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| HashiCorp Vault: Data Encryption & Protection  CRYPT  DATA ENCRYPTION VAULT | SAMARTH PATEL  COMPUTER SCIENCE |

SYSTEM REQUIREMENTS

Recommended System Requirements

* Processors: Intel® Core™ i3 processor 4300M at 2.60 GHz.
* Disk space: 2 to 4 GB.
* Operating systems: Windows® 10, macOS, and UBUNTU.
* Python Versions: 3.X.X or Higher

Minimum System Requirements

* Processors: Intel Atom® processor or Intel® Core™ i3 processor
* Disk space: 1 GB
* Operating systems: Windows\* 7 or later, macOS, and Linux
* Python\* versions: 2.7.X

PREREQUISITES BEFORE INSTALLING MYSQL CONNECTOR PYTHON

You need root or administrator privileges to perform the installation process.

Python must be installed on your machine.

Note: – MySQL Connector Python requires python to be in the system’s PATH. Installation fails if it doesn’t find Python.

On Windows, If Python doesn’t exist in the system’s PATH, please manually add the directory containing python.exe yourself

INTRODUCTION

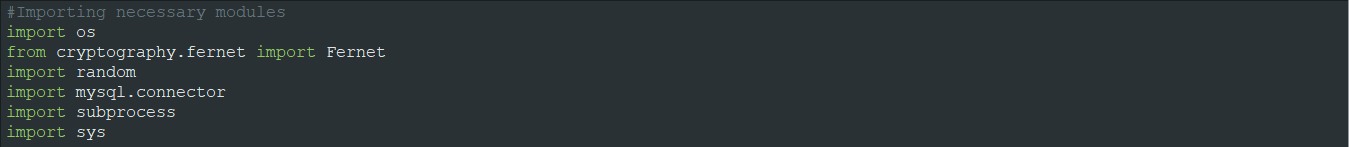
I have designed a Data Encryption Vault. A Vault provides Encryption as a Service[EaaS] to enable security teams to fortify data during transit and at rest. So even if an intrusion occurs, your data is encrypted and the attacker would never get a hold of the raw data.

The program uses AES[Advanced Encryption Standard] 128-bit encryption.

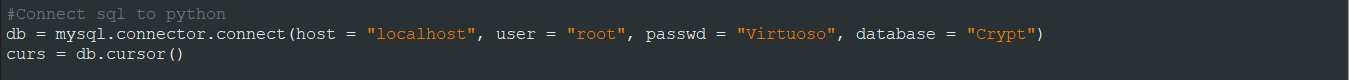
The program uses Fernet module from the Cryptography package

CODE[CRYPT]

