



FPT UNIVERSITY



ETHVIETNAM



BLOCKCHAIN 101

Supported by





ETHVIETNAM is the blockchain event series with the participation of global large-scale iconic blockchain and cryptocurrency entities. The event aims to empower participants to shape this new world, while cementing the Vietnam community as a thriving hub of Ethereum and blockchain innovation.



Suci is an academy platform to help builders from 0 to 1 on Web3 journey. Students, developers, builders, founders can learn, share and build together.

Suci /suchi/ means pure in Pali language. We believe that the good will and purity is the good start of #BUIDL great projects which can make the world better.

MENTOR

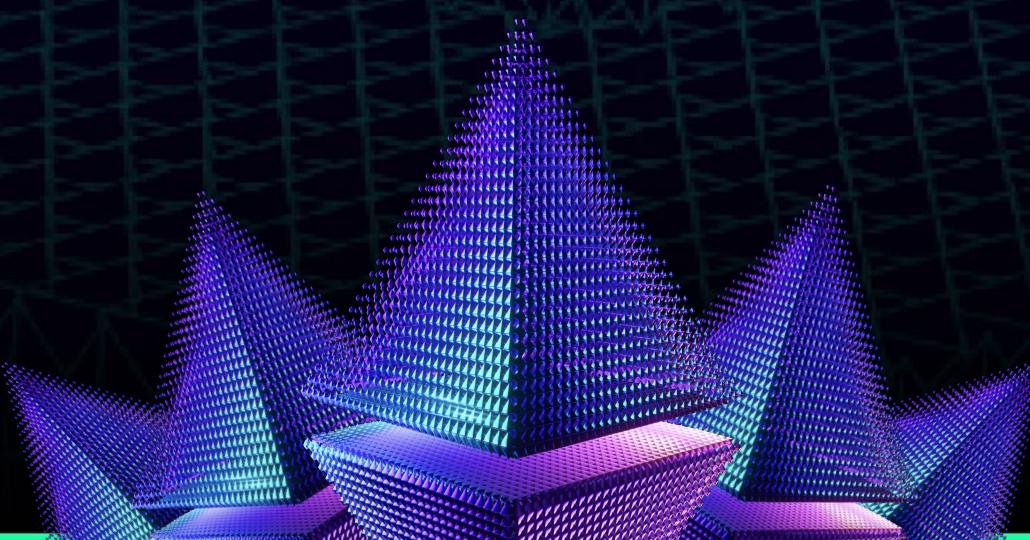


SUE NGUYEN

Developer Relation - SUCI Blockchain Hub

ABOUT THE WORKSHOP

This workshop is designed for university students who are interested in **learning about blockchain** technology or **starting with blockchain development**. This workshop helps to build a mental model of how each moving piece works and to get an understanding of the design principles which will govern your development experience.



ABOUT THE WORKSHOP

BLOCKCHAIN FOUNDATION

[Proudly presented to]

SUE NGUYEN

Graduate the Blockchain Foundation
Bootcamp by SUCI in June 2023



Quinn Giang

Founder SUCI Blockchain Hub
| Ethvietnam |

SYLLABUS

- 1 What is Blockchain Technology?
- 2 Accounts - Crypto Wallets & Smart contract
- 3 Blockchains Pt1 - EVMs
- 4 Blockchains Pt2 - Others & L2s
- 5 Cryptocurrencies - Token standards, IDEs, Faucets, Decentralized Storage
- 6 Programming Process & Tech Stack
- 7 Coding Practice ...
- 8 Defi, NFTs, and Gaming in Web3.
- 9 Code Along: Build an NFT marketplace with Hardhat, IPFS, Typescript
- 10 Cont. Coding

GET TO KNOW EACH OTHER



SPORTS



MUSIC

ART



LESSON 2:

Ethereum

Accounts - Crypto Wallets & Smart contract

01

Blockchain: Bitcoin vs. Ethereum

02

More on Ethereum...

