**DESCRIPTION OF PROJECT**

**PROJECT TITLE: Image Steganography**

**What is Image Steganography?**

Steganography is a method of hiding secret data, by embedding it into an audio, video, image or text file. It is one of the methods employed to protect secret or sensitive data from malicious attacks.

**\* Applications of Image Steganography:**

1) Confidential communication and secret data storing

2) Protection of data alteration

3) Access control system for digital content distribution

4) Media Database system

The area differs in what feature of the steganography is utilized in each system.

**\* Project Purpose and Approach:**

Least Significant Bit: The LSB is the lowest significant bit in the byte value of the image pixel. The LSB based image steganography embeds the secret in the least significant bits of pixel values of the cover image (CVR). The concept of LSB Embedding is simple.

PIL(Python Image Library)-

The Python Imaging Library (PIL) adds image processing capabilities to your Python interpreter. This library supports many file formats, and provides powerful image processing and graphics capabilities.

Purpose:

1) Confidential communication and secret data storing

2) Protection of data alteration

 3) Access control system for digital content distribution

 4) Media Database systems

**\* Product Functions:**

There is only one kind of user for our product. The general user will be able to perform all the operations on the product after installing the product on its machine.

\* **User Characteristics**

Any user with a little knowledge of computers and security will be able to operate our application.

**\* Hardware Interfaces**

1. Machine: x86 (32-bit) or x86-64 (64-bit)

2. CPU: Operating System Dependent

3. RAM: 128 MB; 64 MB for Windows XP (32-bit)

4. Disk Space: 500 MB

5. Compatible Mouse and Keyboard

**\* Software Interfaces**

Python 2.7, Windows 8, Windows 7(32 /64 bit)

**\* My Role in the project:**

This Project uses the concept of **Image Steganography** which is an application of Digital Image Processing and the whole environment is based on Python. In this project, Python 2.7 is used for coding and implementation purpose. My task was basically to design the GUI. I have designed it using Tkinter library. Tkinter is a python GUI package. This project helped me to enhance my knowledge in python and its libraries and it was a good opportunity to sharpen my programming skills.