Color Code Substitution Based Advanced Mailing Technique

PROBLEM STATEMENT

- To solve the current lack of highly encrypted mail service using triple encryption using steganography and multi language support for highly important or secretive communication.
- Man-in-the-Middle attack has became a biggest threat to mailing systems , here the attacker can steal the data and can also alter it when its been carried through communication medium.
- In AMT we are going to use color-code substitution which will be hard for the attacker to identify the data from the Color blocks.
- Thus the above problem will be solved using AMT with the help of triple encryption and Steganography.

SCOPE

- The main motto of this project is to create a system which will be platform independent , will be efficient in mailing image and videos in encrypted format ie the confidentiality is been maintained.

INTRODUCTION

- Steganography, the art of "hiding" some kind of secret inside the pictures, is very ancient.
- This work amplifies the scope of applications for steganography allowing the hiding of any data file inside the color images typically used in the networks.
- Nowadays there are many hackers present who can easily crack any system using advance hacking techniques.
- Hackers can cost a lot of damage for the communication systems because the hacker can be able steal data which in under process of communication.
- In case of man in the middle attacks the hacker can spectate the overall activities carried out through the communication channel.

LITERATURE REVIEW

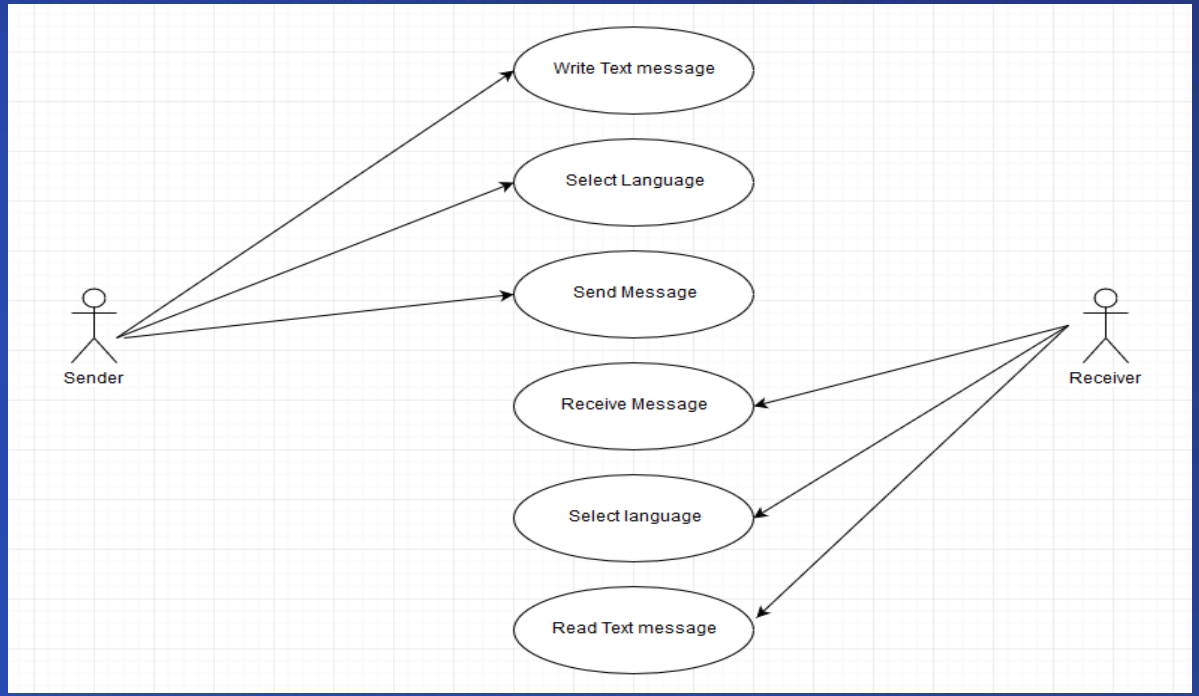
PARAMETERS	IEEE Paper1	IEEE paper2	IEEE Paper3
	(An Improved Approach for LSB-Based Image Steganography using AES Algorithm)	(Advance Encryption Technique using Color Code Based Substitution)	(AES Cryptography in Color Image Steganography By Genetic Algorithms)
PUBLISHED	October 29-31, 2017	JUNE 2017	October 2015
INTRODUCTION	•In the modern literature, the aim of steganography is to hide a secret data in a medium file so that an intruder cant easily attack the data	Color code substitution will be used in the project for encryption and decryption of the data using the algorithm play color cipher.	This work incorporates the AES cryptography algorithm, to improve the hidden data security in two methodologies for steganography:the genetic algorithm and path relinking.

