Design and Implementation of the Digital Education Transaction Subject Two-factor Identity Authentication System Based on Blockchain

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Abstract—In recent years, online education service platform has swept the world due to its high quality, openness and variety of education resource, and user registered in online platform has increased dramatically. However, the traditional centralized information storage method based on the third-party may cause problems such as the loss and disclosure of the transaction subject identity data, seriously threatening the legitimate rights and interests of users. Therefore, based on education service theory, this paper applies blockchain technology to identity authentication to design and implement a blockchain-based digital education transaction subject identity authentication system. The system proposed in this study can store identity information in ciphertext form and is jointly verified and maintained by the entire network node, thus it can guarantee the security and reliability of identity data in the digital identity authentication.

Keyword—blockchain technology, chaincode, education transaction subject, identity authentication, two-factor

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