

Test task for Solidity developer

Description:

Within the framework of our DeFi product, we want to allocate funds into an investment strategy based on the Moonwell protocol (<https://moonwell.fi/>) on the Base blockchain. The strategy looks as follows step by step:

1. Deposit USDC as collateral into the lending protocol Moonwell.
2. Borrow DAI against the collateral of USDC with an LTV of 70%.
3. Swap borrowed DAI to USDC on any DEX.
4. Deposit the received USDC into the Moonwell protocol as collateral.

Requirements:

- It is necessary to develop a smart contract that allows allocating funds within the described strategy.
- The smart contract awaits input of USDC tokens and after depositing them to its address, it holds the USDC.
- We can call a method that will place the whole deposited amount of USDC within the described strategy in one transaction.
- We can call a method that will unwind our position in Moonwell protocol and withdraw the whole amount of USDC to the smart contract address in one transaction.
- We can call a method that will the whole amount of USDC to the owner address. Owner's address should be predefined at the moment smart contract deployment.
- Deploy the protocol on the Base blockchain (gas expenses reimbursed) and verify the code.