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Public Blockchain: Exercises

Hands-on Intro to Blockchains

Home Assignments Tutorial

NOW - Knowledge Base
Learn Blockchain with Blockchain NOW!

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How to Submit Home Assignments

In 15 steps…

How to Submit Home Assignments

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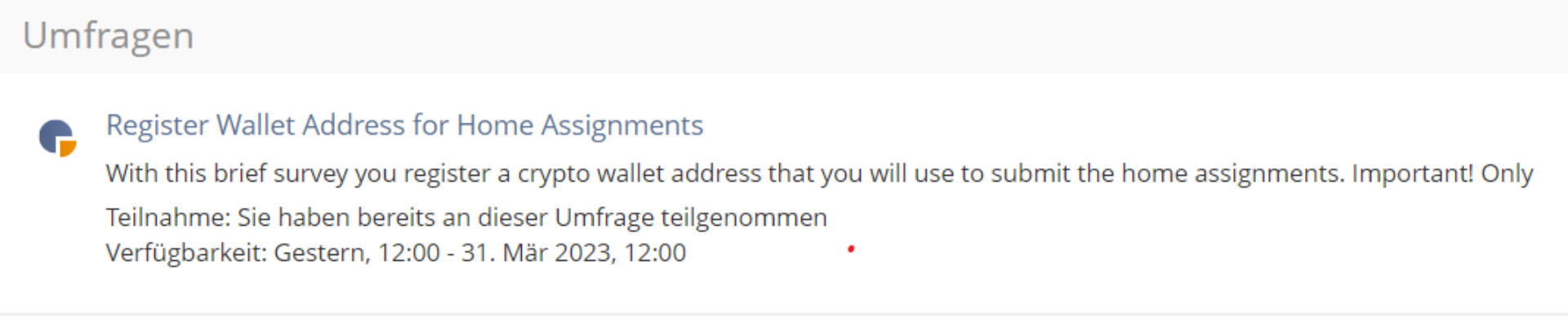
1. You have registered your wallet address through the ILIAS survey.

2. The address you registered is one of your Metamask's addresses, so you can interact with the course's Dapp.

3. Other Ethereum browser wallets might work but are not tested.



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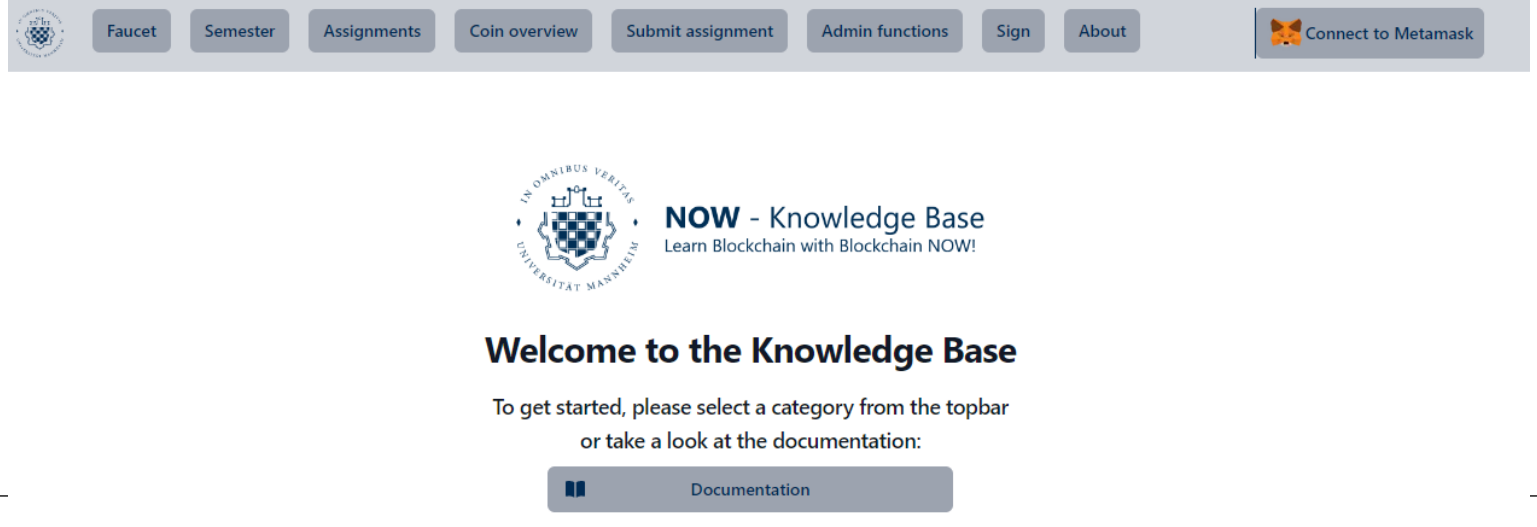
4. Open the browser to the (not) UniMa Blockchain dapp.