ADVANTAGE	• The picture quality of cover-image is hardly affected hiding capacity is good, and it is very simple in implementation.	. To increase the security of the data and making it more robust, asymmetric encryption technique is used on the data for multiple language	▪ Once a picture is transformed into mathematical representation it can be shuffled anyway you like until you have the right key to decrypt it
DIS-ADVANTAGE	**•Robustness is less the hidden data is subject to alternation due image manipulation.**	**The block size of encrypted image is fixed.**	**If the size of the original file is already known or estimated then that could be a potential threat to the excess of the memory that it would show in its properties**

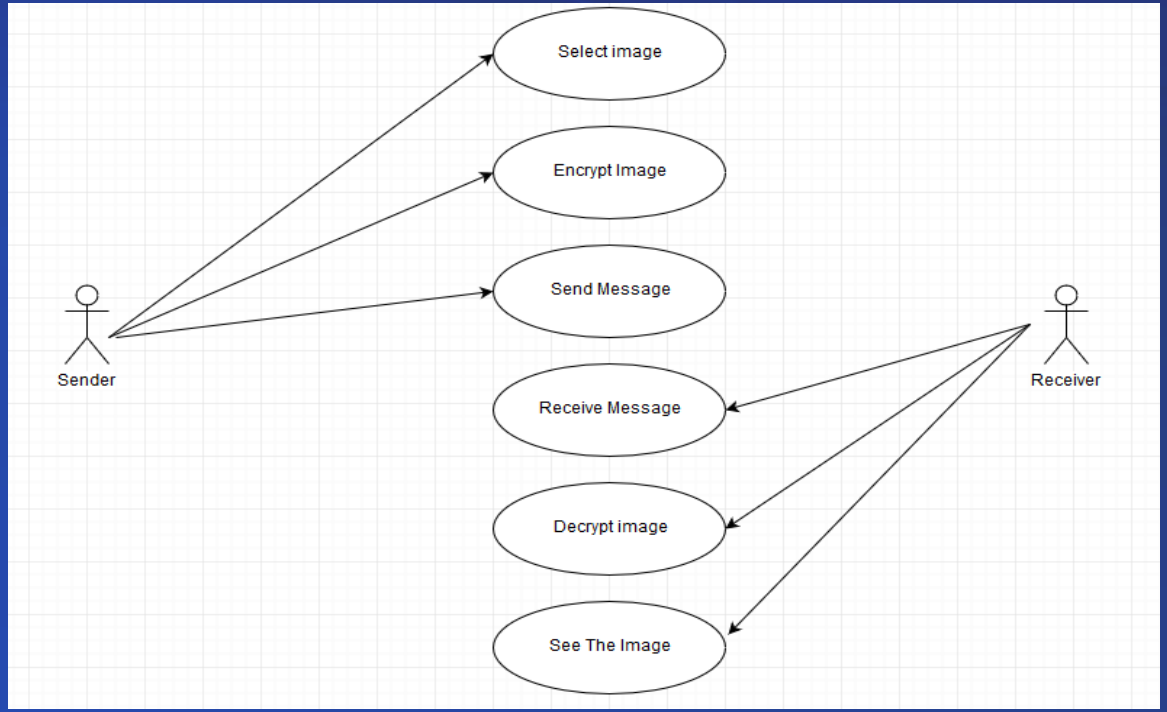
ALGORITHM	• Advanced Encryption Standard • Compression Algorithms: 1. LZ77 algorithm: 2. Huffman coding: 3. Deflation algorithm	• Play color cipher algorithm • RSA Algorithm	•genetic algorithm, path relinking, information security, data protection.
TECHNIQUES	• Pseudo-Random LSB Encoding Technique: • Distortion Technique	Symmetric and asymmetric techniques	Steganography, Data Encryption Standard (DES), AES cryptography, LSB substitution, information hiding, image

