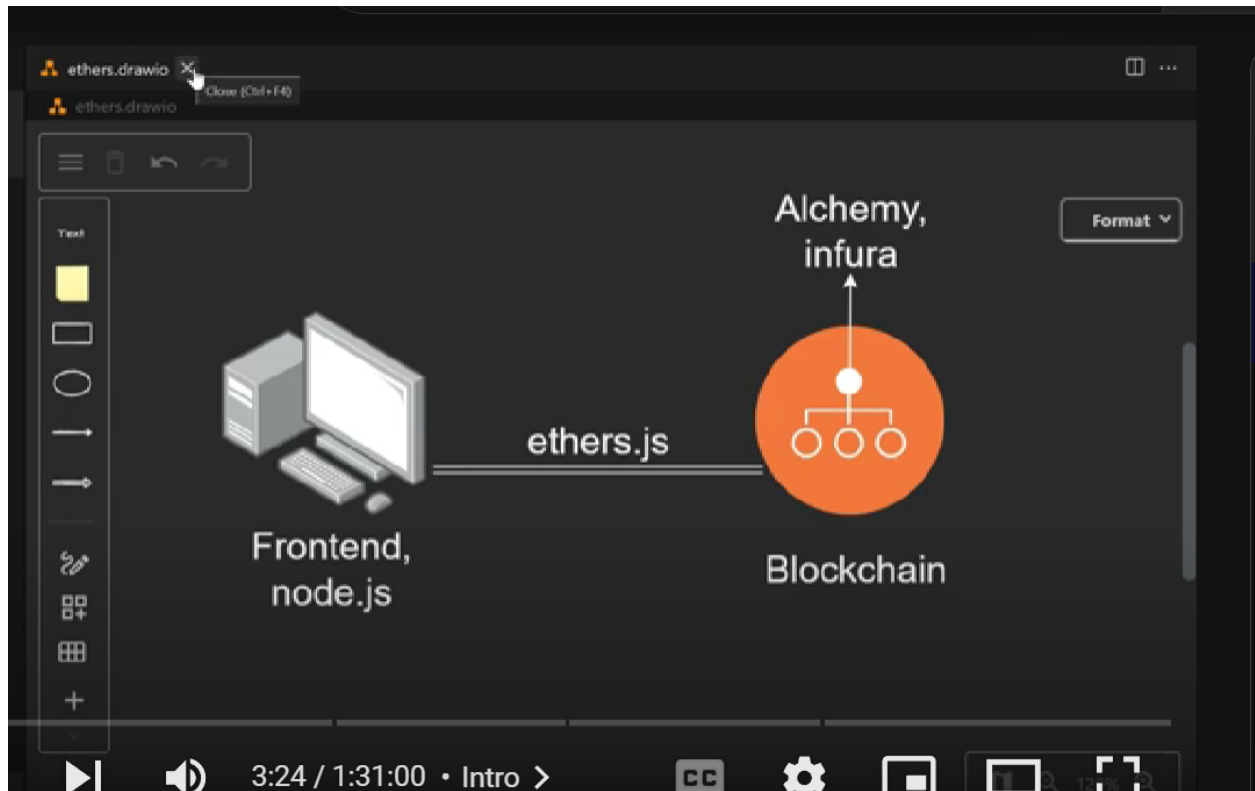


HardHat

-



-

Course Overview

Hardhat

Deployment

Compilation

Testing

Debugging

-

Hardhat

- Hardhat is a **development environment to compile, deploy, test, and debug your Ethereum software.**
- It is written in JavaScript language.

-

Hardhat vs Truffle

Hardhat	Truffle
Faster migration process.	Poor migration process.
Less gas fee during migration.	More gas fee during migration.
Debugging is easy.	Not good as compared to Hardhat.

- Process of HardHat installation

1. PS C:\Users\Nirbhay Gupta\Desktop\Web_Development\13_BlockChain\4_HardHat\HardHat> **npm** init
This utility will walk you through creating a package.json file

2. PS C:\Users\Nirbhay Gupta\Desktop\Web_Development\13_BlockChain\4_HardHat\HardHat> **npm** install --save-dev hardhat

3. PS C:\Users\Nirbhay Gupta\Desktop\Web_Development\13_BlockChain\4_HardHat\HardHat> **npm** run hardhat
888 888 888 888 888

4. PS C:\Users\Nirbhay Gupta\Desktop\Web_Development\13_BlockChain\4_HardHat\HardHat> **npm** install --save-dev @nomiclabs/hardhat-ethers ethers @nomiclabs/hardhat-waffle ethereum-waffle chai

- Compilation in HardHat

1.

```
PS C:\Users\Nirbhay Gupta\Desktop\Web_Development\13_BlockChain\4_HardHat\HardHat\contracts> npx hardhat compile
```

- Testing in HardHat

1.

```
Compiled 1 Solidity file successfully  
PS C:\Users\Nirbhay Gupta\Desktop\Web_Development\13_BlockChain\4_HardHat\HardHat\contracts> npx hardhat test
```

- Debugging in HardHat

1.

```
PS C:\Users\Nirbhay Gupta\Desktop\Web_Development\13_BlockChain\4_HardHat\HardHat> npm hardhat test
```

- Deploying to a live network

1.

```
PS C:\Users\Nirbhay Gupta\Desktop\Web_Development\13_BlockChain\4_HardHat\HardHat> npx hardhat run scripts/deploy.js
```

2.

```
-traces  
PS C:\Users\Nirbhay Gupta\Desktop\Web_Development\13_BlockChain\4_HardHat\HardHat> npx hardhat run scripts/deploy.js --network sepolia
```