THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

COMP5568 Decentralized Finance

Lab 1: Smart Contracts for DeFi

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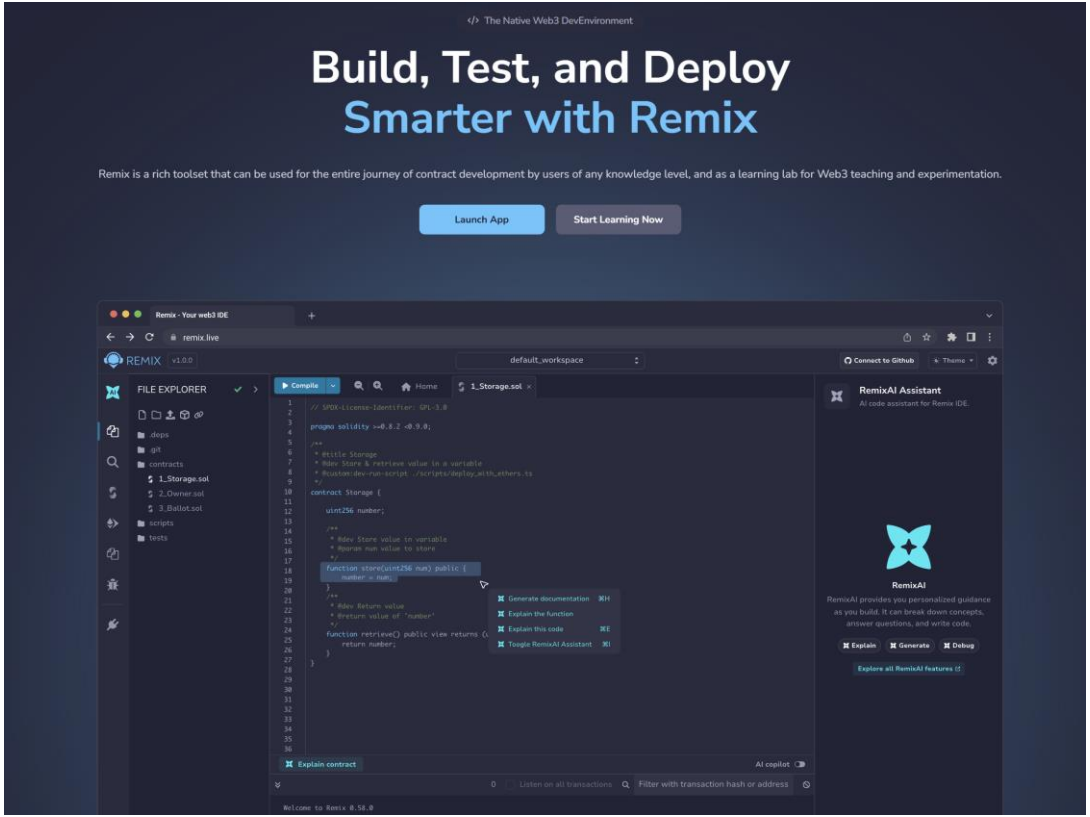
Outline

- Introduction
- Task 1: Deploy ERC-20 Token Contract
- Task 2: Transfer the ERC-20 Token

Introduction

- Remix: https://remix.ethereum.org/



Introduction

- The ERC-20 introduces a standard for **Fungible Tokens**, in other words, they have a property that makes each Token be exactly the same (in type and value) as another Token.
- For example, an ERC-20 Token acts just like the ETH, meaning that 1 Token is and will always be equal to all the other Tokens.
- Example functionalities ERC-20 provides:
  - **Transfer** tokens from one account to another.
  - Get the current token balance of an account.
  - Get the total supply of the token available on the network.
  - Approve whether an amount of token from an account can be spent by a third-party account.

