



Centurion
UNIVERSITY
*Shaping Lives...
Empowering Communities...*

School: Campus:

Academic Year: Subject Name: Subject Code:

Semester: Program: Branch: Specialization:

Date:

Applied and Action Learning (Learning by Doing and Discovery)

Name of the Experiment : Know Your TX – Dissecting a Transaction

Objective/Aim :

To analyze the internal structure and behavior of a blockchain transaction by using a transaction hash and exploring it through a blockchain explorer (Sepolia Testnet)

Apparatus/Software Used:

- ⌚ MetaMask Wallet (Testnet enabled)
- ⌚ Sepolia Testnet ETH
- ⌚ Sepolia Etherscan
- ⌚ Web browser and internet
- ⌚ Ethereum test contract (for interaction)

Theory/Concept:

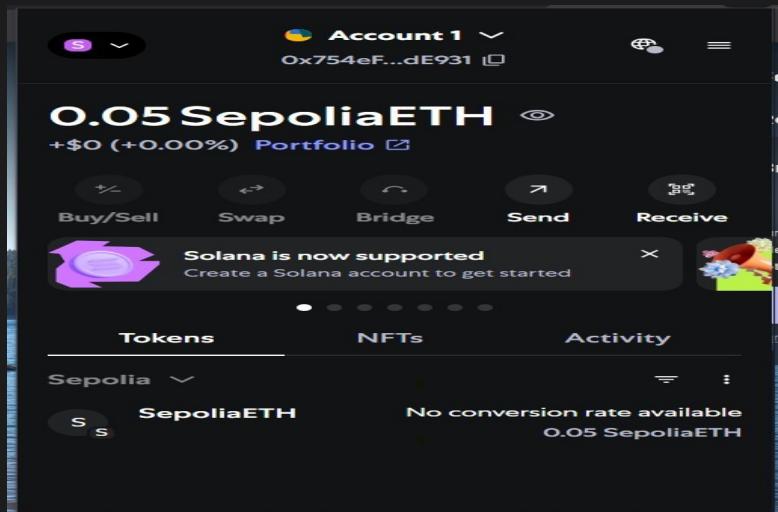
A **transaction (TX)** on the Ethereum blockchain represents an action initiated by an externally owned account (EOA). Transactions may transfer ETH or interact with smart contracts. Key parts of a transaction include:

- **TX Hash** – unique ID of the transaction
- **From** – sender address
- **To** – receiver or contract address
- **Value** – amount of ETH transferred
- **Gas Fee** – amount paid to miners/validators
- **Status** – success or failure
- **Block** – block number where TX was recorded

Procedure:

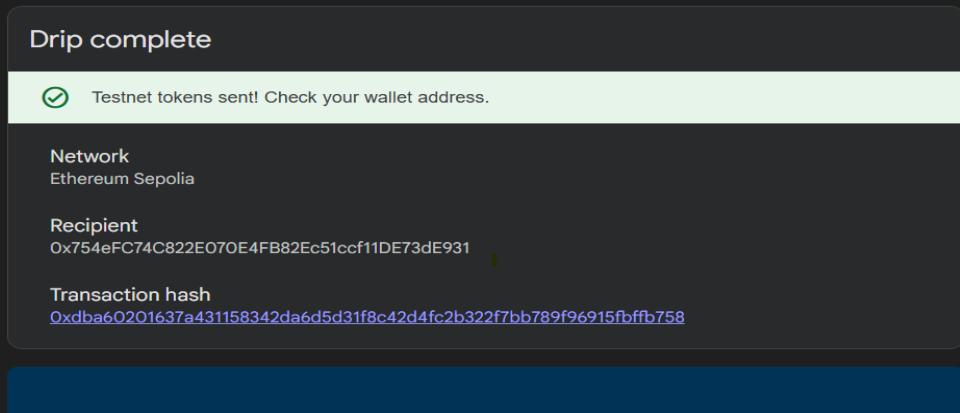
1. Setup MetaMask for Sepolia Testnet:

- Open the **MetaMask** browser extension or mobile app.
- Enable **Sepolia Test Network** from the network list.
- Make sure you have some **test ETH** in your wallet



Ethereum Sepolia Faucet

Get free Sepolia ETH sent directly to your wallet. Brought to you by [Google Cloud for Web3](#).



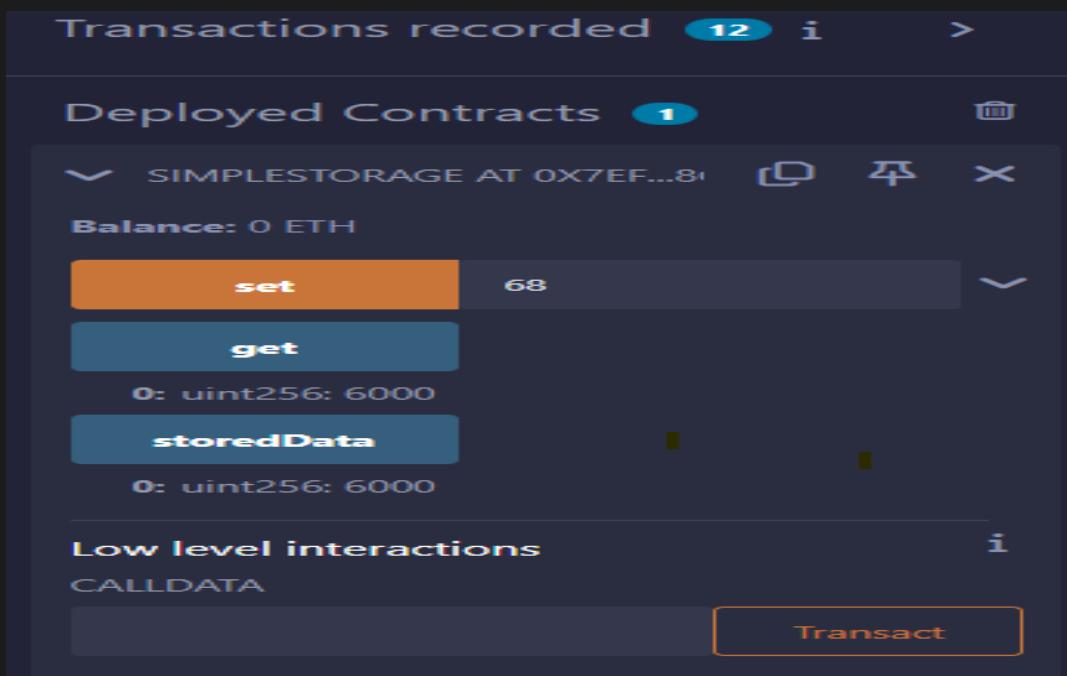
2. Interact with a Smart Contract:

