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Unchaining the Future of Software License Management in the Digital Age through Blockchain

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Abstract

In the current digital age, software license management plays an essential role in assuring compliance, security, privacy, and optimal use of software resources. With the dawn of blockchain technology, there is a growing interest in exploiting its potential to transform software license management. This research study focuses on how blockchain technology, digital signing, and smart contracts can be used to redesign software license management. The Research investigates the unique contributions of blockchain technology in improving security, trust, and automation in software license administration, as well as software license challenges. It delves into the concept of digital signing, which offers a cryptographic technique for verifying the validity and integrity of license agreements, assuring non-repudiation, and prohibiting unauthorized modifications. Furthermore, this research looks into the potential of smart contracts in automating license verification, activation, and expiration processes based on established conditions, expediting administrative duties, and reducing human intervention. This research sheds light on their combined impact on software license management. It emphasizes the advantages of using blockchain for immutable record keeping, transparent audit trails, and improved license compliance. The study also covers the various obstacles and considerations in deploying these technologies, such as scalability and privacy. This research paper investigates the digital age's reformation of software license management, highlighting the transformational possibilities of blockchain, digital signing, and smart contracts.

Keywords: *Software license management, Blockchain, Digital signing, Smart contracts, Privacy*