Encrypted Chat App (CLI)

# Installation Process

I had run the code in Spyder, but there was an error message. Within the Anaconda Prompt, I entered this command: “conda install -n base -c conda-forge pycryptodome”. This installed pycryptodome.

## Screenshot of Output:

A screenshot of a computer

AI-generated content may be incorrect.

# Encryption Utility (encrypt.py)

## Python Source Code:

from Crypto.Cipher import AES

import base64

#16-byte secret key

key = b'ThisIsA16ByteKey'

#pad the message

#it must be a multiple of 16 bytes

def pad(text):

return text + b' ' \* (16 - len(text) % 16)

#encrypt the message

def encrypt(message):

cipher = AES.new(key, AES.MODE\_ECB)

return base64.b64encode(cipher.encrypt(pad(message.encode())))

#decrypt the message

def decrypt(encrypted):

cipher = AES.new(key, AES.MODE\_ECB)

return cipher.decrypt(base64.b64decode(encrypted)).strip().decode()

## Screenshot of Output:

**A screen shot of a computer code

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# Server (server.py)

## Python Source Code:

import socket

from encrypt import decrypt, encrypt

#set up the server socket

server = socket.socket()

server.bind(('localhost', 9999))

server.listen(1)

print("Server listening...")

#accept one client connection

conn, addr = server.accept()

print("Connected:", addr)

#continuous chat loop

while True:

msg = conn.recv(1024) # Receive encrypted message

if msg:

print("Client:", decrypt(msg)) # Decrypt and print

reply = input("You: ") # Get your response

conn.send(encrypt(reply)) # Encrypt and send back

## Screenshot of Output:

**A screen shot of a computer code

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# Client (client.py)

## Python Source Code:

import socket

from encrypt import decrypt, encrypt

#connect to the server

client = socket.socket()

client.connect(('localhost', 9999))

#continuous chat loop

while True:

msg = input("You: ") # Get user input

client.send(encrypt(msg)) # Encrypt and send

reply = client.recv(1024) # Receive and decrypt reply

print("Server:", decrypt(reply))

## Screenshot of Output:

A computer screen shot of a program code

AI-generated content may be incorrect.