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Simplifying Modern UI Architecture for Transaction Processing Systems

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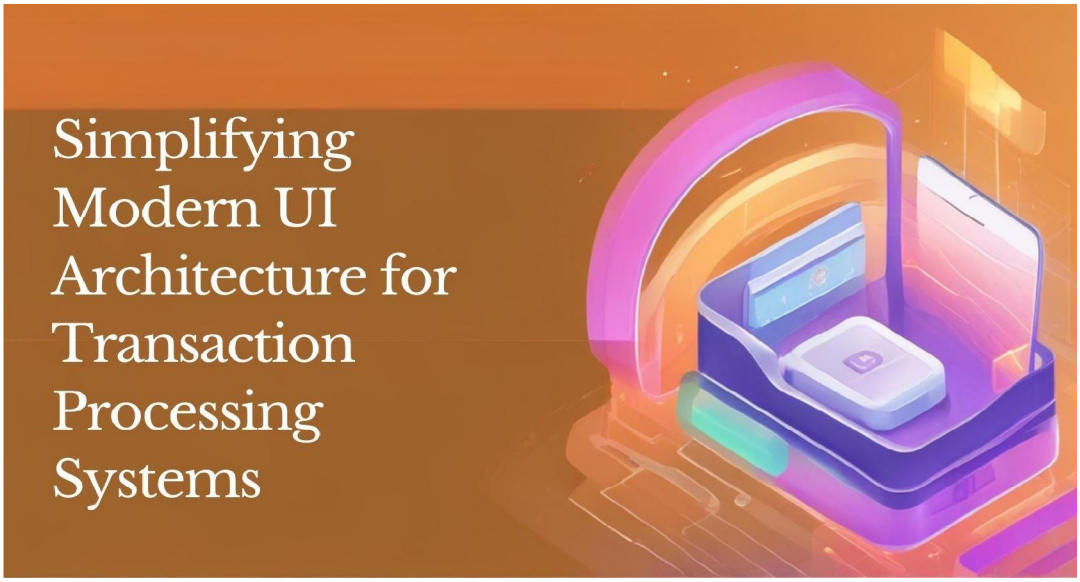

Abstract: *Transaction processing systems serve as the backbone of essential industries like retail, banking, healthcare, and logistics, where user interfaces critically determine operational efficiency. However, as these systems evolve, organizations face growing challenges with architectural designs that resist adaptation to modern requirements. This article explores how traditional UI architectures, characterized by tightly coupled components, high maintenance overhead, and limited reusability, impede business agility and increase operational costs. It presents a component-based architectural approach built on separation of concerns, cross-platform compatibility, and standardized device interfaces as the foundation for more resilient transaction systems. The transition to modern architectures delivers significant business advantages through increased adaptability to market changes, enhanced maintainability, and improved scalability. Implementation strategies, including iterative modernization, design systems, API-first development, and automated testing, provide organizations with practical pathways to architectural transformation without disrupting critical business operations..*

Keywords: Adaptability, Architecture, Component-Based, Modernization, Transaction-Processing

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