REPORT ON SUMMER INTERNSHIP

Steganography: Hiding Information inside Image

Platform- Coursera(Introduction to Cybersecurity Essentials)

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1. INTRODUCTION

1.1 Cryptography: Cryptography is technique of securing information and communications through use of codes so that only those person for whom the information is intended can understand it and process it. Thus preventing unauthorised access to information. The prefix “crypt” means “hidden” and suffix graphy means “writing”.

Types Of Cryptography:

In general there are three types Of cryptography:

1. Symmetric Key Cryptography:
   It is an encryption system where the sender and receiver of message use a single common key to encrypt and decrypt messages. Symmetric Key Systems are faster and simpler but the problem is that sender and receiver have to somehow exchange key in a secure manner. The most popular symmetric key cryptography system is Data Encryption System(DES).
2. Hash Functions:
   There is no usage of any key in this algorithm. A hash value with fixed length is calculated as per the plain text which makes it impossible for contents of plain text to be recovered. Many operating systems use hash functions to encrypt passwords.
3. Asymmetric Key Cryptography:
   Under this system a pair of keys is used to encrypt and decrypt information. A public key is used for encryption and a private key is used for decryption. Public key and Private Key are different. Even if the public key is known by everyone the intended receiver can only decode it because he alone knows the private key.

1.2 Steganography:

Steganography comes from the combination of the Greek words Stegano means sealed and Graphy referring to writing which means secret writing. Steganography is a very old art