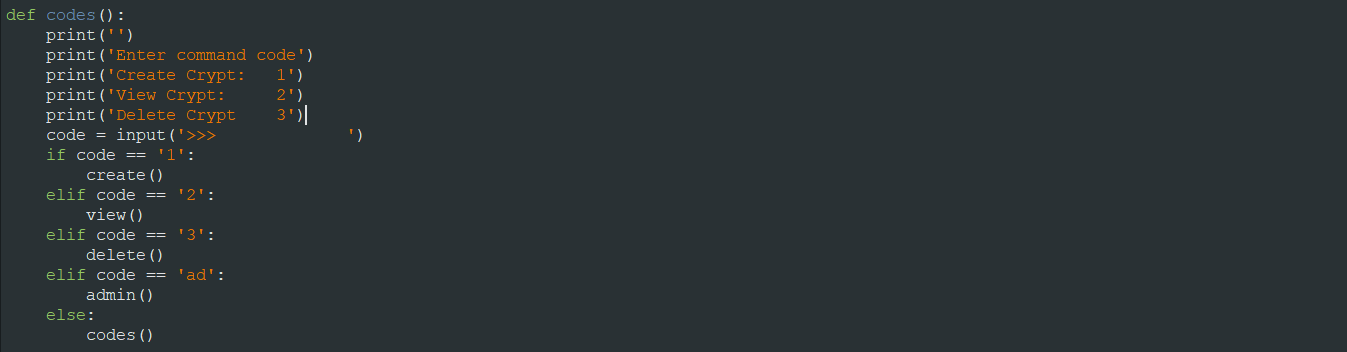
IMPORTING NECESSARY MODULES



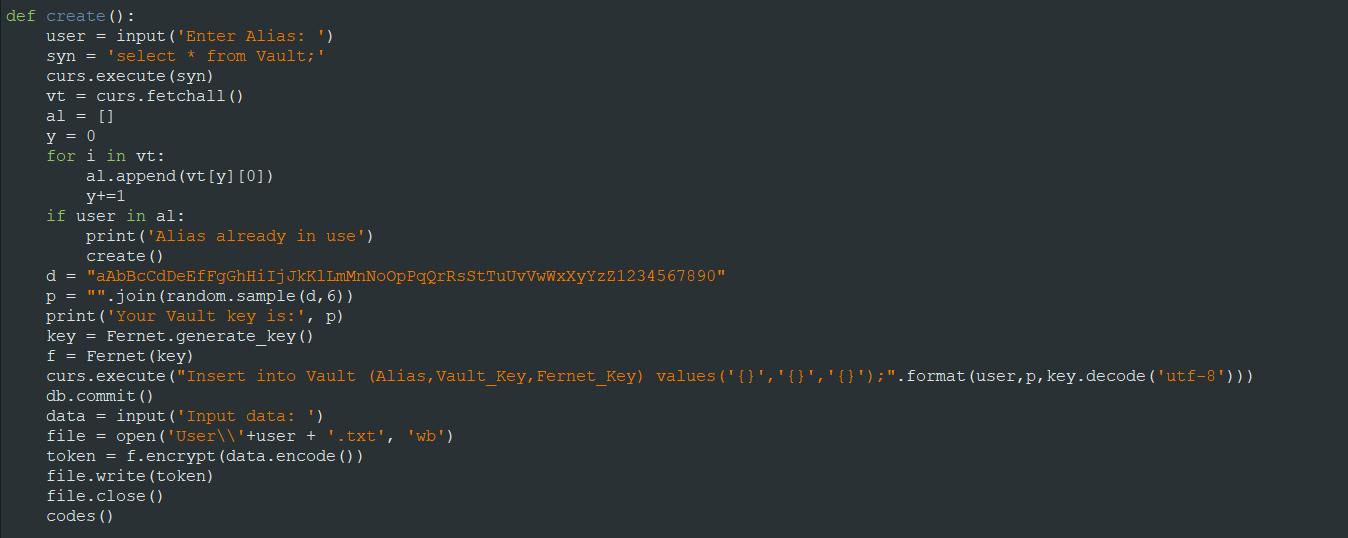
ESTABLISHING CONNECTION BETWEEN SQL AND PYTHON



