BLOCKCHAIN ASSIGNMENT-1 NAME-N.MOHAN SAI GUPTA ROLL NO-2303A51502

BATCH-25 QUESTION-1:

Objective:

To learn blockchain interaction by creating a cryptocurrency wallet,

checking wallet balance, and simulating transactions using

Python and Web3 Requirements:

- Install Python 3.x
- Set up VS Code with Python extension
- Install required Python libraries:
- pip install web3
- Use a test blockchain network (Ethereum Sepolia /

Ganache local blockchain)

- Basic understanding of blockchain wallets and private keys Practical

  Description:

Step 1: Environment Setup

- Install Python and VS Code
- Install Web3.py library
- Create a Python file named wallet_interaction.py

Step 2: Wallet and Blockchain Interaction Script

Create a Python script that:

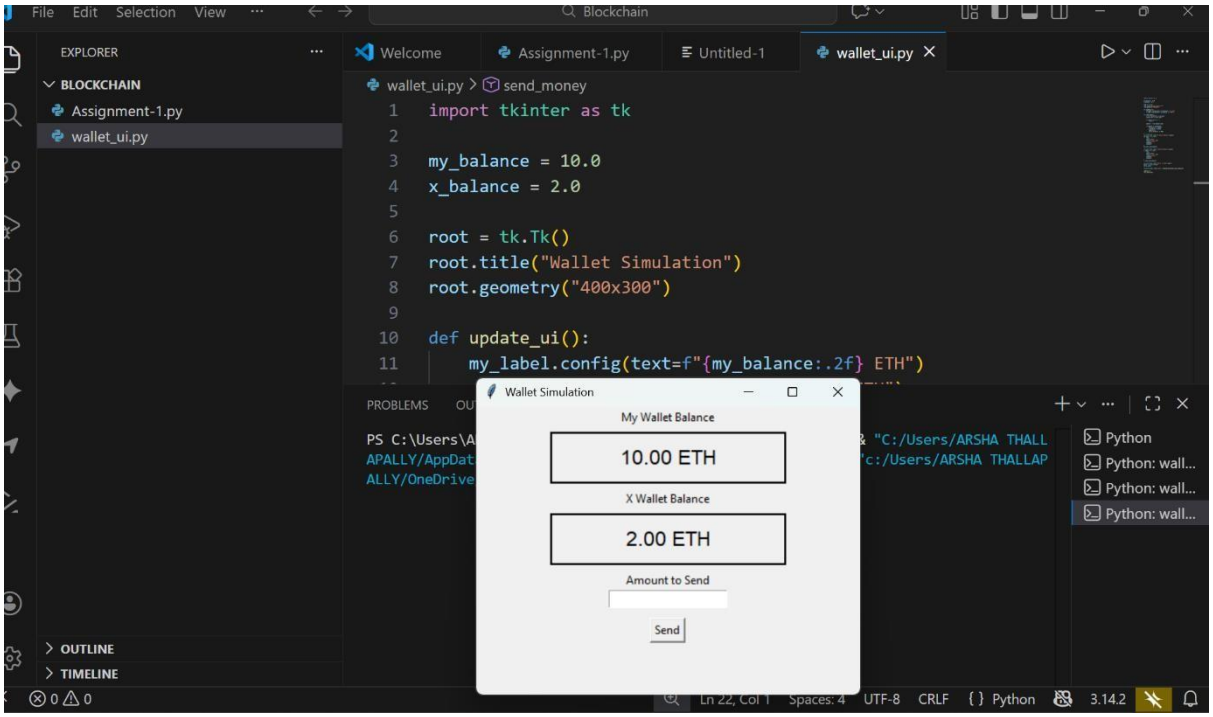
- Connects to a blockchain network
- Loads a wallet using a private key
- Fetches wallet address
- Checks wallet balance
- Demonstrates transaction preparation (without real funds)

Code:

```
import tkinter as tk
my_balance = 10.0 x_balance
= 2.0 root = tk.Tk()
root.title("Wallet Simulation")
root.geometry("400x300")

def update_ui():
   my_label.config(text=f"{my_balance:.2f} ETH")
x_label.config(text=f"{x_balance:.2f} ETH")

def send_money():
   global my_balance, x_balance
amount_text = entry.get()

   if amount_text == "":
return

   amount = float(amount_text)

   if amount <= my_balance:
my_balance -= amount
x_balance += amount
update_ui()        entry.delete(0,
tk.END)

# ---- UI ----
tk.Label(root, text="My Wallet Balance").pack() my_label =
tk.Label(
```

```
   root,     text="0
ETH",
font=("Arial", 16),
relief="solid",
width=20,
height=2
)
my_label.pack(pady=5)

tk.Label(root, text="X Wallet Balance").pack() x_label =
tk.Label(
   root,     text="0
ETH",
font=("Arial", 16),
relief="solid",
width=20,
height=2
)
x_label.pack(pady=5)

tk.Label(root, text="Amount to Send").pack()
entry = tk.Entry(root) entry.pack()

tk.Button(root, text="Send", command=send_money).pack(pady=10)

update_ui() root.mainloop()
```

OUTPUT:



After sending the ETH (3 ETH)to 'X' -my wallet remained with 7 ETH