Task-01

“ Implement Caesar Cipher

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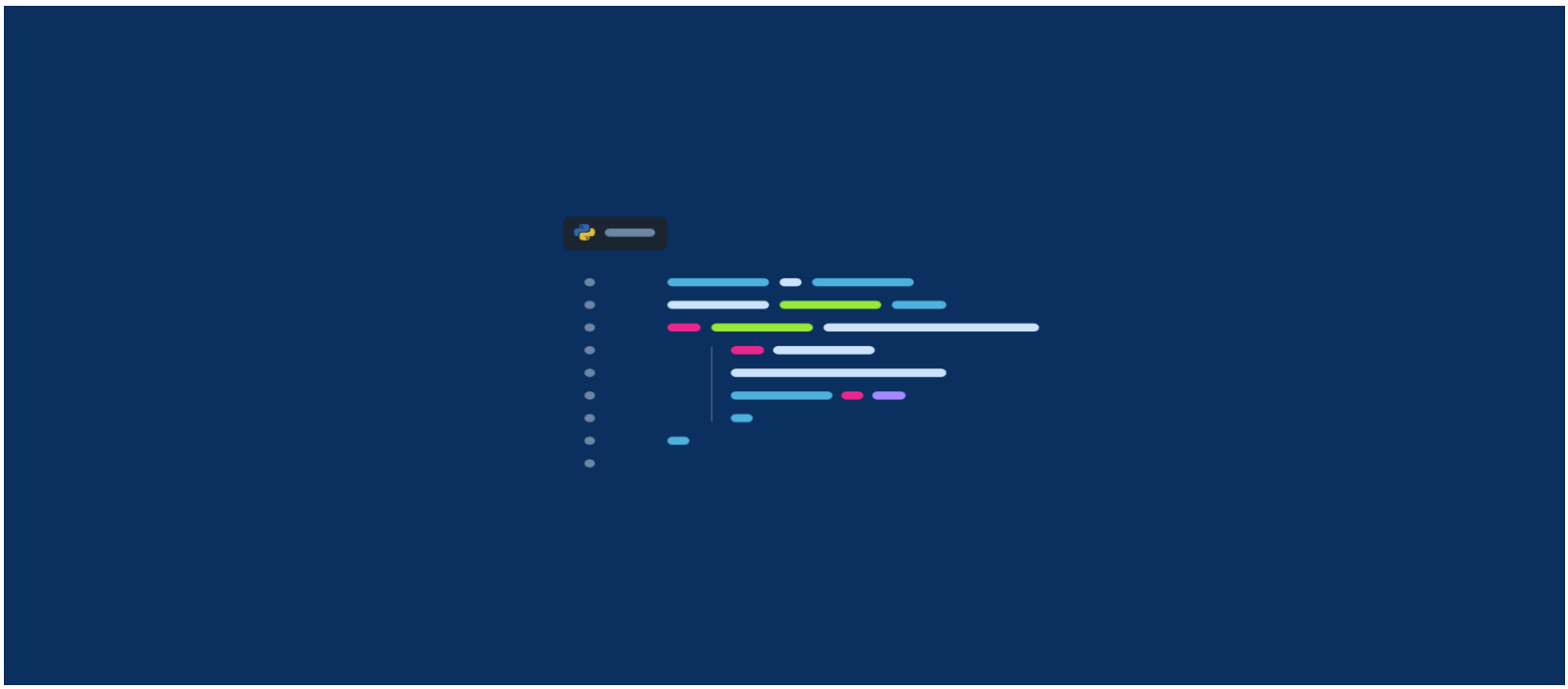
1. INTRODUCTION

Purpose of the Tool

- **The Caesar Cipher Encryption & Decryption script is a Python program designed to fulfill the task of creating a versatile tool for encoding and decoding text messages using the Caesar Cipher algorithm.**



2. KEY FEATURES

Welcome & Author Information:

- Upon execution, the script displays an aesthetically pleasing welcome banner and provides information about the author, creating an engaging user experience.

