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Quantum Proof Encryption Technology

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Abstract: Nowadays we use text passwords to encrypt a file. This research paper proposes to use multimedia files like images videos, audio files and even applications as the password key to encrypt sensitive information. This algorithm can encrypt bulk data as well as single data sets.

Keywords: steganography, multimedia file as key, Quantum computer, cryptography, Quantum computer proof encryption.

I. INTRODUCTION

Nowadays hackers are harvesting encrypted information and waiting for quantum computers to enter the commercial network so that cracking the encryption securing the information becomes a cakewalk and then they can wreak havoc with the sensitive data they get their hands on. This research paper shall demonstrate the resultant ciphertext which is generated as a result of using a multimedia file as a key. The quantum computer shall also fail at the job of cracking the encryption as there are more than a trillion permutations possible to guess the actual key file

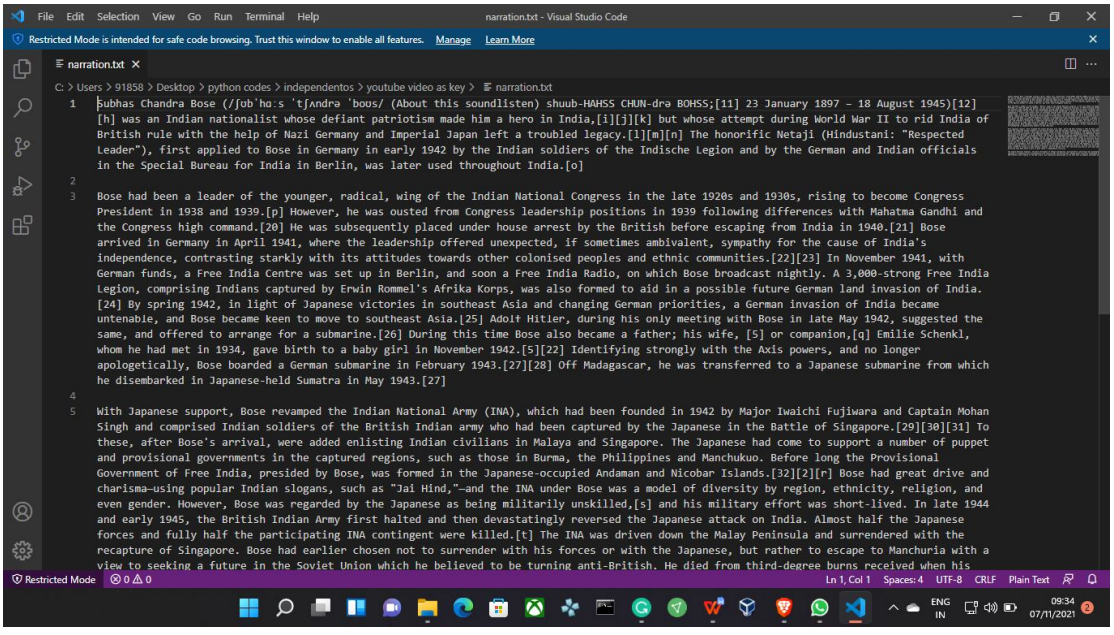
II. OBJECTIVES OF THE STUDY

A. To represent the generation of cypher text which is obtained as a result of using a multimedia file as a key.
B. To represent what happens when the incorrect multimedia file is used as the decryption key
C. To represent the decryption of the cypher text into original plain text on using the correct multimedia file as key to decrypt it.

III. METHODOLOGY

A. Specification of the observation machine I5 10 th gen ,8gb ram , 512 gb ssd
B. Algorithm implementation: Using python
C. Frameworks used: CPython, Jython, IronPython