USECASE DIAGRAM

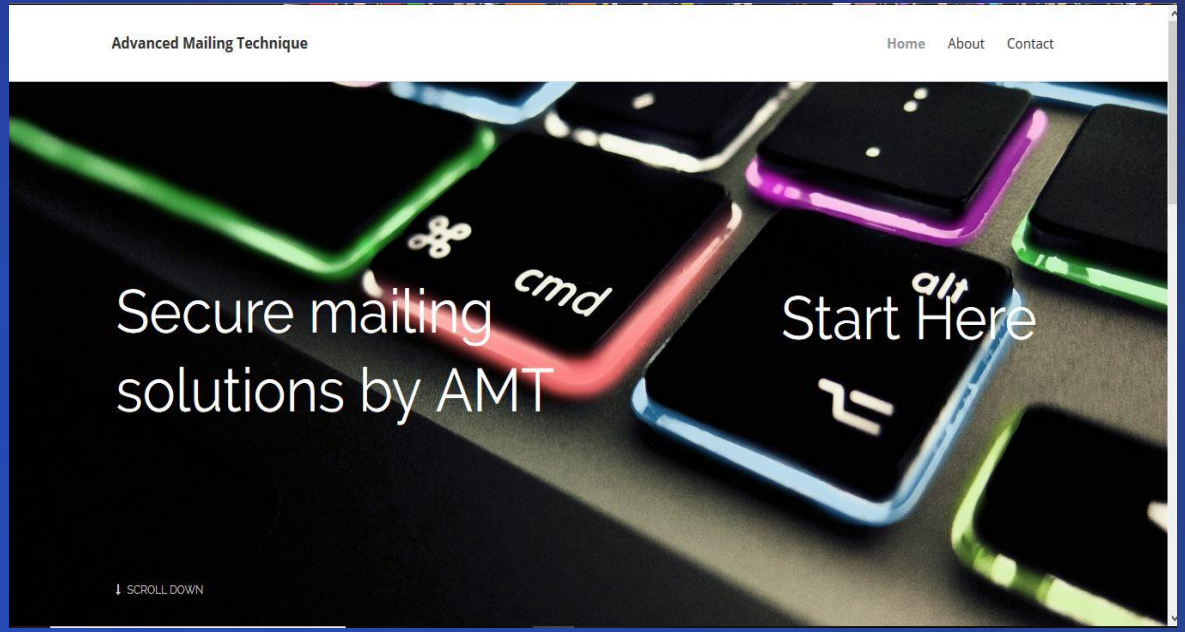
For Text:



For Image:


Select image
Encrypt Image
Send Message
Receive Message
Decrypt image
See The Image
Sender
Receiver

