Alchemy University – Ethereum Developer Bootcamp
Final Project – (2023-08)

DockChain ⚓

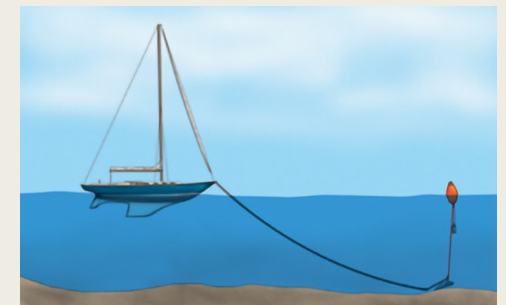A FullStack dApp

DockChain

Boat Mooring Registration Service Made Simple and transparent

- **Full Stack Dapp**
  - *Backend: Solidity*
  - *Frontend: React*
  - *Other: Hardhat, Alchemy API, Bulma*

- A **Boat Mooring Registration Service dApp** available on the Ethereum Blockchain
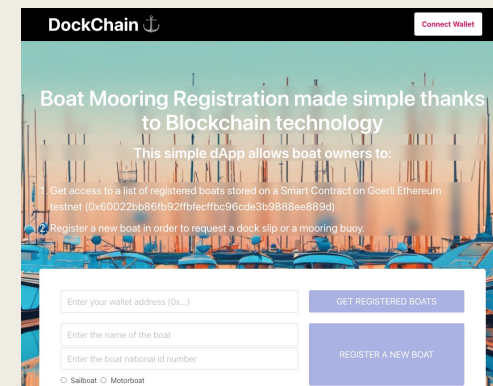
Problem Statement:

- **Small boat owners** struggle to secure **mooring slots in a marina** due to:
  - *Unclear waiting list and lack of transparency in mooring slot allocation*
  - *Complicated access to waiting list status accross various marinas*

- Imagine:
  - *You are a Small boat owner and want to register your new boat to get a mooring slot in a marina close to you*
  - *You need to call the various marinas to check the status (often crowded and need to register to be on a wait list)*
  - *Then wait and hope the allocation process will be fair and that you will get a mooring slot in some years*

DockChain solution:

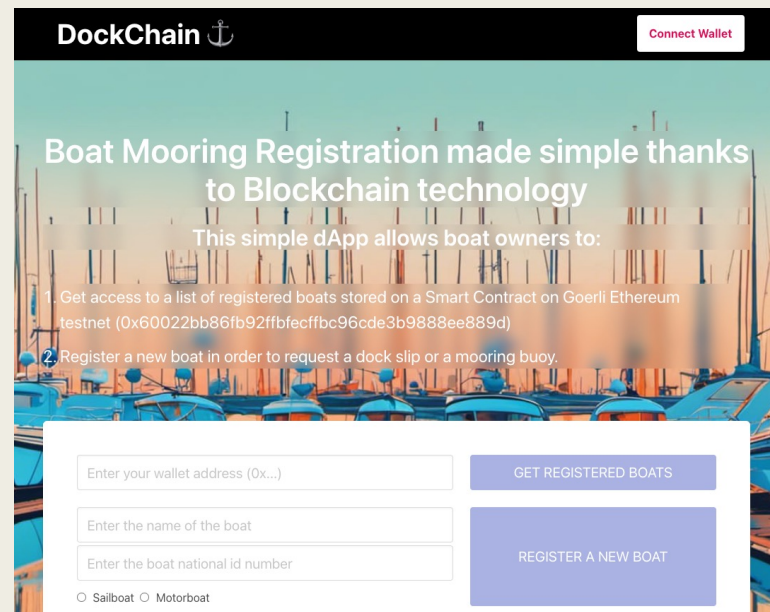- A boat mooring registration service **dApp** on the blockchain that solves these probems:

Pain	Before DockChain	With DockChain	Comment
Time required to register	Long (phone call or in-person visit)	Quick (< 5 minutes)	
Potential allocation manipulation (Transparency / Trust)	Possible	Impossible	**Transparent** process with real-time updates
Security	Low	High	**Secure** data storage on blockchain
Access to waiting lists status	Complicated and time consumming (phone / visits)	Instant access (User friendly dApp)	**Convenient** access to wait lists

<u>Value proposition:</u> *« DockChain simplifies boat mooring registration by offering an easy, secure, and transparent platform that <u>saves time</u> and <u>builds trust</u> between boat owners and marinas. »*

DockChain Demo:

- Watch the video

Next Steps:

- Style DockChain dApp

- Add some « require » to Smart Contract to make sure only relevant data is registered

- Add further functionalities already in the Smart Contract to the frontend part (marina available slots etc...)

- Add « FAQ » and « documentation » pages to the dApp

- Give the possibility to boat owners to create an NFT for their boat (NFT will include boat characteristics)

- Give the possibility to marina operator to create NFTs for mooring slots to facilitate mooring slot allocation (allowed boat size, location etc...)

- Create a market place to allow boat owners to rent out their mooring slots for short period of time when they do not use it

Various links

Description	Link
Project Repo on GitHub	https://github.com/xavsln/DockChain
Smart Contract address on Goerli	0x60022bb86fb92ffbfecffbc96cde3b9888ee889d
Smart Contract data on Etherscan	https://goerli.etherscan.io/address/0x60022bb86fb92ffbfecffbc96cde3b9888ee889d
Live dApp	TBD

Thank you !