5. Connect the Metamask's address that you registered at step 1.



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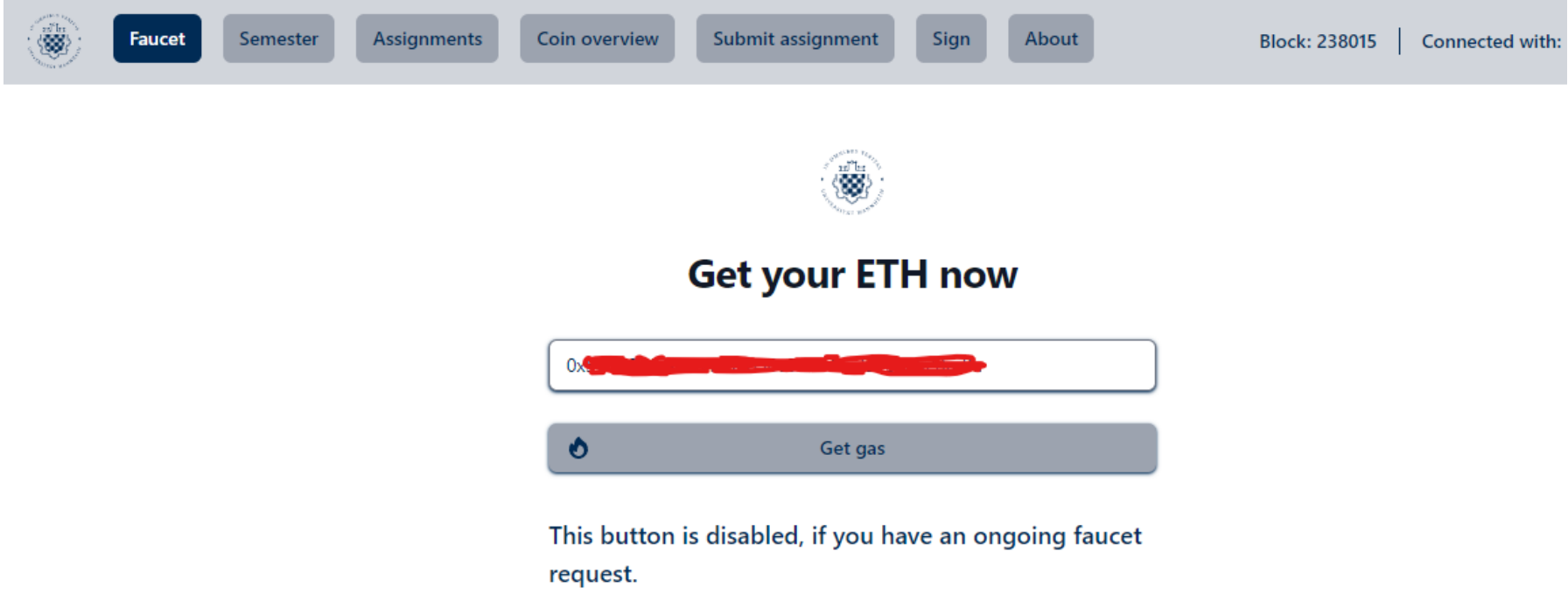
6. Get (not) Uni Mannheim ETH from the Faucet (first time gasless).



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7. Work on the assignment on VS Code (or other editor)…

8. When you are ready, deploy your contract to the (not) UniMa blockchain

9. From a working Hardhat project folder:

```
npx hardhat compile
npx hardhat run scripts/my_deploy_script.js
```

or

```
npx hardhat ignition deploy ignition/modules/my_module.js
```

Don't forget to add the (not) unima network in hardhat.config.js and set as default

