Block Chain, Bitcoin & Security

…But truly Bitcoin, Proof of Work and Smart Contracts Development

EPITA - 2022

Part 4: Live Coding

1. A few more resources
2. Objectives
3. Repositories

Part 4: Live Coding

1. A few more resources
2. Objectives
3. Repositories

A few more resources

- Blockchain explorer: https://www.blockchain.com/explorer
- Etherscan: https://etherscan.io/
- OpenZeppelin: https://github.com/OpenZeppelin/openzeppelin-contracts - The most used Solidity library for tokens, among other things
- Solidity documentation: https://docs.soliditylang.org/en/v0.8.13/
- Solidity Discord: https://discord.gg/JH68rjpBtT
- Ethereum Stack Exchange: https://ethereum.stackexchange.com/

Part 4: Live Coding

1. A few more resources
2. **Objectives**
3. Repositories

Objectives

Update Cryptozombies

- cryptozombies.io used to be the reference when learning Solidity a few years ago
- A lot of their explanations are still very clear and valuable
- However, it hasn’t been updated for years: the latest updates takes into account Solidity 0.5.0 (13/11/2018) when we are currently in version 0.8.9
- Most of what changed since: constraints lifted, syntax changed, new requirements

Objectives

Production ready code

- Also, Cryptozombies was a fun way to start, but doesn’t allow you to make production code
- By using Hardhat, we will make unit tests along the development and make sure everything works as intended
- Also, you should learn from when I get stuck

Objectives

Group Project

- By the end, you should be able to produce a complete app based on a decentralised network

Objectives

How about today?

- How to set up a Solidity project: VSCode, npm, Hardhat, Solidity linter, JavaScript linter, hardhat.config.js, project architecture
- Smart contract initialisation, state variables, integers, structs, arrays, functions, function visibility, simili-random, typecasting, events, mapping and addresses, msg.sender, require, inheritance, import, storage vs memory

Part 4: Live Coding

1. A few more resources
2. Objectives
3. **Repositories**

Repositories

To follow the live coding…

- Solidity repository: https://github.com/tnguyen42/cryptozombies-spring3
- Git link: git@github.com:tnguyen42/cryptozombies-spring3.git