Ministry of Higher Education and Scientific Research
University of Babylon
College of Information Technology
Department of Information Security
Study: (Morning)

Secure File: Integrating Compression and Steganography for Robust File Security

A Graduate Project Submitted to the department of Information Security of the College of Information Technology, University of Babylon, in Partial Fulfillment of the Requirements for the Bachelor's degree in the Information Security of Information Technology

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2023-2024

Abstract

The graduation project aims to develop a system called “Secure File” to achieve strong file security. This system is based on compression and steganography techniques using the LZ4 algorithm and discrete cosine transform (DCT) respectively.

The system includes a login page to ensure safe access to the system. After logging in, users can upload files, encrypt them using the LZ4 compression algorithm, and hide the information using the discrete cosine transform (DCT), making it difficult for hackers to extract or modify information.

Thanks to these technologies, users can store files securely without fear of hacking or leaking. The system also provides an easy-to-use interface for securely uploading and managing files, making it ideal for use in environments that require a high level of security, such as companies, organizations, and government institutions.

In short, the Secure File project represents an important step towards developing innovative security solutions to protect sensitive information and ensure its integrity in today's digital environments.