

PLAGIARISM SCAN REPORT

Words	673	Date	August 12,2020
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CHAPTER 2 2. THE OVERALL DESCRIPTION The overall description of project can be depicted as a secure system designed to guard the classified information, primarily without getting noticed and enabling shields that could protect the data from unauthorized access. The embedding of data into a file and extracting data from a file is the major task prosecuting the security levels and shields in order to protect classified information. 2.1 Product perspective: - The product provides mainly three modules hide module, retrieve module and key Creation module with the facility easily covering of the classified data into a simple image. The problem that the project resolves is of hiding sensitive data that should not be perceived by others. The transferring of data over network that is private and sensitive needs to be protected. The data may contain sensitive information that should not be altered and read by others. Sharing secret information without being noticed is an issue in the current scenario. For this issue, the project is designed to hide the textual classified data into an image without intervening its visual aid and providing unbreakable security. Python Python is a growing language of our digital lifestyle. Python is a general-purpose programming language that is class-based, object-oriented, and designed to have as few implementation dependencies as possible. It follows the modularity approach write once, run anywhere. It provides extremely fast processing and dynamically typed language. It is used in growing filed like Machine Learning & AI, Web Development, Data Science & Data Analysis. 2.1.1 User interface: - Front-end: Command Prompt or Terminal Back-end: Python, Python Libraries. 2.1 .2 Hardware interface: - Processor: Intel Dual Core RAM: 2GB OR Above. HDD: 80 GB 2.1.3 Software interface: - Operating System: Windows. Language: Python 3.7 Tool: Pycharm 2.1.4 Memory constraints: - Hard-disk Space: 60 GB Minimum. RAM: 2 GB minimum. Processor: Intel, AMD (Min DUAL CORE). 2.2 Product Functions: - The steganographic system performs some major functions to accomplish the required tasks. These functions constitute a basis for the whole system. These functions can be stated as: 2.2.1 Key Creation Key Creation method generates a key with is of 256 bits. A user gives a password which is a string of varying length, which gets passed under the SHA-256 an cryptographic hash function and it generates a inversible hashed 256 bits key which can never be decrypted or its the original form cannot be perceived by any manner. 2.2.2 Hide Hide method embeds the classified information into an image via LSB (Least Significant Bit) which is a steganographic technique. The user inputs the simple textual data, it gets automatically converted into a cipher text using a most secure encryption AES-256 and an cover image is selected by the user in order to hide the data in it while ensuring its visual aids. 2.2.3 Retrieve Retrieve method is used to extract the classified information from a file (Stego-image) which is not being visual from human eyes and stored in a encrypted format. This method extract the data from in an encrypted format then by entering a right key it gets decrypted into an readable format. And at last shown to the user. 2.3 User Characteristics: - All the end users can use the product, all they need to do is setup the python environment and install the dependencies related to it and simply run the script. They can perform both the tasks of generating a stego image as well as retrieving classified information from the stego image provided they enter correct security key. 2.4 Constraints: - 2.4.1 Regularity policies: - The should always provide an correct password else the user can never access the classified information. And the size of the stego image should always be greater than size of the textual information. 2.4.2 Hardware limitations: - There is no limitation in the operating system in which application will work. However, it will be requiring the python libraries or dependencies and python environment together. Users can access the application without any internet connection as it is a system application.