 **PANIMALAR ENGINEERING COLLEGE**

**Chennai – 600 123**

**Department of Computer Science & Engineering**

**CS 8811 - Project Work (2021 -2022)**

**ZEROTH REVIEW FORM**

**TILE OF THE PROJECT**

**Image Based Encrypted System**

**ABSTRACT**

In today’s era of digitalisation and internet, user authentication, the use of passwords and use of secret messages has been a centrepiece for decades. There is substantial research in the field of password security. Unfortunately, the methods of storing the passwords and its mechanism have failed to fetch enough attention from the researchers. In the past few years, a lot of researchers recommended the use of a combination of security methods like steganography and cryptography to elevate the security of the system. However, it still does not assure the security of the password. In this paper, we propose a system that implements multi-level encryption with decentralized and distributed storage of enterprises’ sensitive information and offers multi-layered security to the system. In this design, we introduce a password security equation, *Data Protection = Encrypt + Hide + Split*. According to our equation, we encrypt the password using AES-128, split it into pieces and hide it behind the images using steganography adding another layer of encryption and store it in a decentralized manner. When the user logs in to the system all the pieces of the password are retrieved from all the steganographic images, merged and decrypted to form a legitimate password in one piece.

**TECHNOLOGY**

Python, Tkinter

**LIST OF REFERENCES**

[1] V. Venukumar and V. Pathari, “Multi-factor authentication using threshold cryptography,” in 2016 International Conference on Advances in Computing, Communications, and Informatics (ICACCI), Jaipur, India, Sept 21-24, 2016.

[2] E. S. I. Harba, “Advanced password authentication protection by hybrid cryptography & audio steganography,” Iraqi Journal of Science, vol. 59, no. 1C, pp. 600-606, 2018.

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