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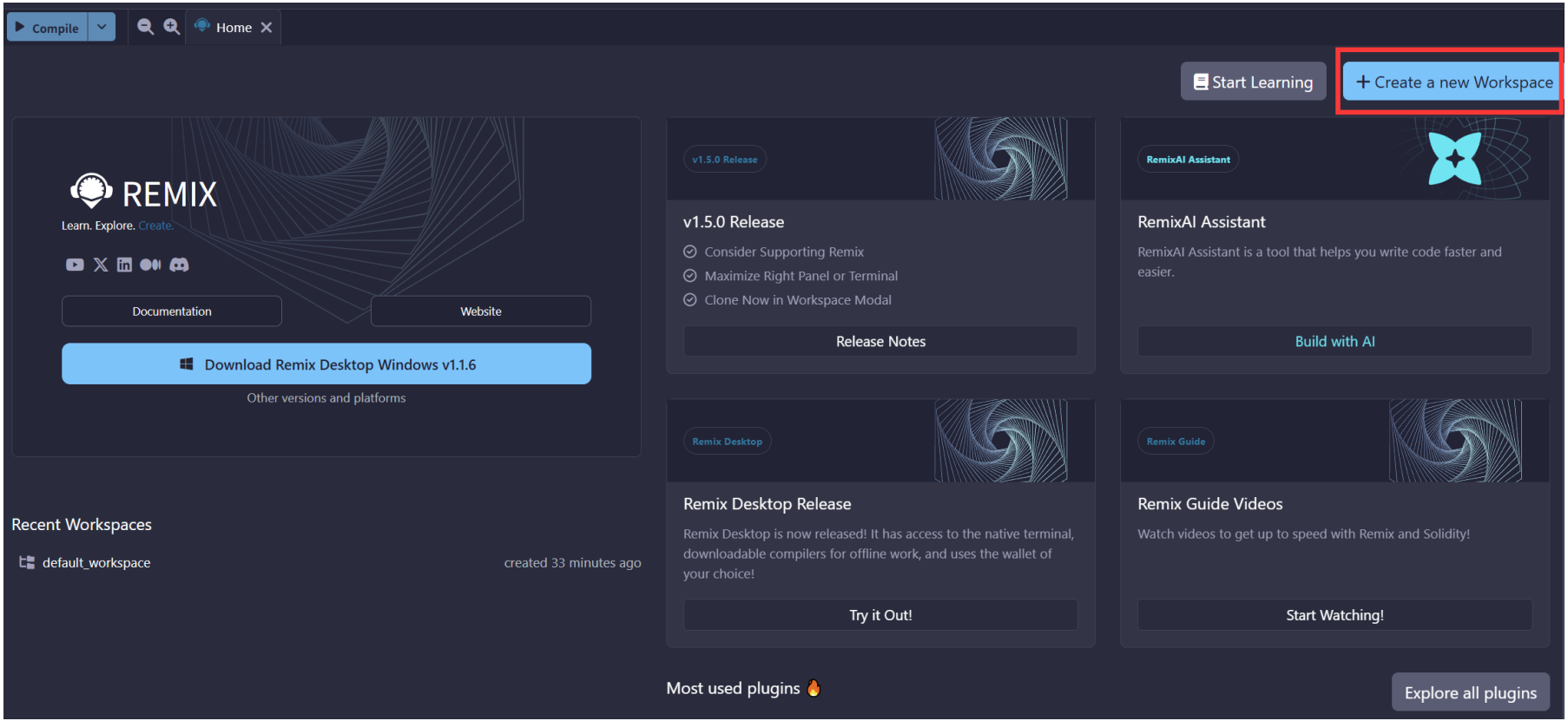
