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Design and Implementation of a Scalable and Secure Tour Booking System Using Cloud-Backed Relational Databases

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Abstract: *This paper presents the design and development of a scalable and secure tour booking system powered by cloud-backed relational databases. The proposed system aims to revolutionize how travel services are booked and managed by integrating modern cloud computing technologies with reliable, structured data handling capabilities. Designed to support real-time availability checks, secure user authentication, and seamless booking experiences, the platform addresses critical limitations of traditional systems — including inefficiency, limited scalability, and poor data security.By leveraging cloud infrastructure, the system achieves high availability, elastic scalability, and fault tolerance, enabling it to efficiently handle fluctuating user demands without performance degradation. At the core of the data layer, relational databases provide robust support for structured data modeling, integrity constraints, transactional reliability, and query optimization, all of which are essential for managing complex relationships among users, tours, bookings, payments, and administrative operations*

Keywords: Cloud Computing, Relational Databases, Tour Booking System, Scalability, Data Security, Real-Time Availability, User Authentication, Transaction Management, Web Application Architecture, Travel Technology

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