IV. DATA ANALYSIS



Plain Text

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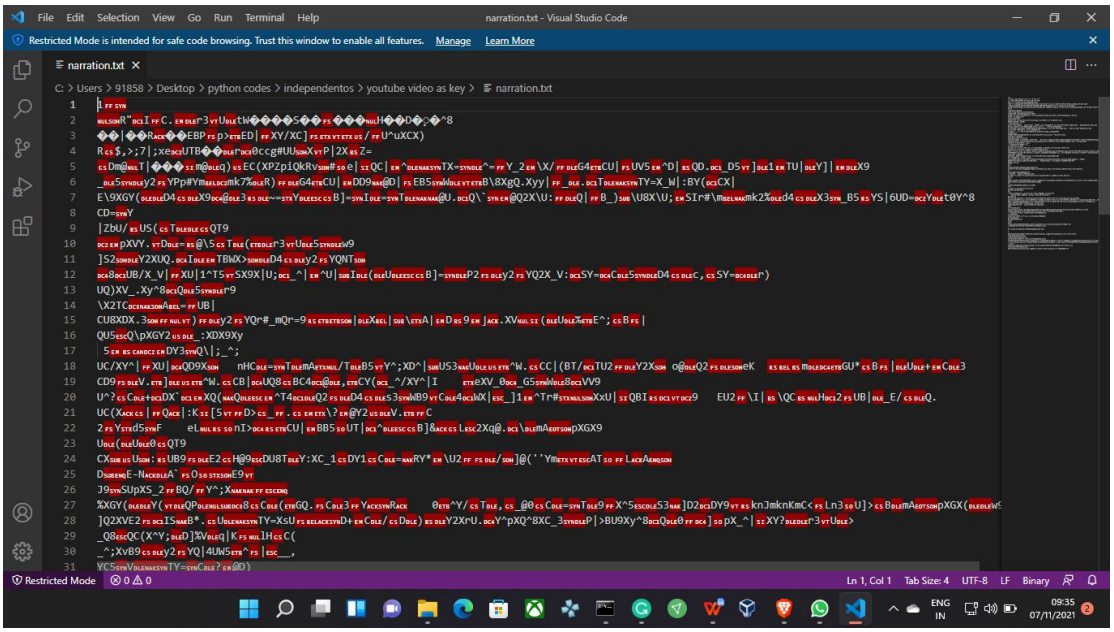
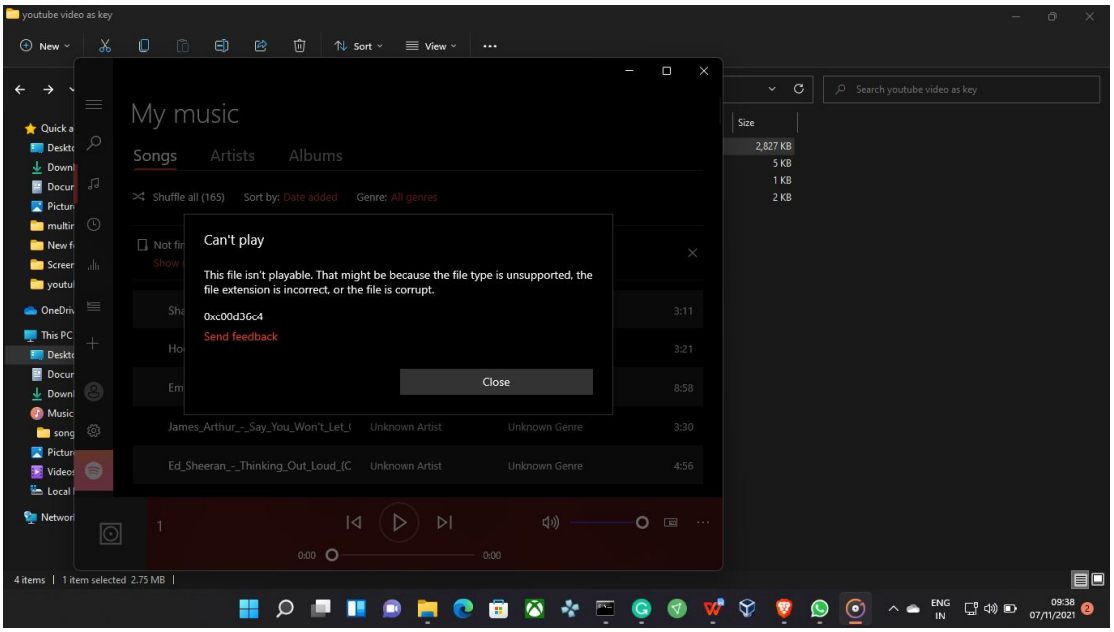


Encrypted text



Multimedia file encryption

V. CONCLUSION

From the above screenshots, we can conclude that if we do not know the correct multimedia file which was used as a key. It would be impossible to decrypt the encrypted file. This encryption algorithm can be further strengthened using a two-factor authentication password to further encrypt the file.

