MESSAGE ENCODE AND DECODE

Project submitted to the

SRM University – AP, Andhra Pradesh

for the partial fulfillment of the requirements to award the degree of

Bachelor of Technology/Master of Technology

In

Computer Science and Engineering

School of Engineering and Sciences

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Certificate

Date: 13-Dec-22

This is to certify that the work present in this Project entitled "**MESSAGE ENCODE AND DECODE**" has been carried out by **Aliviya Jana** under my/our supervision. The work is genuine, original, and suitable for submission to the SRM University – AP for the award of Bachelor of Technology/Master of Technology in the **School of Engineering and Sciences**.

Supervisor

SURESH BABU SUNKARA

Designation,

Affiliation.

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Acknowledgments

I am overwhelmed in all humbleness and gratefulness to acknowledge those who have helped me to put these ideas, well above the level of simplicity and into something concrete.

I'd like to thank my professor, Mr. Suresh Babu Sunkara who has given me this opportunity to do this project and thereby improve my knowledge. wholeheartedly would like to thank the college management and the lab assistants for guiding me and helping me throughout this project and my research on this project.

I'd also like to thank my parents and friends for helping me in acquiring and making me understand the concept of this project and for giving me the motivation and encouragement in doing this project.

Thank You

Aliviya Jana

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Abstract

Message encoder and decoder is usually used to secure our information. This objective of this project is to encode and decode messages using a common key. This project will be built using the Tkinter and base64 library. In this project, users have to enter the message to encode or decode. Users have to select the mode to choose the encoding and decoding process. The same key must be used to process the encoding and decoding for the same message.

Abbreviations

enc	Encode
dec	Decode
p_key	Private Key

Introduction

Encoding is the process that transforms the text or information to the unrecognizable form and decryption is the process to convert the encrypted message into original form. Message encoding and decoding is the process to first convert the original text to the random and meaningless text called ciphertext. This process is called encoding. Decoding is the process to convert that ciphertext to the original text. This process is also called the Encryption-Decryption process.

1.1. A few of the features of messege encoder decoder include:

1.1. Entering the simple text.

1.2. Entering the decoded text.

1.2. Using one special key to do both the features of 1.1

1.3. To build this, you will need to know basics of python programming and a little understanding Tkinter module and base64.

1.4. Here are the steps you will need to execute to build this python project:

4.1. Importing all the necessary libraries

4.2. Initializing the window and placing all the components in it

4.3. Creating the encoder, decoder, mode and exit function

Methodology

To work on messege encoder decoder in python, basic understanding of python programming language, Tkinter and base64, especially Tkinter widgets would be helpful. But don't worry as this article will provide an explanation of every line of code as we go about building this python project. You are free to choose any IDE of your choice (Pycharm, VSCode, etc.).

2.1. Procedure:

• First, we will import all the modules required to build the project.

• We will then define some functions necessary to execute the application.

• We will then create a main window for the application

• We will then add a database to the application to store the data.

• We will add the necessary widgets to the application and apply the event triggers.

• Calling the functions in the main function of the application.

2.2. Steps :

• Importing the required modules - we have imported the tkinter module as tk. We then imported the tk module and the messagebox from the Tkinter library and base64 as well.

• Defining the functions for the application - We have defined an empty list as tasks in the above code snippet. This list will allow us to store all the tasks entered.

• Encoder function - we have defined a function as encoder. We have used an empty list and appending the messege after the process is done using the special key.

• Decoder function - we have defined a function as decoder. We have used an empty list and appending the messege after the reverse process is done using the special key.

• Mode function - we have defined the function as modeit is for the user to choose e for encoding or d for decoding the messege.

• Closing the application - we have defined a function as exit. We have used destroy() method to close the application

• Reset function – we have defined it for reserting all the values

Discussion

All the figures and tables should be aligned to “fit to window”.