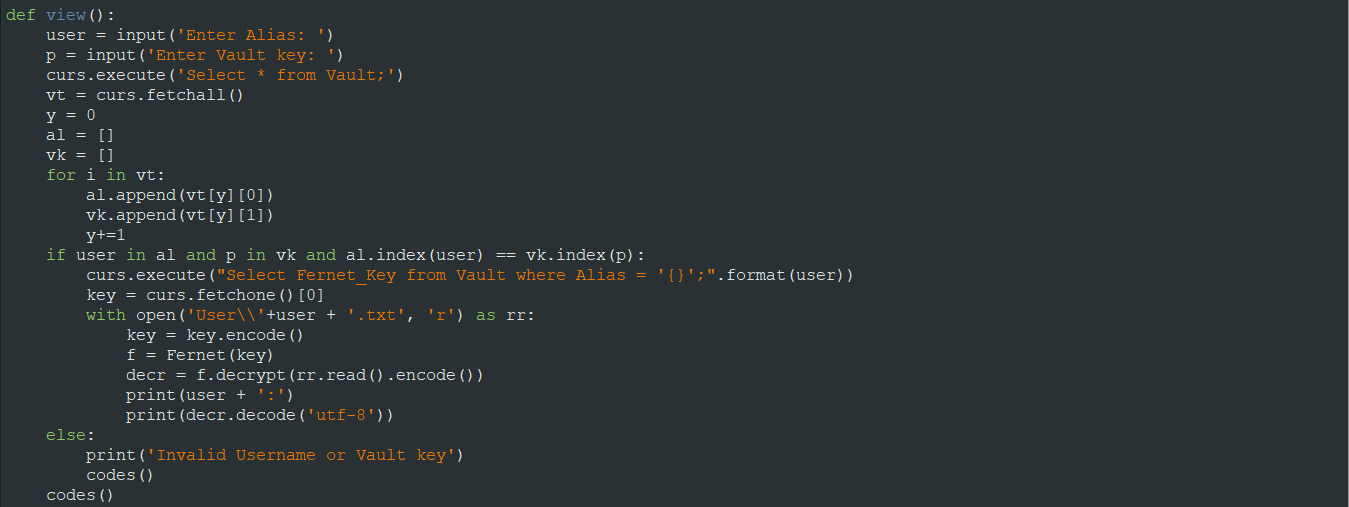
DEFINING EXECUTION INTERFACE



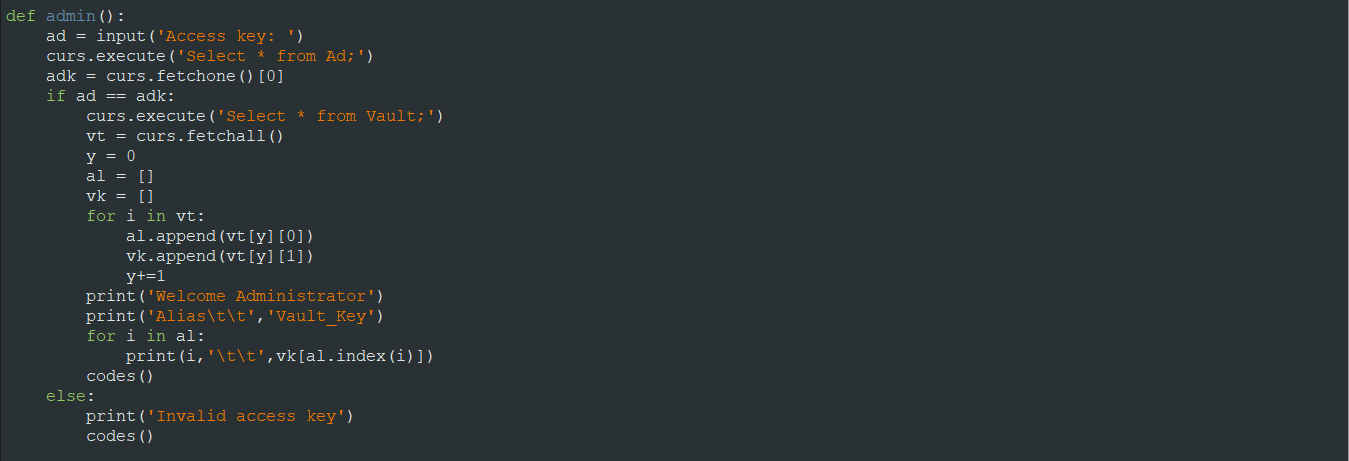
DEFINING FUNCTION FOR CRYPT CREATION



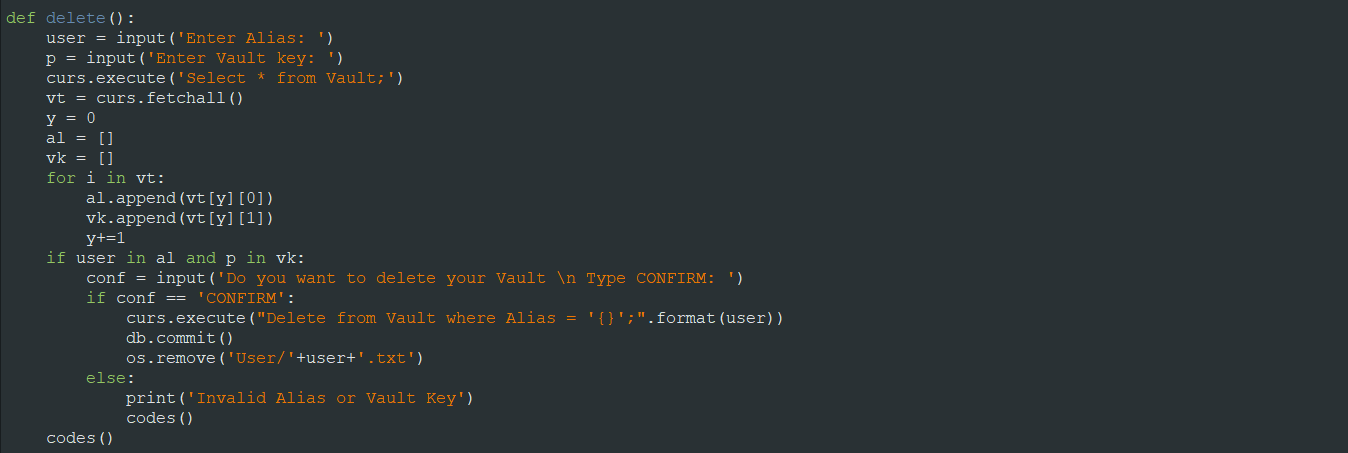
DEFINING FUNCTION FOR CRYPT ACCESS



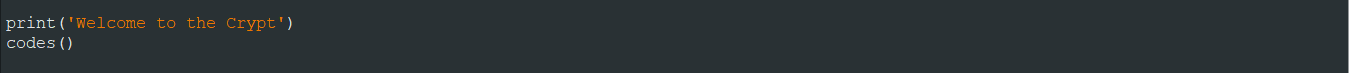
DEFINING ADMIN ACCESS FUNCTION



DEFINING FUNCTION FOR CRYPT EXCISING

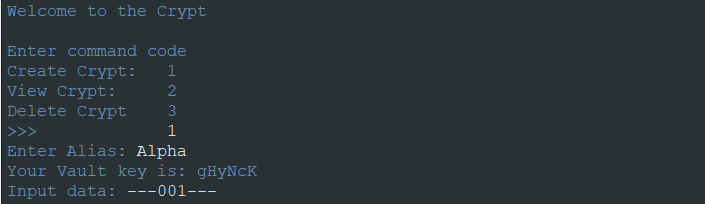


CALLING EXECUTION INTERFACE



OUTPUT[CRYPT]

