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Applying some arithmetical counting functions for enhancing the security of healthcare network system

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Abstract

This work presents a two-pronged approach to strengthening the security of healthcare network systems. Firstly, we investigate the application of arithmetical counting functions (ACFs) as a novel security measure. ACFs hold promise for bolstering various security mechanisms, including access control, intrusion detection, data integrity, and secure communication. We explore how ACFs can be integrated into these areas to create a more robust security posture for healthcare networks.

Secondly, we design a hospital management system utilizing the Tkinter library to provide a user-friendly graphical user interface (GUI). This system can be employed by healthcare providers to manage patient data, appointments, and other administrative tasks. While the focus of this abstract is on the ACF-based security enhancements, the hospital management system design serves as a potential use case for integrating the proposed security measures into a practical healthcare application.

By combining the theoretical advancements of ACFs for healthcare network security with the practical implementation of a Tkinter-based hospital management system GUI, this work contributes to the ongoing effort to safeguard sensitive patient data and ensure the smooth operation of healthcare networks.