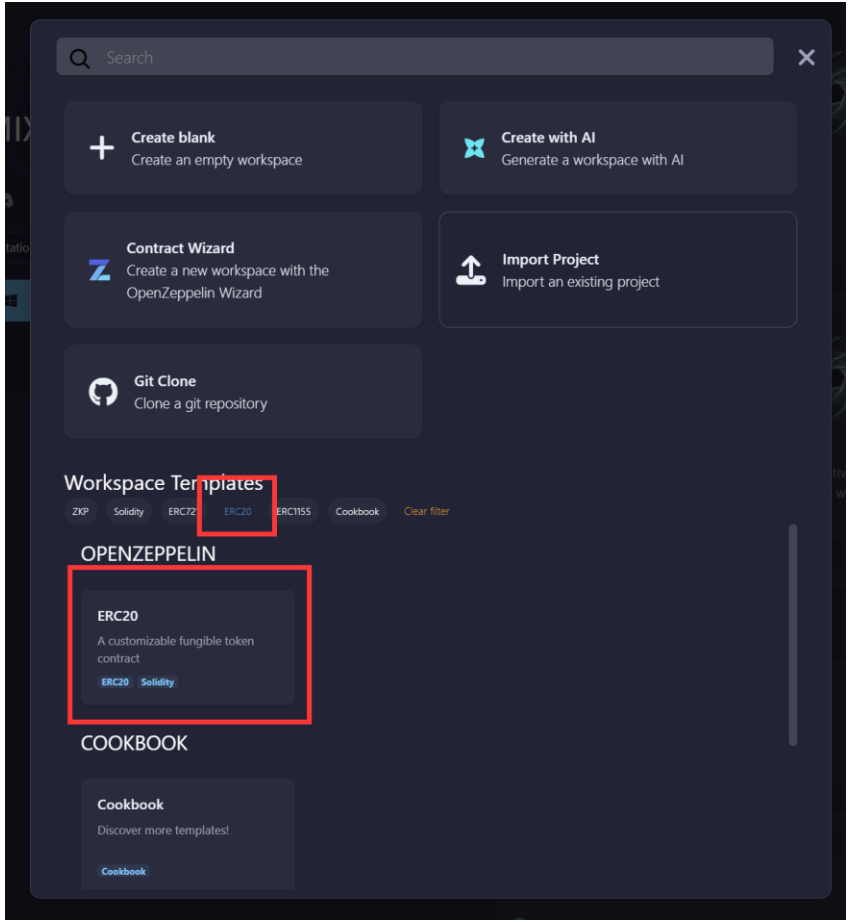
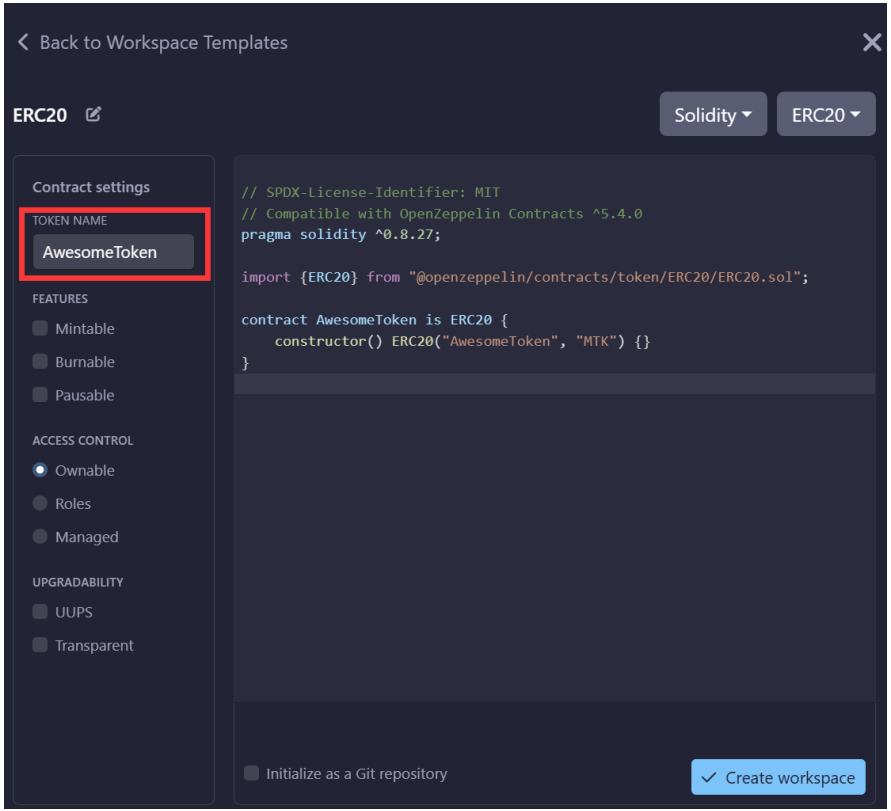
Task 1: Create from template

