

## ASSIGNMENT-5:

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BATCH-29

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PROBLEM STMT:

TO DEVELOP AND PERFORM UNIT TESTING OF SMART CONTRACTS USING THE TRUFFLE FRAMEWORK

-PROBLEM STATEMENT (EQUIVALENT TO GIVEN CIPHER PRACTICAL)

DEVELOP A BASIC PERSONAL PORTFOLIO SMART CONTRACT THAT STORES AND RETRIEVES USER PROFILE DATA, AND VALIDATE ITS BEHAVIOR USING TRUFFLE UNIT TESTS

CODE WITH OUTPUT:

The image shows a code editor with a Python script named `blockchain_app.py` and its graphical user interface (GUI) running. The code defines a Tkinter application with several functions: `store_profile()` to save user data, `get_profile()` to retrieve it, and `send_ether()` to simulate a transaction. The GUI, titled "Blockchain Portfolio Interface", contains input fields for Name, Email, Skills, and Receiver Address, along with a label for the Amount (ETH). It also features buttons for "Store Profile", "Get Profile", "Send Ether", and "Check Balance". The terminal at the bottom shows the command to run the application using Python 3.14.

```
36 tk.Label(app, text="Amount (ETH)").pack()
37 amount_entry = tk.Entry(app)
38 amount_entry.pack()
39
40 result = tk.Label(app, text="", fg="blue")
41 result.pack(pady=10)
42
43 def store_profile():
44     profile["name"] = name_entry.get()
45     profile["email"] = email_entry.get()
46     profile["skills"] = skills_entry.get()
47     result.config(text="Profile stored successfully!")
48
49 def get_profile():
50     result.config(text=f"Name: {profile['name']}\nEmail: {profile['email']}\nSkills: {profile['skills']}")
51
52 def send_ether():
53     if use_blockchain:
54         result.config(text="Ether transfer simulated (Ganache node)")
55     else:
56         result.config(text="Blockchain not connected. Transfer failed.")
```

Blockchain Portfolio Interface

Name: Arsha

Email: arsha@gmail.com

Skills: Blockchain, AML

Receiver Address (optional): b2c4e3f7d1a9b5c6e4f1234567890abcdefff

Amount (ETH):

Profile stored successfully!

Store Profile

Get Profile

Send Ether

Check Balance

PS C:\Users\ARSHA THALLAPALLY\OneDrive\Desktop\Blockchain> & "C:/Users/ARSHA THALLAPALLY/AppData/Local/Programs/Python/Python314/python.exe" "c:/Users/ARSHA THALLAPALLY/OneDrive/Desktop/Blockchain/blockchain\_app.py"

## GET PROFILE:

Blockchain Portfolio Interface

Name

Arsha

Email

arsha@gmail.com

Skills

Blockchain,AI/ML

Receiver Address (optional)

2C4E3F7D1A9B5C6E4F1234567890ABCDEFF

Amount (ETH)

1

Transfer done

Store Profile

Get Profile

Send Ether

Check Balance

## Send Eth:

Blockchain Portfolio Interface

Name

Arsha

Email

arsha@gmail.com

Skills

Blockchain,AI/ML

Receiver Address (optional)

2C4E3F7D1A9B5C6E4F1234567890ABCDEFFF

Amount (ETH)

1

Transfer done

Store Profile

Get Profile

Send Ether

Check Balance