Example Figure

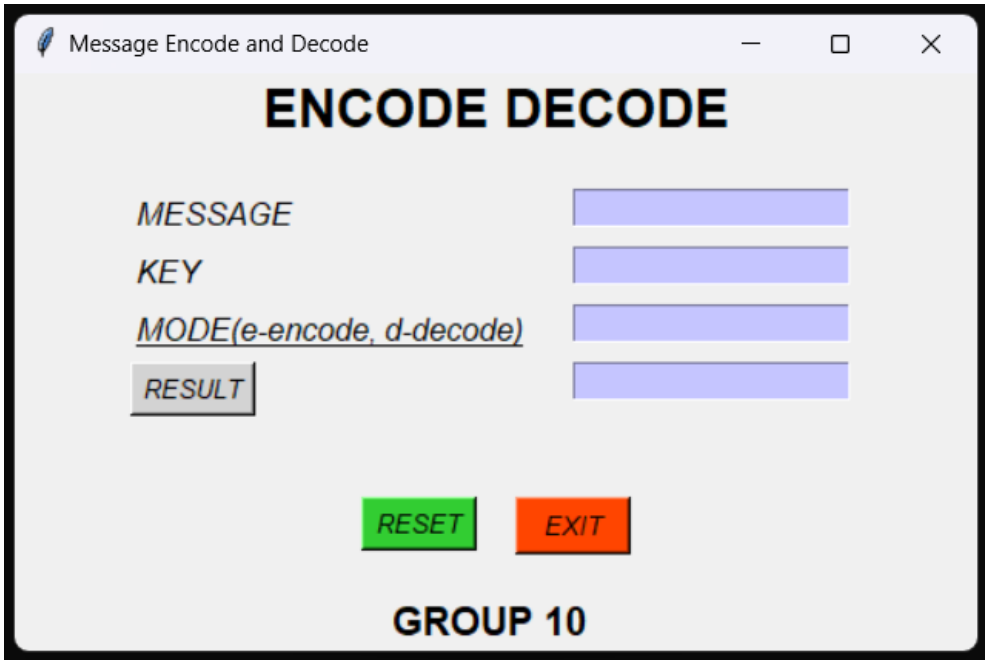
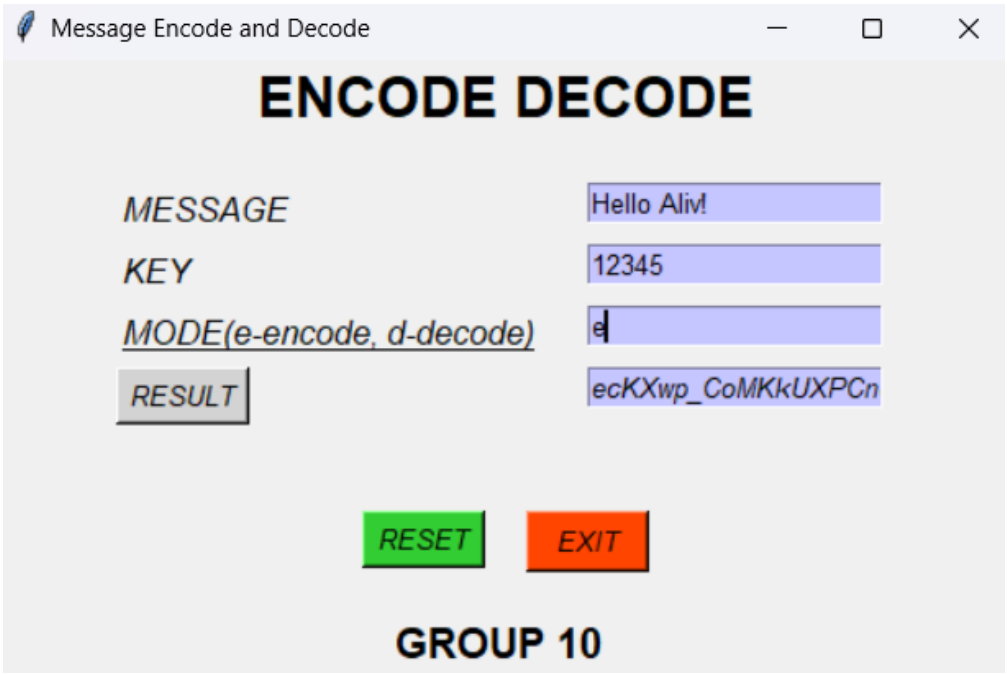


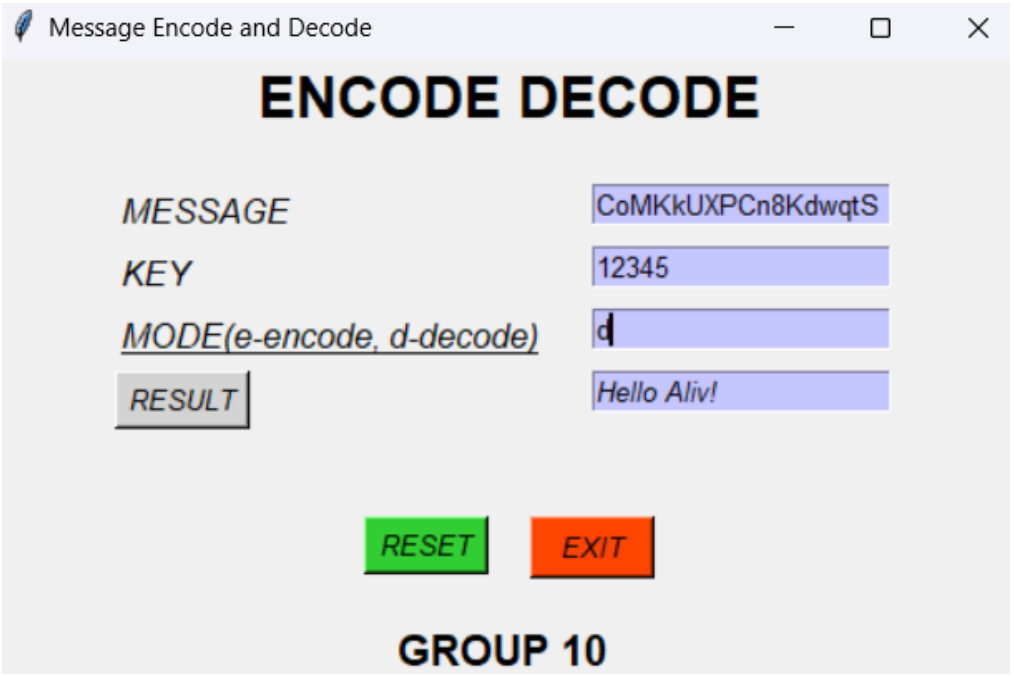
Figure 1. Outlook of the window

Example Table:

Encoder:



Decoder:



Concluding Remarks

The messege encoder decoder developed for this project is meant to be secure communications techniques that allow only the sender and intended recipient of a message to view its contents. It aims to help in:

Authentication/Digital Signatures

Time Stamping

Electronic Money

Encryption/Decryption in email

Encryption in WhatsApp and Instagram

References

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