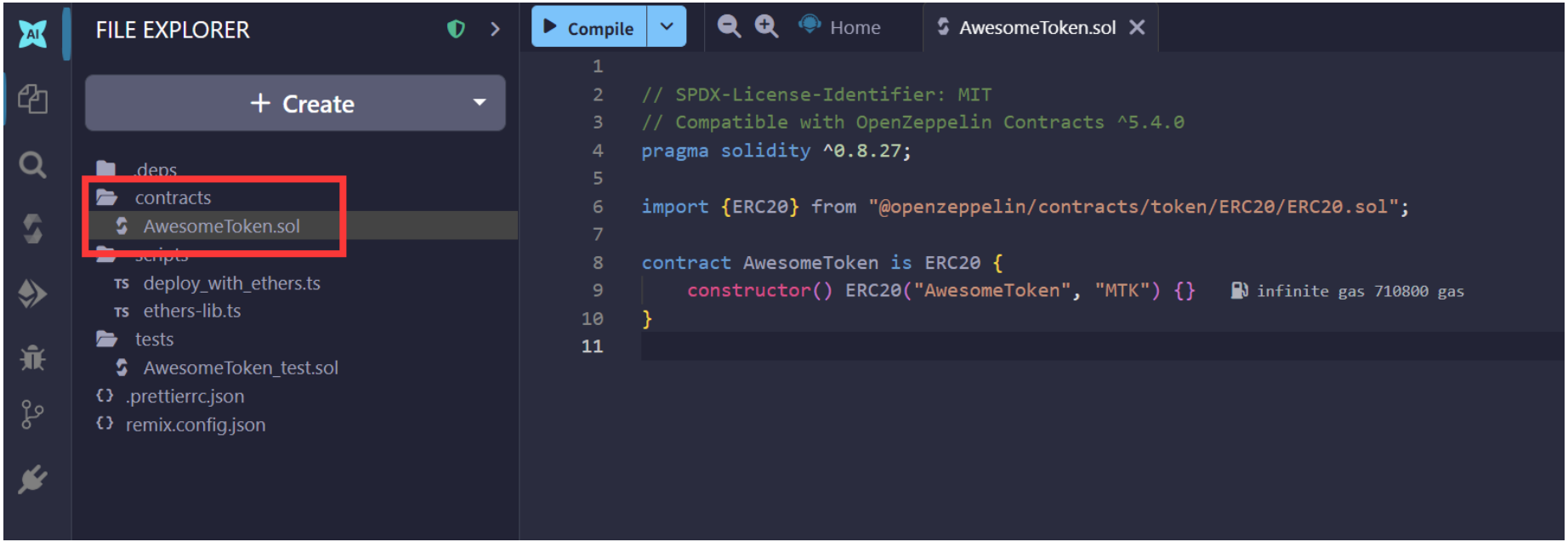


Task 1: Create from template

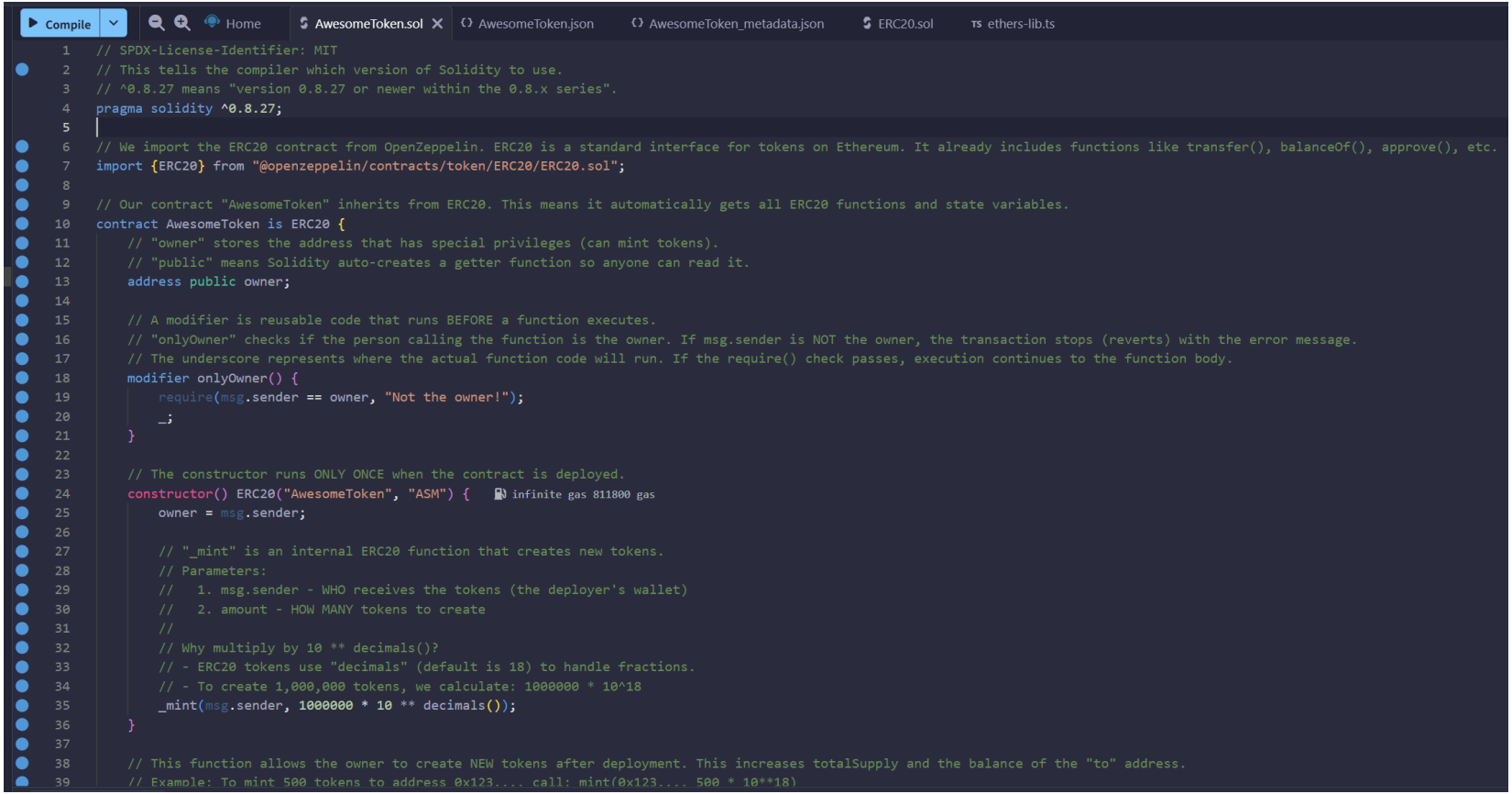