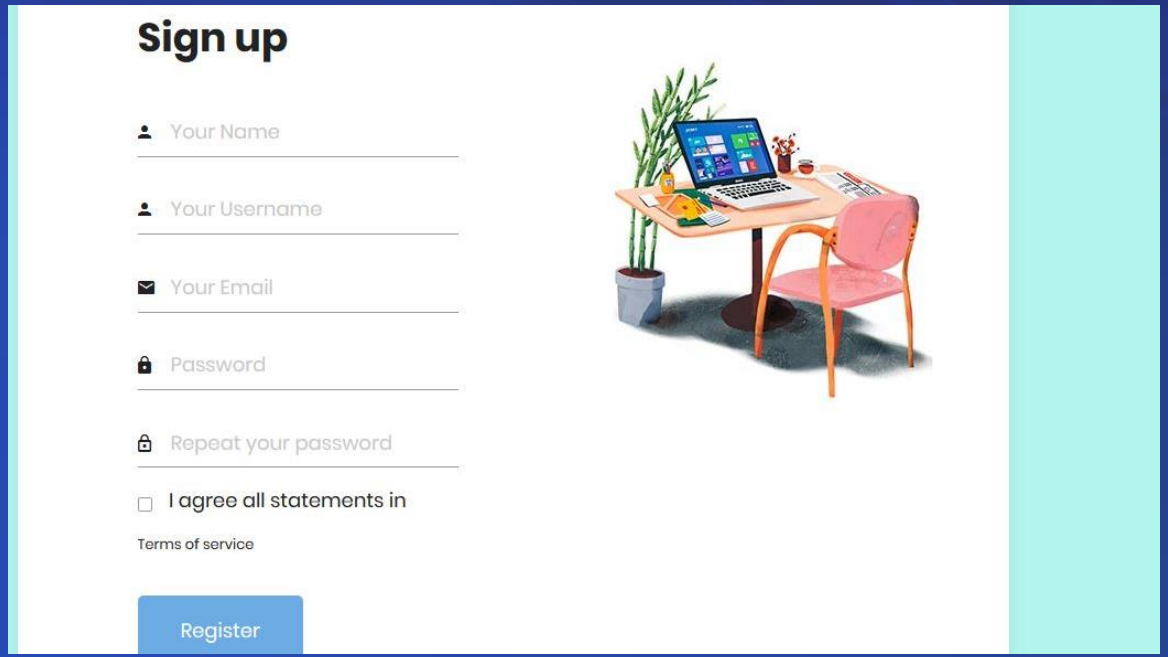
Current Design



It will be the first page which will be displayed by the system when it will be getting started

The home page including the register link.

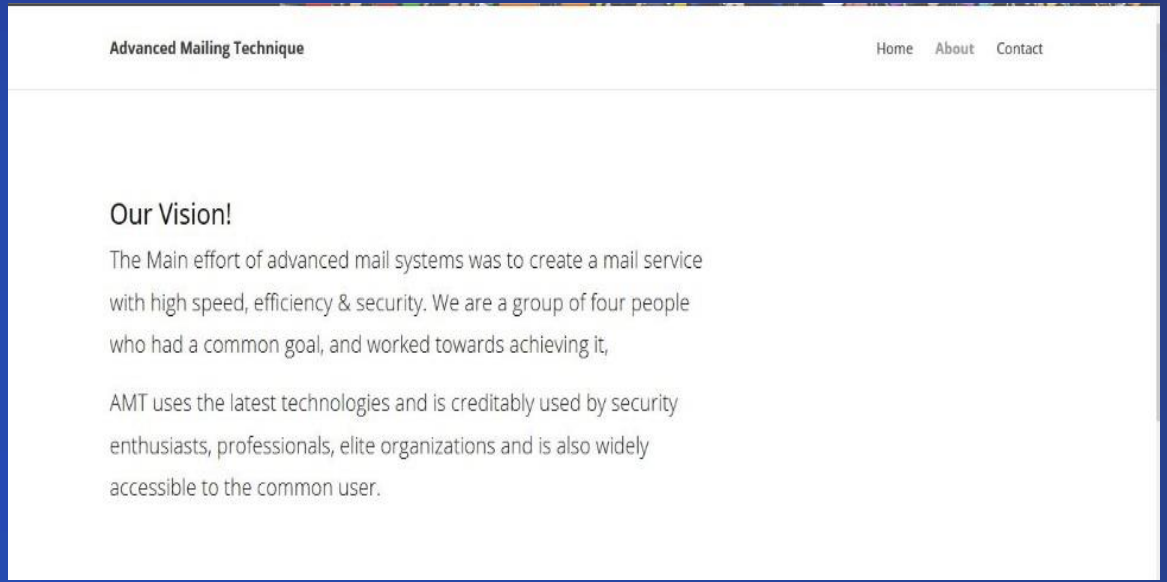
LOGIN PAGE



Logging in is usually used to enter a specific page, which trespassers cannot see.

