

Land Registration using Blockchain Technology.

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Abstract: Land registration authorities face frequently criticism for the alleged mismanagement or manipulation the land records across various nations. Pakistan, out particular, grapples with the heightened susceptibility the falsification and corruption its property records due to economic challenges. This vulnerability results of conflicting claims of authority over specific parcels of land. consolidation of the data further exacerbates this susceptibility to the security threats. A land administration system (LAS) is the structured framework designed to the govern of management of land resources in a specific region or country. However, LAS faces challenges like the inefficiencies, of a lack of transparency, and the susceptibility to fraud. Digitization of land records improved efficiency but failed to address manipulation, centralized databases, and the double-spending issues. Traditional lease and mortgage management systems also suffer from complexity, errors, and a lack of real-time validation. At present, a significant influx of land transactions produces substantial data, classifiable as big data due to the constant minute-to-the-minute occurrences like the land transfers, acquisitions, document verification, and leasing/mortgaging transactions. In that context, we present the Blockchain-driven system that not only tackles alteration and double-spending issues in atraditional systems but also a implements distributed data and management. Current state-of-the-art solutions do not fully incorporate crucial features of the Blockchain, such as transparency, prevention of double-spending, auditability, immutability, and user and their participation. To the tackle this problem, this the research introduces a comprehensive Blockchain-powered framework for the lease and the mortgage management, addressing transparency, user and their involvement, and the double-spending the prevention. Unlike existing solutions, ourused framework integrates the key Blockchain characteristics for the holistic approach. Through their practical use cases and involving property owners, banks, and financial institutions, they establish a secure, distributed, transparent method for the property financing

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