**PRIVATE KEY ENCRYPTION**

Sathvika Karri (sk3628)

Rohan Katkam (rk944)

## 1. Introduction:

This document provides step-by-step instructions for running the encryption code and understanding its functionality.

## 2. Prerequisites:

Python should be installed on your system or install from “<https://www.python.org/downloads/>"

Installation of required libraries: “**pycryptodome**" and "**python-dotenv**".

## 3. Setup:

1. Install required libraries using pip: **pip3 install pycryptodome python-dotenv** (Depends on the version you have, if you have latest version of python then you have to use pip3 otherwise just pip)

2. Create a .env file in the project directory and add the following line with your desired encryption key: “**ENCRYPTION\_KEY=your\_encryption\_key\_here**”.

## 4. Running the Code:

1. Open a terminal or command prompt.

2. Navigate to the directory containing the Python script (**main.py**).

3. Run the script using the following command: **python3 main.py** (Depends on the version you have, if you have latest version of python then you have to use python3 otherwise just python)

## 5. Understanding the Code:

* The code generates a random private key using AES encryption.
* It loads the encryption key from the .env file.
* The private key is encrypted using AES encryption with the provided key.
* The encrypted private key is printed to the console.
* The encrypted private key is decrypted using the same key, and the decrypted private key is printed to the console.