Once the regrestration is done the user can eassily login into the system

Vision


Advanced Mailing Technique
Home
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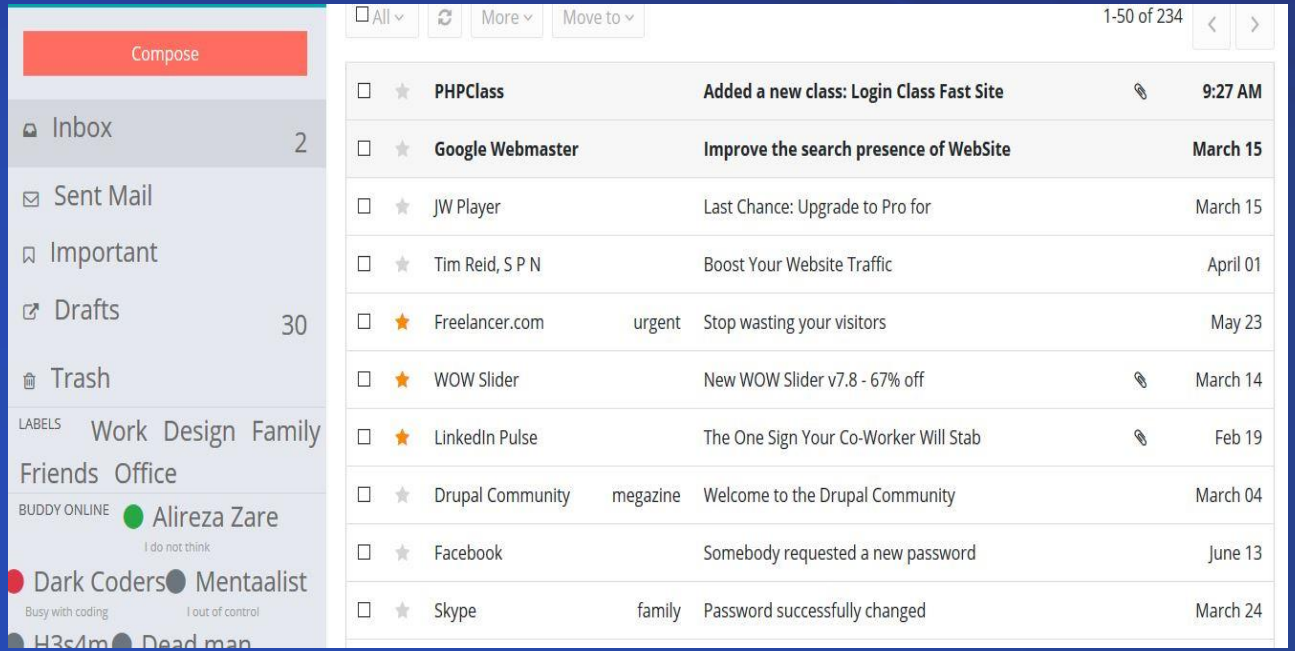
Contact
Our Vision!
The Main effort of advanced mail systems was to create a mail service with high speed, efficiency & security. We are a group of four people who had a common goal, and worked towards achieving it,
AMT uses the latest technologies and is creditably used by security enthusiasts, professionals, elite organizations and is also widely accessible to the common user.

Inbox conception & progress.