03

Build our first Smart Contract

Blockchain Technology - A Review





What concept of blockchain that ensures data cannot be altered by any users within the network?

ⓘ Click **Present with Slido** or install our [Chrome extension](#) to activate this poll while presenting.

Blockchain Technology - A Review

Definition

- A blockchain is a database of transactions that is updated and shared across many computers in a network.
- Every time a new set of transactions is added, it's called a "block" – hence the name blockchain.
- Most blockchains are public, and you can only add data, not remove. If someone wanted to alter any of the majority of computers on the network or cheat the system, they'd need to do so on the majority of computers on the network. That is a lot! This makes established blockchains highly secure.

From Last Class

[Blockchain 101
- A Visual Demo -](#)

[But How Does Bitcoin Actually
Works?](#)

[The Blockchain Trilema](#)

[Bitcoin whitepaper](#)

[Consensus Algorithm - Thuật Toán
Đồng Thuân Blockchain Là Gì?](#)

[Ethereum Learn Hub](#)

Blockchain Technology - A Review

Decentralization

IMMUTABILITY

TRANSPARENCY

Core
principles

Security

Scalability

The Benefits of Using Blockchain

Industries

Music royalties tracking

Supply chain and logistics monitoring

Original content creation

Advertising insights

Cross-border payments

Voting mechanism

NFT marketplaces

Real-time IoT operating systems

Anti-money laundering tracking system

Different use cases and considerations for each type

Blockchain - Key Terminologies

GLOSSARY

- 1. Blockchain
- 2. Transaction
- 3. Blocks
 - a.
 - b.
 - c.
- 4. Nodes
- 5. Synchronize
- 6. Centralization

- 7. Decentralization
- 8. Consensus Algorithm
 - a. PoW
 - b. PoS
- 9. Cryptography
- 10. Encryption
- 11. Symmetric cryptography
- 12. Asymmetric cryptography

- 13. Cryptocurrency
 - a. Coin
 - b. Token
- 14. Wallet
- 15. Smart contracts
- 16. Protocol
- 17. DApp

ETHEREUM



ethereum
foundation



以太坊

Welcome to Ethereum

Ethereum is the community-run technology powering the cryptocurrency ether (ETH) and thousands of decentralized applications.

[Explore Ethereum](#)

ETHER

WHAT IS ETHER (ETH)?

Currency for our digital future

ETH is digital, global money.

