**STEALTHY MESSAGING**

**Project Report**

Industrial Training

BTECH [CSE]

BACHELOR OF TECHNOLOGY (CSE)

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| PROJECT GUIDE:  **Mr. Aditya jain (Internal)** | SUBMITTED BY:  **Neha Verma (TCA1909064)** |

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**FACULTY OF ENGINEERING**

**TEERTHANKER MAHAVEER UNIVERSITY, MORADABAD**

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***Student Name – Neha Verma***

***Enrollment Number – TCA1909064***

**DECLARATION**

We hereby declare that this Project Report titled **STEALTHY MESSAGING**

submitted by me and approved by our project guide, the College of Computing Sciences and Information Technology (CCSIT), Teerthanker Mahaveer University, Moradabad, is a bonafide work undertaken by me and it is not submitted to any other University or Institution for the award of any degree diploma / certificate or published any time before.

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| --- | --- | --- |
| **Student Name:** | NEHA VERMA | Signature |
| **Project Guide: (Internal)** | MR. ADITYA JAIN | Signature |
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# Project Title

**STEALTHY MESSAGING**

# Problem Statement

Today we observe data from all different sources, and ultimately the challenge becomes its security and privacy. In this digital era, the need for security is increasing rapidly. Complying with this requirement, the encryption & decryption algorithms were devised. Where encryption means a process of converting information into some form of a code to hide its true content and decryption means a process of converting encrypted data into original information. The process of encryption/decryption is called cryptography.

# Project Description

**STEALTHY MESSAGING** is a project that we have developed in python. In this, sender and receiver can do the hidden communication among themselves means with the help of this project, if sender wants to send a message to a receiver and does not want that message to be seen by any third person, then he can secure his message by using this project.

In this project we use a key by which the message is decrypted and encrypted. If the sender wants to send a message to receiver then he uses that key to convert his simple message into ciphertext which cannot be seen by any third person and at the receiver site if the receiver wants to see that message so he can read that message by decrypting that message with the same key. For making the GUI of the project we are using Tk-inter which is the standard library for Python with the help of which we create GUI of our project.

## Scope of the Work

STEALTHY MESSAGING helps to protect private information, sensitive data, and can enhance the security of communication between sender and receiver. In essence, when your data is encrypted, even if an unauthorized person or entity gains access to it but they will not be able to read it. In this project we use a key by which the message is decrypted and encrypted. If the sender wants to send a message to receiver then he uses that key to convert his simple message into ciphertext which cannot be seen by any third person and at the receiver site if the receiver wants to see that message so he can read that message by decrypting that message with the same key. For making the GUI of the project we are using Tk-inter which is the standard library for Python with the help of which we create GUI of our project so with the help of this project we can send such a message to a receiver which cannot be read by any third person.

## Project Modules

The fernet module of the cryptography package has inbuilt functions for the generation of the key, encryption of plain text into cipher text , and decryption of cipher text into plain text using the encrypt() and decrypt() methods respectively.

## User Case Diagram

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# Implementation Methodology

In this project we use a key by which the message is decrypted and encrypted. If the sender wants to send a message to receiver then he uses that key to convert his simple message into ciphertext which cannot be seen by any third person and at the receiver site if the receiver wants to see that message so he can read that message by decrypting that message with the same key. For making the GUI of the project we are using Tk-inter which is the standard library for Python with the help of which we create GUI of our project so with the help of this project we can send such a message to a receiver which cannot be read by any third person.

**DATA FLOW DIAGRAM:**

sender

message

ciphertext

message

receiver

*DATA FLOW DIAGRAM*

## Software Platform

* Language- Python
* Ide- vs code

## Hardware Platform

* 8 RAM
* 1 TB Hard Disk
* Windows 11.



# Advantages of this Project

This is the project of msg encryption and decryption of message. Data encryption is the method of translating data into another form or code so that access to the data is limited to only those with the correct decryption key (or password). Encrypted data, sometimes referred to as ciphertext, is one of the most popular and widespread forms of data security. If you experience a data breach involving ciphertext, then the attackers will still not be able to see the data.

* Encryption Can Help to Protect Remote Workers
* Encryption Increases the Integrity of Our Data
* Encryption is Cheap to Implement
* It Helps You Stay Safer When Working Remotely
* Data Encryption Is a Privacy Safeguard
* Using Encryption Technology for Data Protection Could Increase Trust

# Assumptions, if any

NO

# Future Scope and further enhancement of the Project

This project is used to convert the readable msg into unreadable format and from unreadable format into readable format because the secure communication is very important nowadays so if a person want to send a secret message to the receiver then he or she can use this project so that they can communicate in a secret language the advantage from using this project is that the third person who is seeing the msg will not understand anything because we are using the key concept here .In future for the better experience we can add two different keys that is used in cryptography which are public key and private key public key is used on sender side to encrypt the message and private key is used on receiver side to decrypt the message.

# Conclusion

Cryptography is the study of secure communications techniques that allow only the sender and intended recipient of a message to view its contents. The term is derived from the Greek word crypto, which means hidden. In today’s age of computers cryptography is often associated with the process where an ordinary plain text is converted to cipher text which is the text made such that intended receiver of the text can only decode it and hence this process is known as encryption. The process of conversion of cipher text to plain text this is known as decryption.so in this project we are converting the normal message into the hidden msg that is called ciphertext which can not be readable to anyone that only can be decrypted by the receiver when he/ she will use key.

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**THANK YOU**