**A Course based Project Report On**

**IMAGE STEGANOGRAPHY**

**Submitted in partial fulfillment of requirement**

**for the completion of the**

**Python Programming through python Laboratory course.**

**B. Tech Computer Science and Engineering**

**of**

**VNRVJIET**

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**2022-2023**



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**Under the Guidance of**

**Mrs. E. Lalitha**

**Associate Professor**

**CSE**





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**CERTIFICATE**

This is to certify that the project entitled **“ Image Steganography”** submitted in partial fulfilment for the course of python Programming through python Laboratory being offered for the award of B.Tech (CSE-CYS) by VNR VJIET is a result of the bonafide work carried out by **21071A6224,21071A6245,21071A6245** during the year **2022-2023**. This has not been submitted for any other certificate or course.

**Internal Guide External Guide**

**ACKNOWLEDGEMENT**

An endeavour over a long period can be successful only with the advice and support of many well-wishers. We take this opportunity to express our gratitude and appreciation to all of them.

We wish to express our profound gratitude to our honorable **Principal and HOD, CSE** department**, VNR Vignana Jyothi Institute of Engineering and Technology** for their constant and dedicated support towards our career moulding and development.



With a great pleasure we express our gratitude to the internal guide  **Mrs. E. Lalitha, Associate Professor, CSE** for her timely help, constant guidance, cooperation, support and encouragement throughout this project as it has urged us to explore many new things.

Finally, we wish to express my deep sense of gratitude and sincere thanks to our parents, friends and all our well-wishers who have technically and non-technically contributed for the successful completion of this course-based project.

**DECLARATION**

We hereby declare that this Project Report titled **“Image Steganography”** submitted by us of Computer Science & Engineering in **VNR Vignana Jyothi Institute of Engineering and Technology,** is a bonafide work under taken by us and it is not submitted for any other certificate /Course or published any time before.

Signature of the Student Date:

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**ABSTRACT**

The word Steganography means "covered in hidden writing". The object of Steganography is to send a message through some innocuous carrier(to a receiver while preventing anyone else from knowing that message).Computer based steganography allows changes to be made to what are known as digital carriers such as images or sounds. Since steganography can be done in sever always, image steganography is studied and one of the methods is used to demonstrate it.

**INTRODUCTION﻿**

This is an interesting project in which we will be given four options .By clicking open image button we select the image from machine which used for data encryption or decryption. After selecting the image then we select the hide button or show button. If we want to select hide button we need to insert the data on the text are after entering text click on the hide button .In this process we hide the data. decryption also same but we need to select the show button. The objective of this project is hide the message within the image and then decode the image .It uses Tkinter , PIL , Stegano modules.

python is a interpreted highlevel , general-purpose programming language. Its design philosophy emphasize code readability with its use of significant indentation. It’s language constructs as well as its object oriented approach aim to help programmers to write clear, small and logical code for small and large projects.

PyCharm is an integrated development environment(IDE) used in computer programming, specially for the python. It is developed by JetBrains. It provides various tools for python developers.

**METHODOLOGY**

﻿Package is basically a directory with python files and a file with name\_init\_.py. This means that every directory inside of the python path,which contain a file named \_init\_.py,will be treated as a package by python.Its posibble to put several modules into a package.

* **Tkinter**
* **PIL**
* **Stegano**

**TKinter:**

Python has a lot of GUI frameworks, but Tkinter is the only framework that’s built into the Python standard library.

**PIL:**

The Python Imaging Library adds image processing capabilities to your Python interpreter...

**Stegano:**

Steganography is the art and science of writing hidden messages in such a way that no one, apart from the sender and intended recipient, suspects the existence of the message, a form of security through obscurity. Consequently, functions provided by Stegano only hide messages, without encryption. Steganography is often used with cryptography

**CODE:**

**Text

Description automatically generated**

**OUTPUT**

**Graphical user interface

Description automatically generated**

**Graphical user interface, text, application

Description automatically generated**

**CONCLUSION:**

* We have successfully completed the python Image Steganography project with the help of Tkinter module. We have learned about the Tkinter and PIL modules. By using this, We can communicate with others secretly We also learned how to create buttons. Various functions were also used while developing this project.
* We can add many more functionalities to it, and make it more useful.