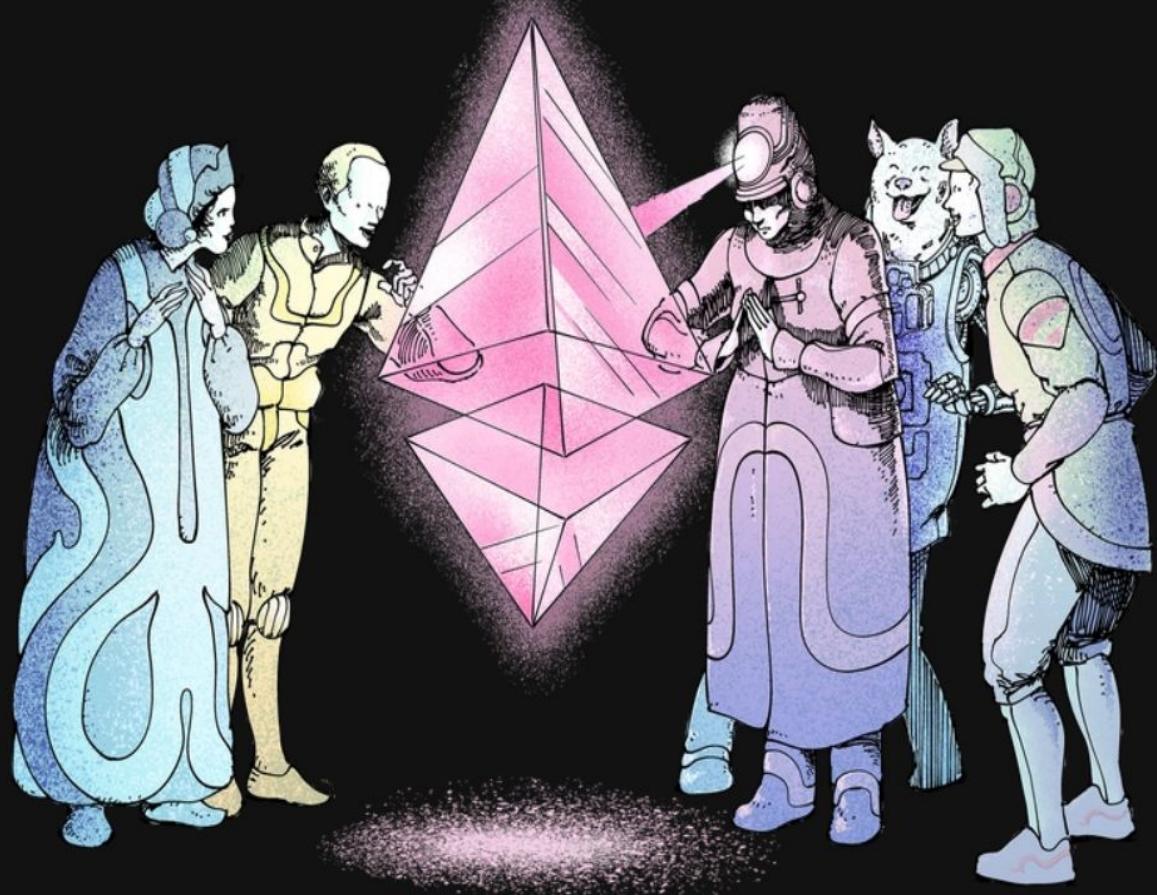
It's the currency of Ethereum apps.

CURRENT ETH PRICE (USD) ⓘ

\$1815.84

1.77% ↗ (LAST 24 HOURS)

Get ETH



ETHEREUM Accounts

Externally-owned account (EOA)
controlled by anyone with the private keys

SIMILARITIES

1. Receive, hold and send ETH and tokens
2. Interact with deployed smart contracts

Contract Account
a smart contract deployed to the network, controlled
by code.

Two practical types of account

External actor



World state

Externally owned account (EOA)

Contract account

EVM code



storage

Autonomous object

EOA is controlled by a private key.

