeks to propose solutions to facilitate the marketing and selling of craft products in rural areas. The transformative role of mobile applications in empowering rural artisans is a key focus of this research. Previous studies have shown that mobile applications can significantly impact smallholder farmers and micro-entrepreneurs in rural areas by providing access to information, market linkages, financial inclusion, and improved resource management.

These applications have also addressed barriers such as ICT literacy and cultural challenges among local artisans, providing real-time access to relevant information. The role of Self-Help Groups (SHGs) in rural areas is critical for community development and economic empowerment. SHGs have been instrumental in providing self-employment, training, and social mobilization, ultimately leading to an improvement in the standard of living in rural areas. Research has shown that SHGs play a significant role in poverty alleviation, quality of life improvement, and economic well-being of people in isolated areas. This underscores the potential of SHGs to address the challenges faced by individuals in rural settings, aligning with the proposed solution involving representatives from SHGs visiting villages to impart skills and the development of the VCOM mobile application.

Software system design

The software system design for rural livelihood improvement through the VCOM platform is a critical aspect of empowering rural artisans and entrepreneurs to effectively sell their goods and crafts. This design should focus on creating a user-friendly, scalable, and efficient mobile application architecture that accommodates individuals with varying levels of technological literacy and familiarity with mobile applications. Key considerations for designing the software system include prioritizing a user-centric interface design, scalability and efficiency, utilization of suitable technology stack, user-centered development, maintenance and updates, and support for ICT literacy and cultural challenges. In conclusion, the software system design for the VCOM platform should prioritize user-centric design, scalability, and efficiency to empower rural artisans in effectively marketing and selling their products.

System architecture

The research explores the challenges faced by rural entrepreneurs lacking skills in modern e-commerce applications and proposes solutions to market and sell craft products effectively. It emphasizes the potential of mobile applications to provide a platform for rural artisans to sell their goods and crafts. The role of Self-Help Groups in rural areas is essential for community development and economic empowerment. The architecture of the mobile application should be user-friendly and efficient. The architecture needs to be scalable, modern, and maintainable, and should leverage technologies like Flutter, Dart, Node.js, and MySQL. These technologies enable the development of a user-friendly interface tailored for ease of use by individuals with varying levels of education. The VCOM mobile application has been developed to address challenges faced by individuals in rural areas and to provide a platform for them to sell their products online without intermediary charges, fostering community engagement.

Software implementation

The software implementation for rural livelihood improvement through VCOM involves developing a user-friendly UI and screen flow design to support users, particularly those new to mobile applications. It aims to enhance user interaction with visual elements and a linear application workflow. The software architecture emphasizes seamless interaction

between the client-side and server-side systems, with a focus on scalability and efficiency. Key technologies include Flutter, Dart, Node.js, and MySQL, chosen for their ability to develop visually appealing cross-platform applications and ensure data integrity. The implementation process also includes development processes, deployment strategies, and maintenance considerations to sustain the functionality and usability of the VCOM mobile application. The overall goal is to create an effective and user-friendly mobile application that addresses the challenges faced by rural artisans in marketing and selling their products.

Software technologies

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Conclusion

This research paper focuses on the challenges faced by rural artisans in effectively marketing and selling their products, particularly due to limited access to modern e-commerce applications. It emphasizes the potential of mobile applications, such as VCOM, to empower rural artisans and provide economic opportunities. The research also discusses the transformative role of Self-Help Groups (SHGs) in addressing the challenges faced by individuals in rural areas and highlights the potential of the VCOM platform to improve livelihoods and foster community engagement. Additionally, the paper outlines the software system design and technologies used in the development of VCOM, emphasizing the user-friendly interface tailored for individuals with varying levels of education and technological literacy. Overall, the research paper underscores the potential impact of VCOM in improving rural livelihoods and economic empowerment.