

BLOCKCHAIN

ASSIGNMENT-1

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BATCH-29

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()

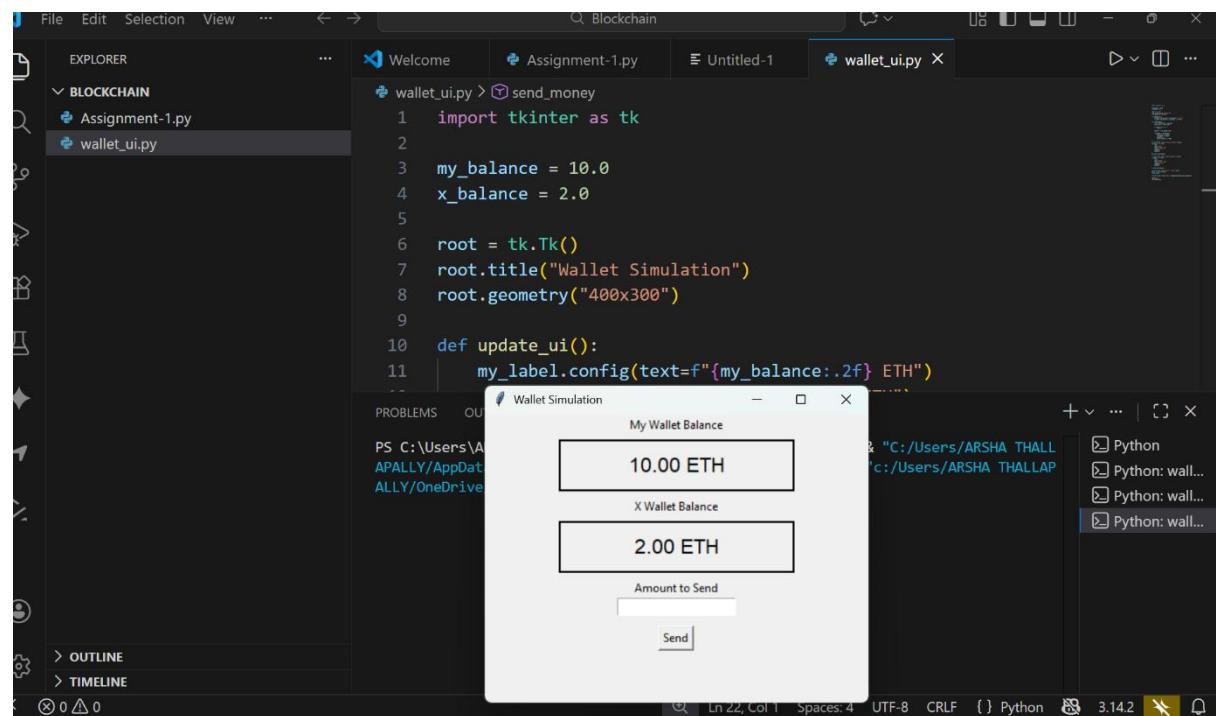
tk.Button(root, text="Send", command=send_money).pack(pady=10)

update_ui()

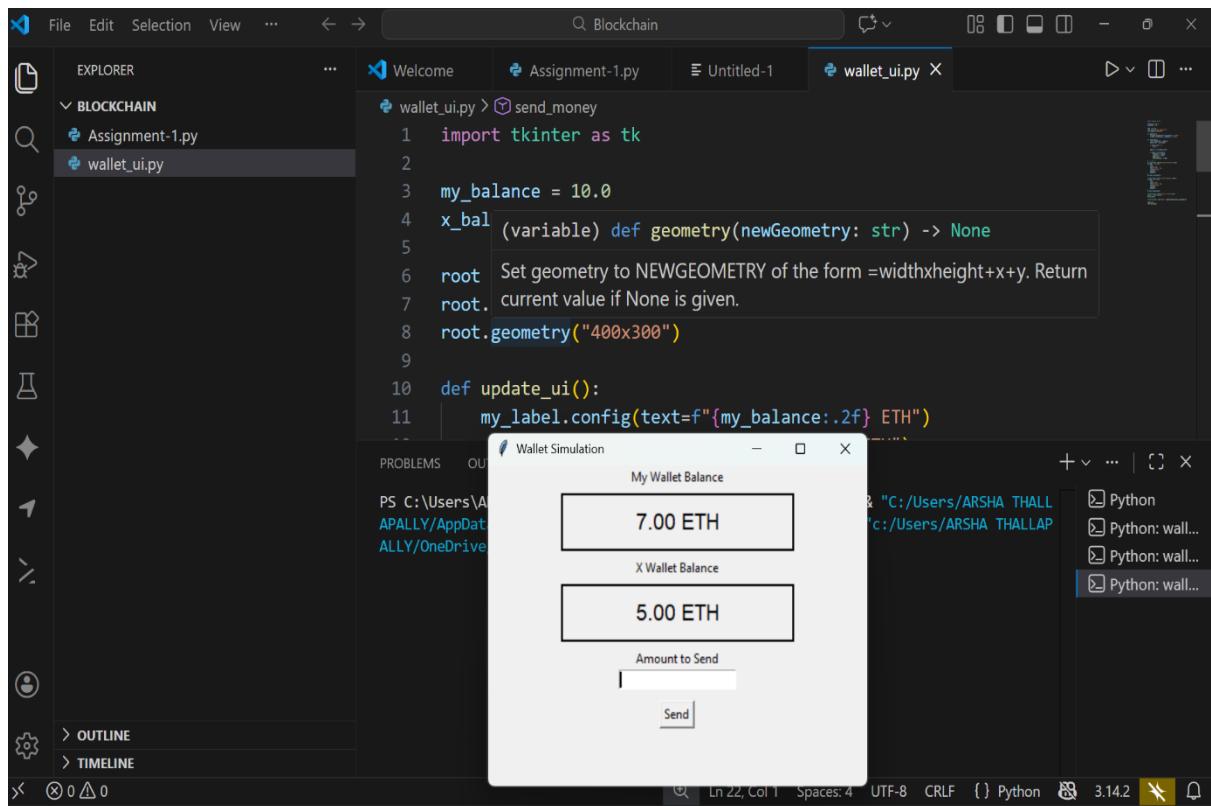
root.mainloop()

```

OUTPUT:



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



```
File Edit Selection View ... ← → Q Blockchain ... EXPLORER ... Welcome Assignment-1.py Untitled-1 wallet_ui.py ...  
BLOCKCHAIN  
Assignment-1.py wallet_ui.py  
1 import tkinter as tk  
2  
3 my_balance = 10.0  
4 x_bal (variable) def geometry(newGeometry: str) -> None  
5  
6 root Set geometry to NEWGEOMETRY of the form =widthxheight+x+y. Return  
7 root. current value if None is given.  
8 root.geometry("400x300")  
9  
10 def update_ui():  
11     my_label.config(text=f"{my_balance:.2f} ETH")  
PROBLEMS OUTLINE TIMELINE C:\Users\APALLY\AppData\Local\OneDrive  
PS C:\Users\APALLY\AppData\Local\OneDrive  
My Wallet Balance  
7.00 ETH  
X Wallet Balance  
5.00 ETH  
Amount to Send  
Send  
+ ... | C:\Users\ARSHA THALLAPALY\OneDrive  
C:\Users\ARSHA THALLAPALY\OneDrive  
Python: wall...  
Python: wall...  
Python: wall...  
Python: wall...  
Ln 22, Col 1 Spaces: 4 UTF-8 CRLF { } Python 3.14.2
```