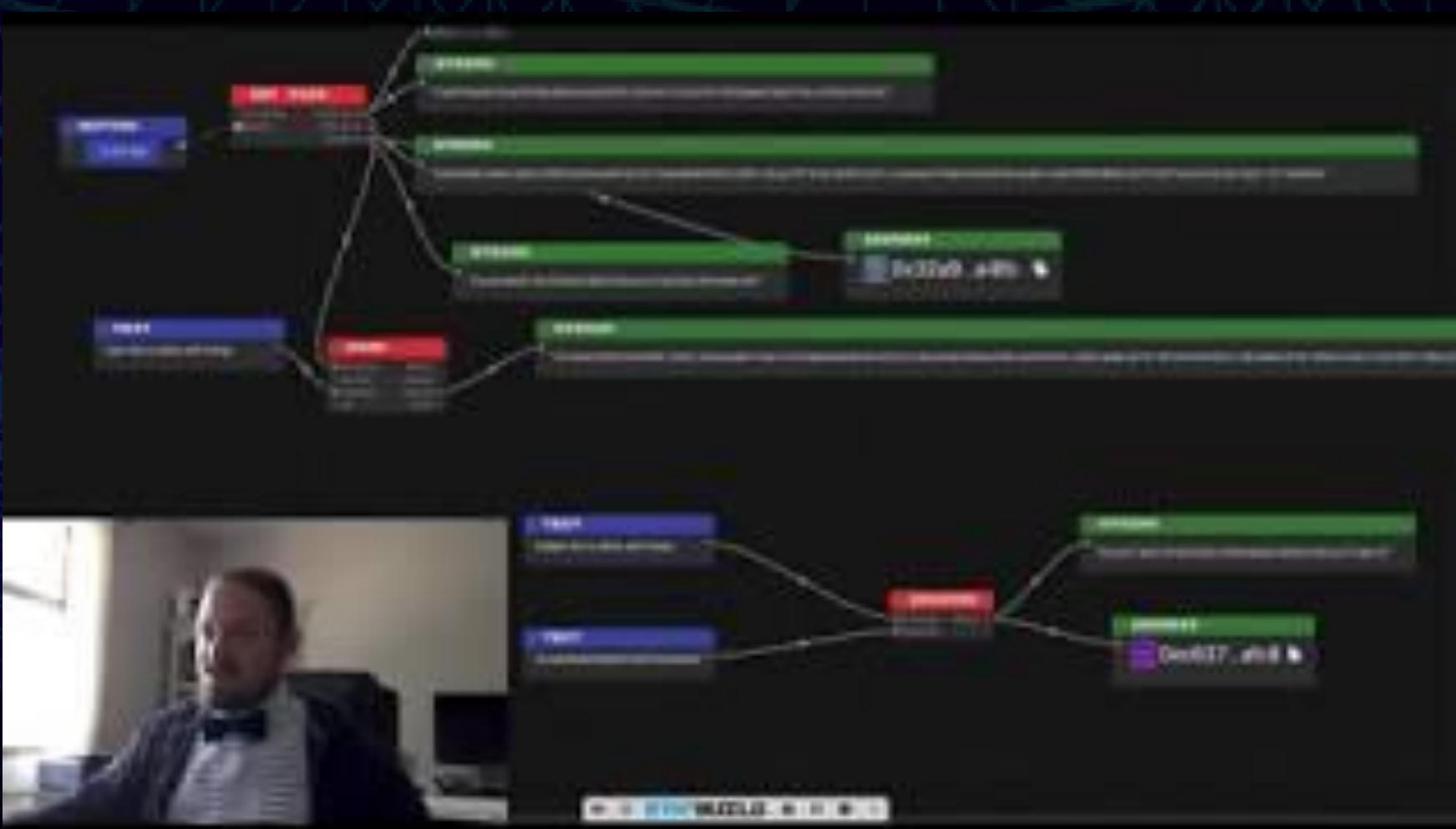
Contract account contains EVM code.

ETHEREUM Accounts

KEY DIFFERENCES

	EOA	Smart Contract
Creation	No cost	Cost (using network storage)
Transaction initiation ability	Yes	No
Limitation	only ETH/token transfers	trigger code -> transferring tokens or creating a new contract
Mechanism	cryptographic pair of keys, public and private keys that control account activities	controlled by the logic of the smart contract code

ETHEREUM Accounts - EOA

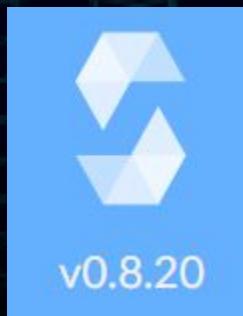


ETHEREUM Accounts - Smart Contract

A smart contract is a program that runs on the Ethereum blockchain. It's a piece of code that has functions and data (state) which resides at a specific address on the Ethereum blockchain.

How to create a smart contract?

SOLIDITY



BUILD!!! Smart Contract



REMIX - Ethereum IDE

SUMMARY



01

More on Blockchain

02

Ethereum

03

Build

Further Reading

[What is a POAP?](#)

[ETH.BUILD](#)

[Decentralized Applications \(DApps\)](#)

[Ethereum EVM Illustrated](#)
(Accounts: 16-31, EVM: 45)

[Video] [Explaining how the EVM works](#)

[Ethereum Virtual Machine EVMS](#)



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FPT WORKSHOP W2: BLOCKCHAIN 101

Friday | 26th May, 2023



CLAIM POAP



SUCI GIFT

THANK YOU FOR JOINING WITH US!