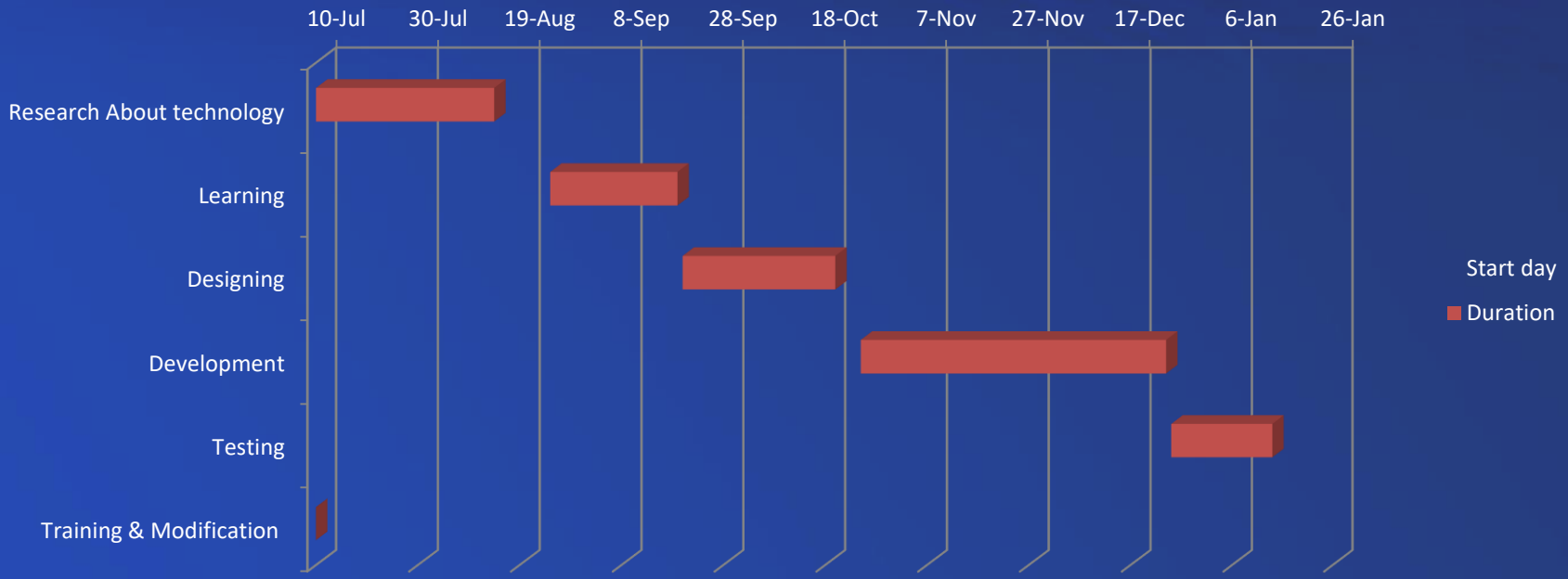


Inbox scans the user's incoming mail messages for information.

It gathers email messages related to the same overall topic to an organized bundle with a title describing the bundle's content.

The incoming messages will be stored in the inbox.

PROJECT PLAN



SUMMARY

- Steganography is a really interesting subject and outside of the mainstream cryptography and system administration that most of us deal with
- Steganography can be used for the hidden communication.
- This steganography type provide for the purpose to how to use any type of image format to hide any data inside.

REFERENCES

- G.J. Simmons, "The Prisoner's Problem and the Subliminal Channe". In: Proceedings of CRYPTO '83. Plenum Press, 1984, pp 51-67.
- N. Provos and P. Honeyman, "Hide and Seek: An introduction to steganography", IEEE Security and Privacy Journal, 2003, pp 32-44.
- F. A.P. Petitcolas, R. J. Anderson, "On the Limits of Steganography", IEEE Journal of Selected Areas in Communications, 16(4):474-481, May 98, Special Issue on Copyright & Privacy Protection.

THANK YOU