True Yield

Project: True Yield ETH Staking Dapp
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Overview

A decentralized application that allows staking Ether (ETH) tokens and earn interest in Ethers on deposit. The app will allow users to un-stake before the unlock date but in that case there will be a penalty, user will lose the earned interest.
The app will also leverage AAVE Lending service to lend the staked tokens and earn yield on them passively.
This will be a full-stack app with complete backend and frontend functionality.

The App will be built using the following stack:
- Solidity
- Hardhat
- Foundry
- Ethers.js
- React.js
- Tailwind CSS

Extra Features

The dapp will also cover these extra features:
- Have three different Interest rates for 1 month, 3 months and 6 months period
- User will be able to un-stake before the unlock-date, however, the earned interest will be lost
- Contract owner will be able to lend the staked tokens on Aave to earn yield
- User will be able to see the Days remaining and accrued interest.

Deliverables

1. A complete Web app with backend and frontend
   a. Complete Wallet connect functionality
   b. Three different tiers for staking based on time period
   c. Staked Assets details
   d. View Staked Amount, Accrued Interest and Remaining Days
   e. Stake and Un-stake functionality

      f.   Unit Tests (Foundry or Chai)
2. Smart contract will all the above mentioned functionality
     a.   Stake and Un-stake functions
     b.   Calculate Interest function
     c.   A struct for current position of the user
     d.   Positions and Tiers mappings
3. A Complete frontend application built with ReactJS and Tailwind CSS

Workflow Visual