Can use yarn instead of npx

10. Copy the deployment address from the terminal, for instance:

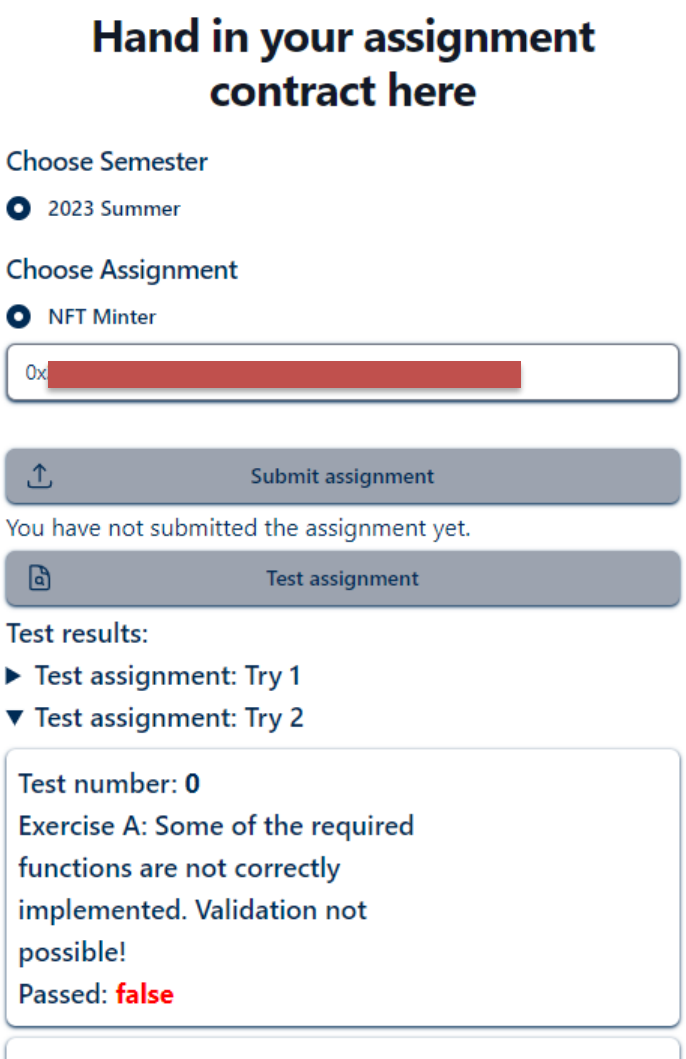
```
PS C:\Users\stefa\www\public-blockchains-assignments> npx hardhat compile
Compiled 1 Solidity file successfully
PS C:\Users\stefa\www\public-blockchains-assignments> npx hardhat run .\scripts\deploy_erc20_base.js
ERC20_base deployed to 0x3A45D2e1e28904628f1EF3A6C4Bc4ff869490cAd
PS C:\Users\stefa\www\public-blockchains-assignments>
```

How to Submit Home Assignments

11. In the Dapp, select “Submit Assignment”, pick the assignment you want to validate and then paste the deployed address

12. Try “Test Assignment” to check how many tests your contract will pass

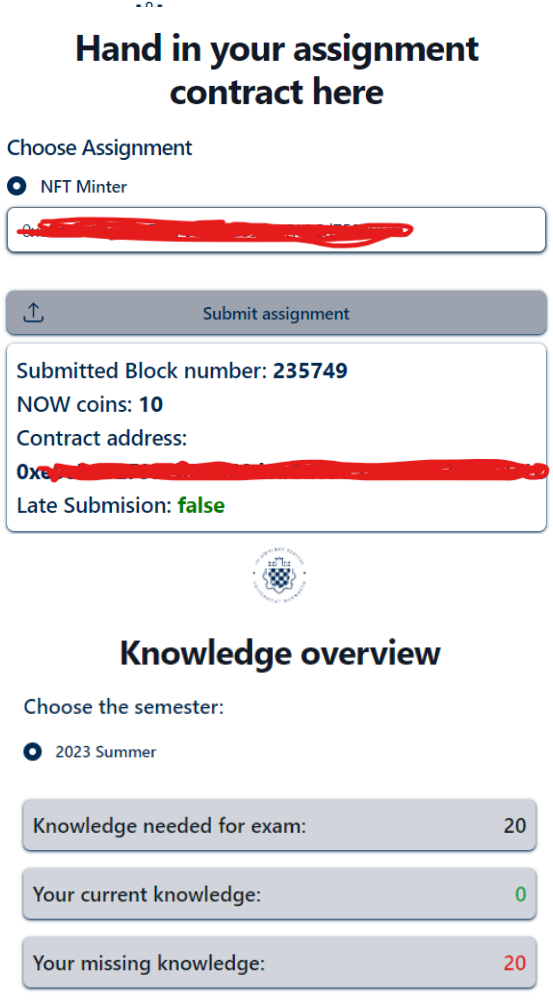
13. If you pass all tests KUDOS! Otherwise, go back to Step 7 and repeat the test as many times as needed without penalty.



How to Submit Home Assignments

14. When ready, click “Submit Assignment” to get your knowledge coins (NOW) and to find out if yours is a late submission.

15. You can check how many coins you have gained so far from the Coin overview tab



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Important!