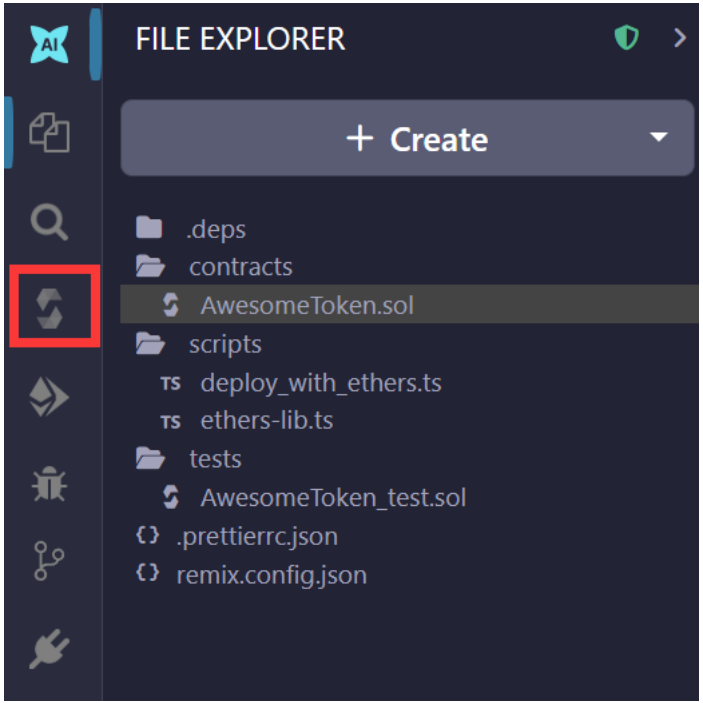
Task 1: Select the solidity file

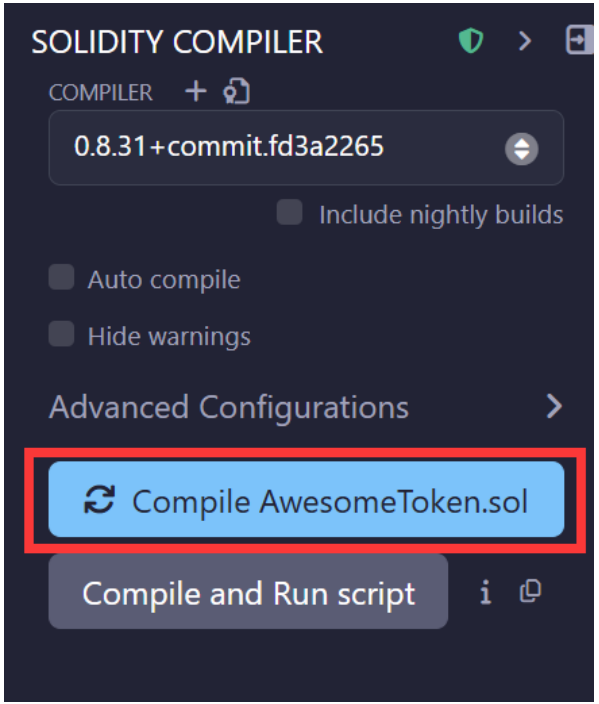


