Booking and Reservation System: A Unified Application Using Location-Based Services for Sustainable Tourism Networks

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Abstract: *The LakByahe Application offers a ground-breaking solution to revolutionize tourism in Nasipit, Agusan del Norte, Philippines. It is a unified application aiming to address existing challenges by incorporating user-centric features. Through an advanced location-based services and streamlined booking processes, the application intends to enhance efficiency, accessibility, and sustainability in the tourism sector. By providing real-time tracking, efficient transit solutions, and a comprehensive directory of establishments, the LakByaheapp fills information gaps and fosters economic growth by connecting tourists with local businesses. The study adopts a mixed-method research approach, combining quantitative techniques with qualitative methods to comprehensively investigate and enhance the booking and reservation system. The software development life cycle for the application involves critical stages such as requirement analysis, design, implementation, testing, deployment, and maintenance. Suggestions and recommendations based on survey responses include incorporating augmented reality experiences, offering curated tour packages, creating community forums, and ensuring offline access to maps. The ongoing collaboration with local businesses and tourists, regular updates, user training sessions, and a well-crafted marketing strategy are recommended to amplify the app's impact. Overall, the LakByahe App presents a comprehensive solution to improve the province's tourism industry, fostering economic growth and sustainable development in the region.*

Keywords: Sustainable Tourism Network, Unified Application, Location-Based Services, Tourist Booking and reservation