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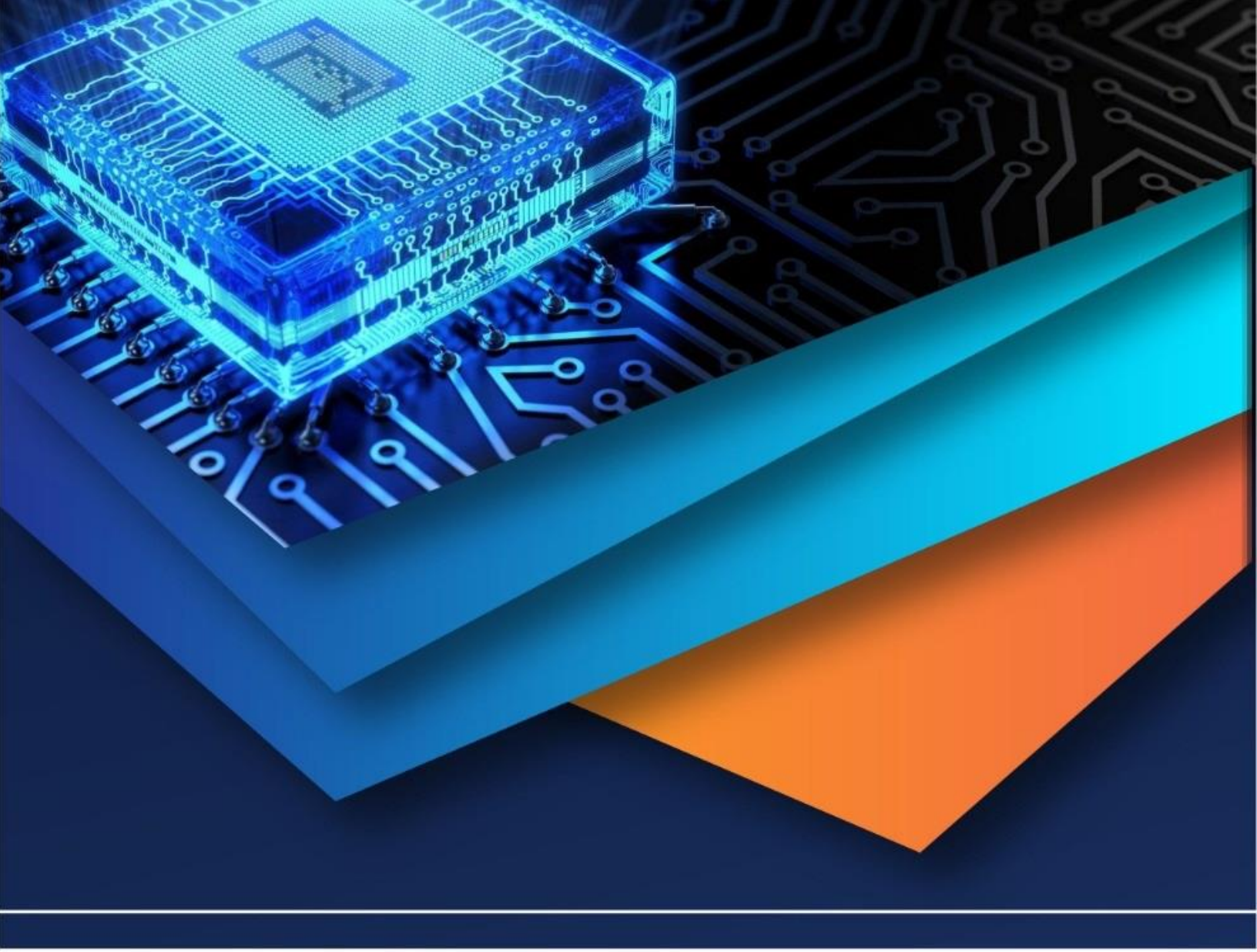

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