Practical advices for successful submissions…

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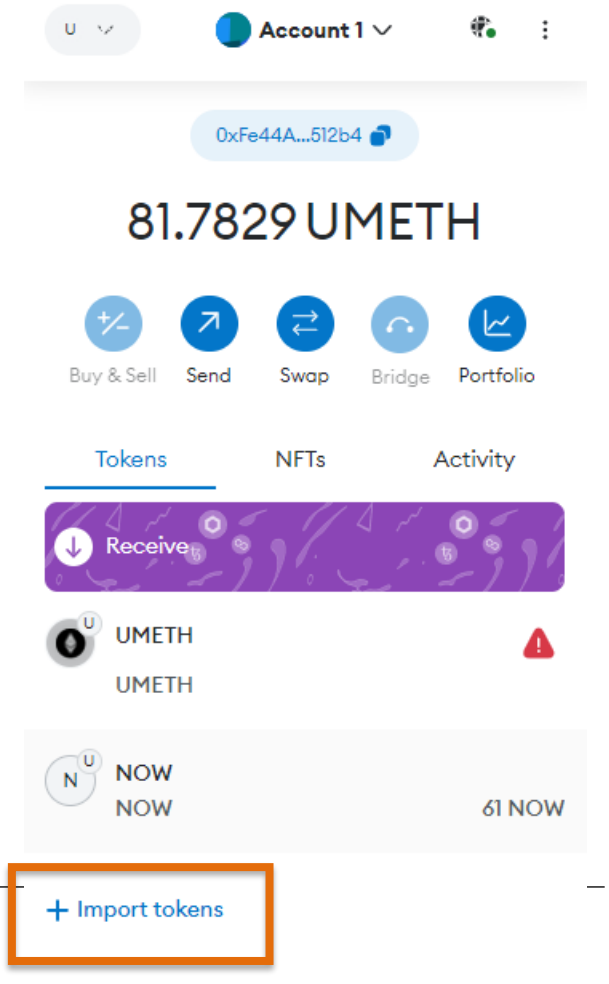
- NOW coins are [“soul-bounded”](#) ERC-20 tokens, i.e., not transferable.
- NOW coins are not displayed by MetaMask unless you manually add them: 0x61Def87D62EEbBA2BC7419F6a95075d3eC0c132c
- MetaMask might still fail to display NOW coins: https://community.metamask.io/t/not-able-to-import-custom-tokens-on-mm-from-ganache/22939)



Practical advices for successful submissions…

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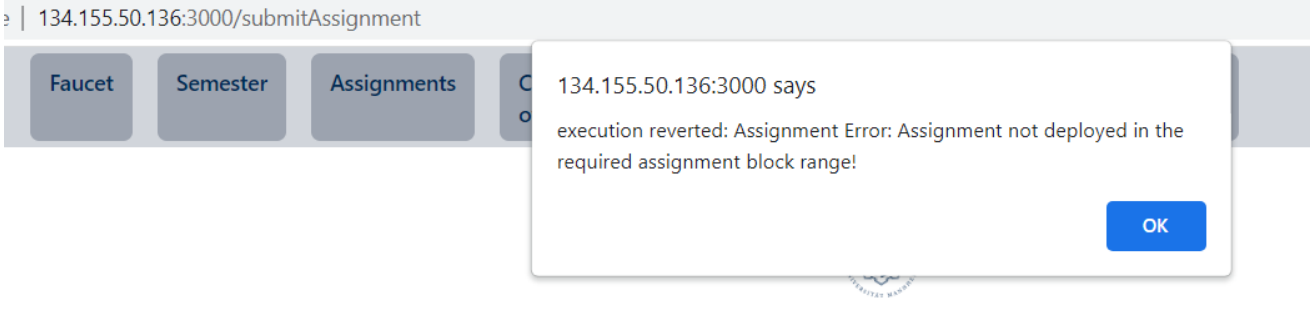
- You can only test/submit contracts that you have deployed yourself.

- Every assignment must inherit the “BaseAssignment” contract; the BaseAssignment takes the Validator Address as input parameter. An error with the BaseAssignment, will get you an error like the one below, because the validator contract cannot properly interact with your submission.



Practical advices for successful submissions…

If you interact with your contract with Ethers.JS:

- If you get an error like 'UNPREDICTABLE_GAS_LIMIT', this is usually due to an incorrect invocation (e.g., wrong parameters passed), less often it can be an internal error of the method you created.

Practical advices for successful submissions…

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- If you have additional pieces of advices to share with your fellow students, please let us know!
- If you get stuck, ask for help in Discord.