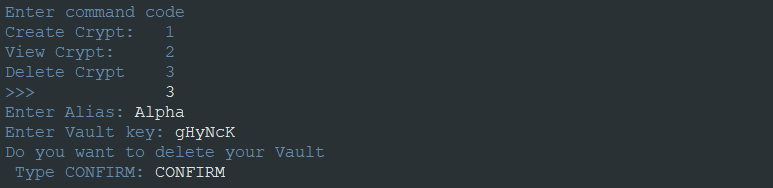
CREATING CRYPT



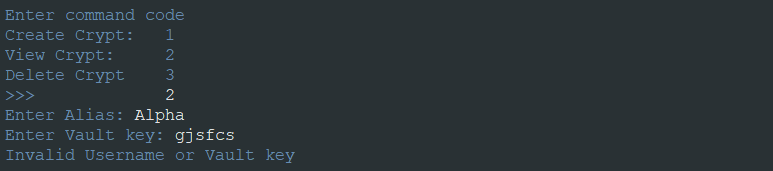
ACCESSING EXISTING CRYPT



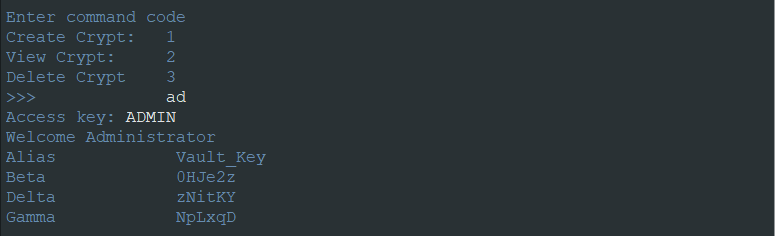
DELETETING CRYPT



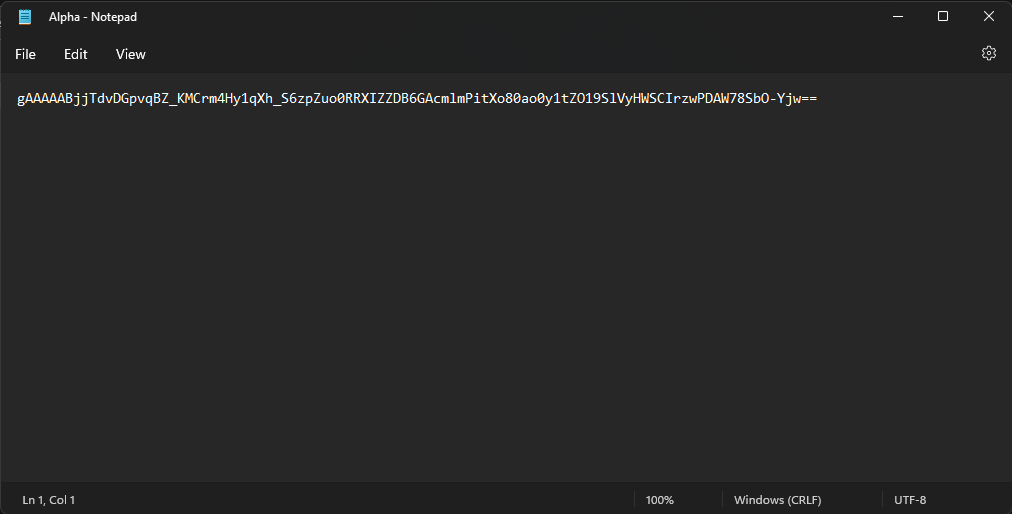
INCORRECT KEY OR ALIAS



ADMINISTRATOR ACCESS



CIPHERTEXT





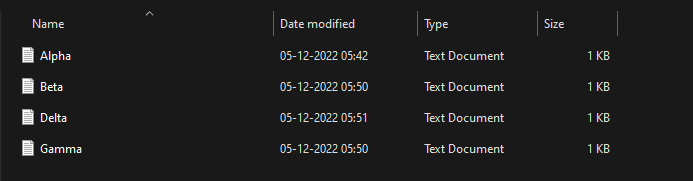
PLAINTEXT



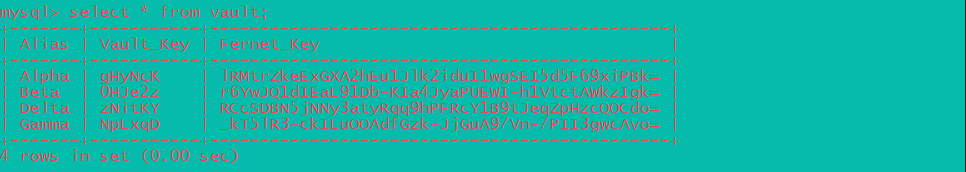


PRE-DELETION

USER DIRECTORY

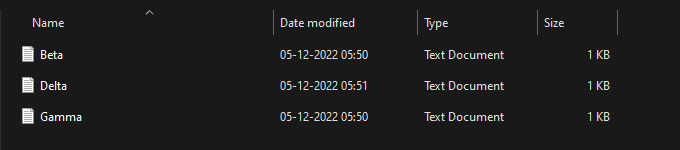


USER CREDENTIALS [IN CRYPT[DATABASE]]

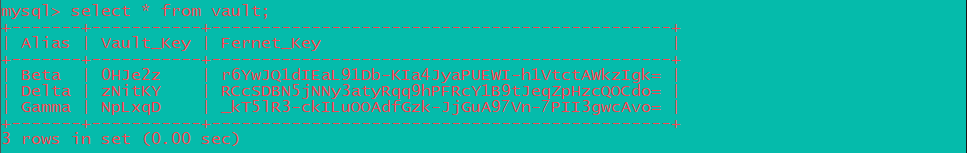


POST-DELETION

USER DIRECTORY



USER CREDENTIALS [IN CRYPT[DATABASE]]



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