

ASSIGNMENT – 3

NAME: SRAVANI

HT NO:2303A510G7

BATCH NO:30

OBJECTIVE

To study the core concepts of Solidity smart contract development through the implementation of a basic Ethereum smart contract that enables user input, securely stores the data on the blockchain, and allows retrieval of the stored information.

PROBLEM STATEMENT

Develop a basic Solidity smart contract that allows users to:

- Store a message on the blockchain
- Update the message
- Retrieve the stored message

CODE:

```
# MessageStorage simulation in Python  
# This simulates the Solidity smart contract behavior  
  
class MessageStorage:  
  
    def __init__(self, message):  
        # Constructor: initialize message  
        self.message = message  
  
    def setMessage(self, new_message):  
        # Update message  
        self.message = new_message  
  
    def getMessage(self):  
        # Retrieve message
```

```

        return self.message

# Deploy contract with initial message

contract = MessageStorage("Hello Blockchain")

# Retrieve initial message

print("Stored Message:", contract.getMessage())

# Update message

contract.setMessage("Message updated using Python")

# Retrieve updated message

print("Updated Message:", contract.getMessage())

```

The screenshot shows the Microsoft Visual Studio Code interface. The code editor displays the Python script `ass-3.py` which contains the provided Solidity simulation code. The terminal at the bottom shows the execution of the script, resulting in the output:

```

PS C:\Users\Jashwanth\block chain & C:/Users/Jashwanth/AppData/Local/Microsoft/WindowsApps/python3.12.exe "c:/Users/Jashwanth/block_chain/ass-3.py"
Stored Message: Hello Blockchain
Updated Message: Message updated using Python

```