

Abstract

This research paper focuses on the development of a mobile application called "VCOM" to empower rural artisans by providing a platform to sell their products online without intermediary charges. The application also aims to provide insights into the product's origin and the story of the village where it was crafted, fostering a sense of connection and community engagement. The study explores the impact of mobile applications on empowering rural artisans, especially those who lack platforms to effectively sell their goods. It also aims to provide valuable insights into the potential benefits of such technology in rural development. The software system design and architecture of VCOM are also discussed, highlighting the use of Flutter, Dart, Node.js, and MySQL for the development of the user-friendly interface.

Introduction

The challenges rural artisans face in selling their handcrafted products are intertwined with global market trends and the adoption of e-commerce platforms. Adapting to the digital marketplace and competing with goods from around the world presents a significant hurdle. Understanding these challenges is essential in crafting effective solutions that support their livelihoods and preserve traditional arts and crafts. This research aims to delve deeper into these challenges and explore potential solutions to empower rural artisans and enable them to thrive in a rapidly evolving marketplace.

Related works

The objective of this study is to create a mobile application platform named "VCOM" to enable individuals in rural areas to sell their crafted goods online without intermediary charges. The platform aims to provide insights into the product's origin and the story of the village where it was crafted, fostering a sense of connection and community engagement. To support the registration of users, the software system has been designed with a suitable UI and screen flow for a text-free interface, using universally recognizable symbols to enhance user interaction. The high-level architecture of the mobile application is inspired by existing work and utilizes Flutter, Dart, Node.js, and MySQL to provide a user-friendly interface tailored for ease of use by individuals with varying levels of education. This research builds upon existing knowledge and insights from various sources related to e-commerce platforms for rural grocery stores, rural e-marketing, online sales for rural farms, serving rural markets efficiently, and e-commerce in rural markets, to better understand the challenges and opportunities of selling products in rural areas through online platforms and e-commerce strategies.

Software system design

The software system design for a mobile application is crucial for ensuring a positive user experience. It is important to prioritize simplicity, showcasing only the most essential elements and functionalities to avoid a cluttered interface. Additionally, technical quality guides must be followed to ensure stability and high performance. UX wireframing is a valuable technique for defining the flow of the app, including the number of windows,

buttons, the registration process, and the login screen, ensuring an effective software system design. Overall, the focus should be on simplicity, technical quality, and efficient UX wireframing to ensure a positive and engaging user experience.

System architecture

The problem of effectively selling crafted products in rural areas, particularly for those unfamiliar with complex mobile applications, has prompted the development of the VCOM mobile application. This platform aims to enable individuals to sell their products online without intermediary charges while providing insights into the product's origin and village story. The software system is designed to ensure a user-friendly interface, especially for new users, using universally recognizable symbols. The high-level architecture encompasses both client-side and server-side components, with a focus on visual appeal and cross-platform efficiency. Additionally, considerations for performance tuning such as reducing app size, optimizing data transfer, and designing for offline access are taken into account.

Software implementation

The software implementation for the mobile application VCOM is designed to address the various requirements and functionalities of the platform. The implementation lifecycle involves best practices such as user-centered design, efficient development processes, and the security of user data. The mobile application should encompass technology and services to provide secure access and control of company information on employees' mobile devices, as well as extend and enhance enterprise-wide ability to manage IT spend on-the-go.

The implementation focuses on creating a complete management platform for the mobile lifecycle, with tailored solutions to maximize efficiency and balance budget constraints. This includes managing wireless services and IT spend from a single pane of glass, controlling every aspect of IT inventory and spend from one place, and providing access to manage contracts, assets, reports, invoices, and support through a user-friendly browser or convenient mobile app.

The software architecture is inspired by existing work, integrating client-side and server-side systems for managing individual views, handling data, and interacting with the database to ensure data integrity and cost-effective visualizations. A suitable UI and screen flow is designed to support user registration and accommodate various roles of users, especially those who are new to using mobile applications. Additionally, the software technologies chosen, such as Flutter, Dart, Node.js, and MySQL, are utilized to develop visually appealing cross-platform applications efficiently and ensure scalability and efficiency in handling various operations.

Software technologies

Based on the research, suitable software technologies for developing a mobile application for rural marketing and e-commerce platforms include smart agriculture applications (SAAs) that operate on mobile devices. These applications are based on the

client/server model and can be used for data collection, processing, and dissemination in the context of rural marketing. Mobile application platforms designed for agriculture can enable users to access specific information, make payments, send messages, and conduct transactions, providing pre-packaged ICT solutions that deliver content and services while managing the content and hosting services. Incorporating communication technologies such as mobile phones and computers into the mobile application can address the challenges of digital divides within and between countries. Overall, the recommended software technologies for the rural marketing mobile application include smart agriculture applications, mobile application platforms, and communication technologies, to support the development of a user-friendly interface tailored for ease of use by individuals with varying levels of education.

Conclusion

The conclusion of a research paper serves several important purposes, including summarizing the main points of the research, restating the research statement, highlighting the most important findings, addressing the research questions or objectives, explaining the broader context of the study, discussing the significance of the findings, providing recommendations if applicable, and emphasizing the takeaway message. To write a strong conclusion for the research paper on VCOM mobile application, you should summarize the main points of the research paper, restate the research statement and highlight the most important findings. It's important to avoid presenting new arguments or evidence in the conclusion and to ensure that the conclusion is a reflection of the strength of the research and your ability to communicate its significance effectively.