- Visit a platform like **Remix IDE** or any dApp connected to Sepolia.
- Use MetaMask to **call a function** on a deployed **smart contract** (e.g., a counter contract or any public method).
- Submit the transaction

```
1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.0;
3 contract SimpleStorage{
4     uint public storedData;
5
6
7     constructor(uint _data) {    ↳ infinite gas 73800 gas
8         storedData = _data;
9     }
10
11     function set(uint x) public {    ↳ 22514 gas
12         storedData = x;    ↳ DUP1 costs 3 gas - this line costs 5023 gas - 9019 gas left
13     }
14
15     function get() public view returns (uint) {    ↳ 2453 gas
16         return storedData;
17     }
18
19 }
20
```

3. Copy the Transaction Hash (TX Hash):

- After sending the transaction, MetaMask will show a **TX hash** (a long alphanumeric string).
- This hash is a **unique identifier** for your transaction on the blockchain.



4. Open Sepolia Etherscan:

- Go to <https://sepolia.etherscan.io>.
- Paste the **transaction hash** in the search bar and hit Enter

Contract 0x7EF2e0048f5bAeDe046f6BF797943daF4ED8CB47

Overview

ETH BALANCE: 6.212313380497664202 ETH

TOKEN HOLDINGS: \$0.00 (14 Tokens)

More Info

CONTRACT CREATOR: 0x5B38Da6a...f56beddC4 | 2 yrs 248 days ago

Multichain Info

N/A

Ad: Advertise your brand here!

BaseScan Etherscan BscScan
polygonscan SOLSCAN

Transactions Internal Transactions Token Transfers (ERC-20) Contract Events

Latest 25 from a total of 1,022 transactions

Transaction Hash	Method	Block	Age	From	To	Amount	Txn Fee
0xd76130bfca0...	Transfer	8799740	2 days ago	0x2D5a66bC...8e0dD469b	0x7EF2e004...F4ED8CB47	0.001 ETH	0.00003158
0x0a5d834d9f3...	0x1f5c1cea	8787597	4 days ago	0x80C0Be1B...082E926D2	0x7EF2e004...F4ED8CB47	0 ETH	0.00003349

[Download Page Data](#)

5. Analyze the Transaction Details:

On the transaction page, observe the following:

- Status:** Success or Failure of the transaction.
- Block Number:** The block that included your TX.
- Timestamp:** Exact time and date of confirmation.
- From & To Address:** Sender (your wallet) and receiver (wallet or contract).
- Value:** Amount of ETH transferred.
- Transaction Fee:** Calculated as Gas Used × Gas Price.
- Gas Price:** Fee per unit of gas set by the sender.
- To (Contract):** If the transaction is a contract call, it shows the contract address.

TRANSACTION ACTION

Transfer 0.001 ETH to 0x7EF2e0048f5bAeDe046f6BF797943daF4ED8CB47

[This is a Sepolia Testnet transaction only]

② Transaction Hash: 0xd76130bfca0833b45b46971a6a94b29f7f780c4d607c914eea5da866b65f7fcf

② Status: Success

② Block: 8799740 17493 Block Confirmations

② Timestamp: 2 days ago (Jul-19-2025 08:43:00 PM UTC)

② From: 0x2D5a66bCcb934Ee901c139eA41426e98e0dD469b

② To: 0x7EF2e0048f5bAeDe046f6BF797943daF4ED8CB47 ✓

② Value: 0.001 ETH

② Transaction Fee: 0.00003158250029477 ETH

② Gas Price: 1.500000014 Gwei (0.0000000150000014 ETH)

More Details: + Click to show more

Observation:

A transaction was sent on the **Sepolia Testnet** and completed successfully. It was included in **block 8787597** and had over **29,000 confirmations**. The **sender address** was **0x80C0...**, and the **receiver** was a smart contract at **0x7EF2...**. No ETH was sent (value = 0), but a **transaction fee** of **0.00003349 ETH** was paid. The **gas price** was **1.5 Gwei**, and the transaction status was **successful**.

ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10		
Planning and Execution/ Practical Simulation/ Programming	10		
Result and Interpretation	10		
Record of Applied and Action Learning	10		
Viva	10		
Total	50		

Signature of the Student:

Name :

Regn. No. :

Page No.-----

Signature of the Faculty:

* As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