User Input & Options:

- Users are prompted to choose between encryption and decryption by entering the corresponding option number (1 for encryption, 2 for decryption).
- The script handles invalid inputs, ensuring a smooth user experience.

Interactive Shift Value Input:

- The user is prompted to input the shift value required for encryption or decryption. The script ensures the input is an integer and prompts the user until a valid input is provided.

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Encryption Process:

- During encryption, the script provides an interactive loading bar in the form of a spinner, creating an engaging and visually appealing experience for the user.

Decryption Process:

- For decryption, a hash loading bar is displayed, enhancing the user interface and providing a clear indication of the process.

Output Display:

- The script outputs the encrypted or decrypted message, depending on the user's choice. The displayed message is accompanied by a colorful output to enhance visibility.

File Saving Option:

- Users have the option to save the result to a file, promoting versatility and enabling users to store their encrypted or decrypted messages for future reference.

Random Shift Generation:

- The script allows users to generate a random shift value for future use, enhancing the flexibility of the tool.

Clear Console & Thank You Message:

- The console is cleared upon execution, providing a neat interface. Additionally, the script concludes with a thank-you message, acknowledging the user's interaction and providing a positive conclusion.

3. USER INTERACTION

Encryption:

- Users input the message and shift value for encryption.
- The script visually engages users with a spinner loading bar during the encryption process.
- The encrypted message is displayed with an option to decrypt the recently encrypted message.

Decryption:

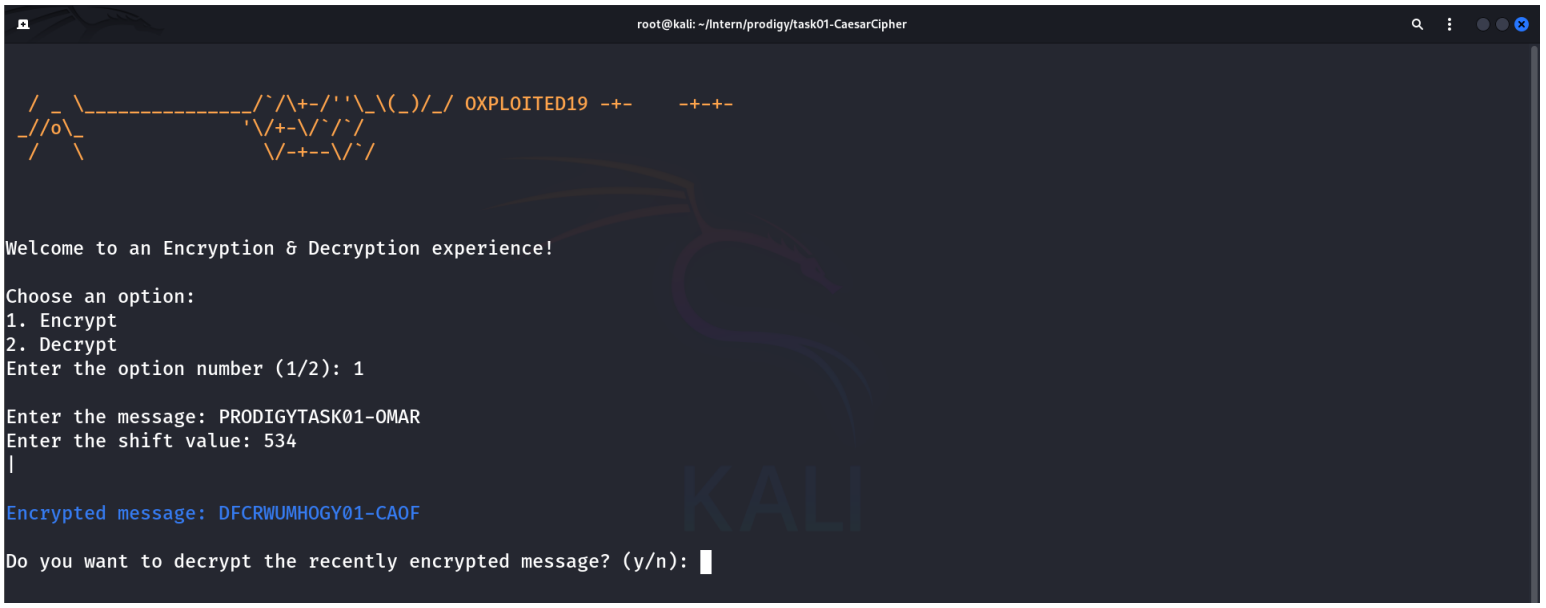
- Users input the message and shift value for decryption.
- A hash loading bar is presented during the decryption process.
- The decrypted message is displayed.

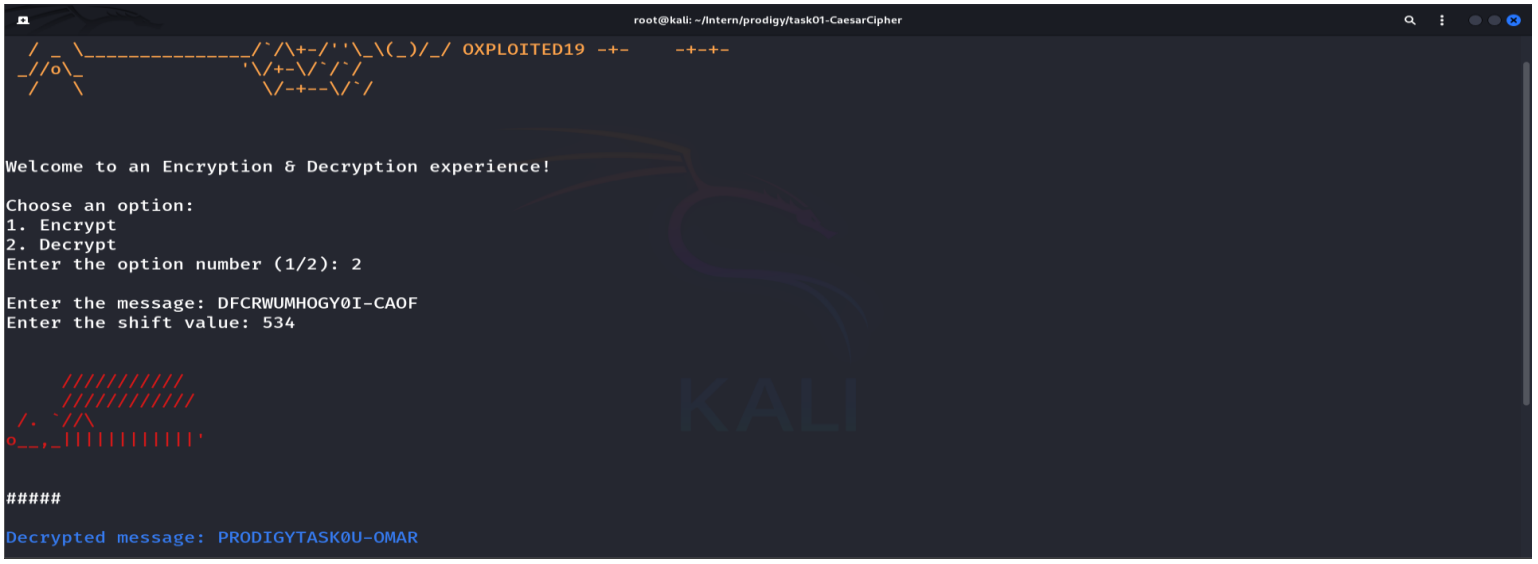
4. ADDITIONAL FEATURES

Error Handling in File Saving:

- The script incorporates error handling when saving results to a file, ensuring that users are informed of any issues during the file-saving process.

5. SAMPLE OUTPUT





6. CONCLUSION

The Caesar Cipher Encryption & Decryption script successfully fulfills the task by providing an interactive, user-friendly, and feature-rich tool for text encryption and decryption. The script's design, colorful output, loading bars, and additional features contribute to a positive user experience. Users can easily understand and operate the script, making it a valuable tool for those seeking a straightforward and effective Caesar Cipher implementation.