Task 1: Implement the Awesome Token

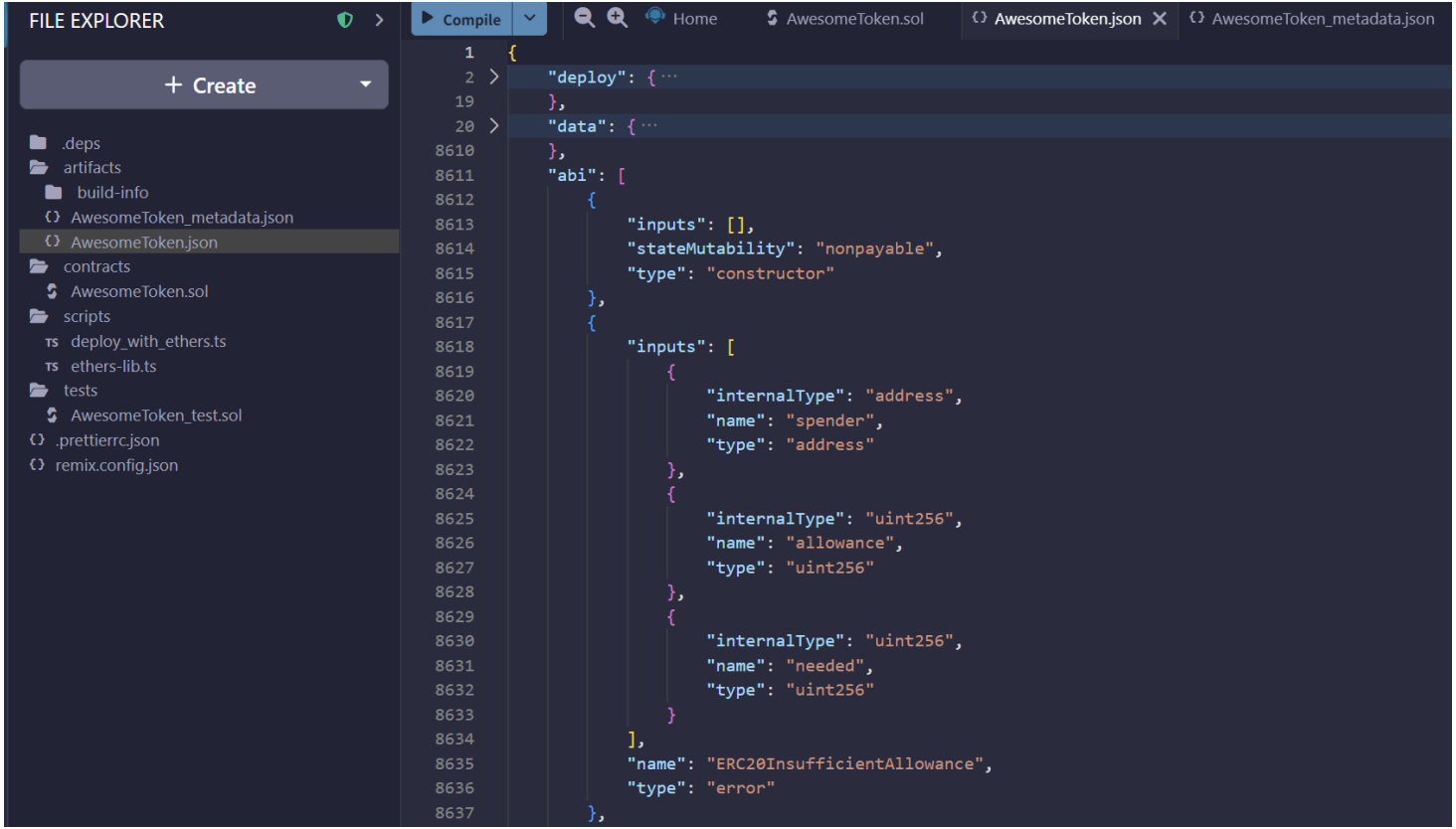


Task 1: Compile smart contract

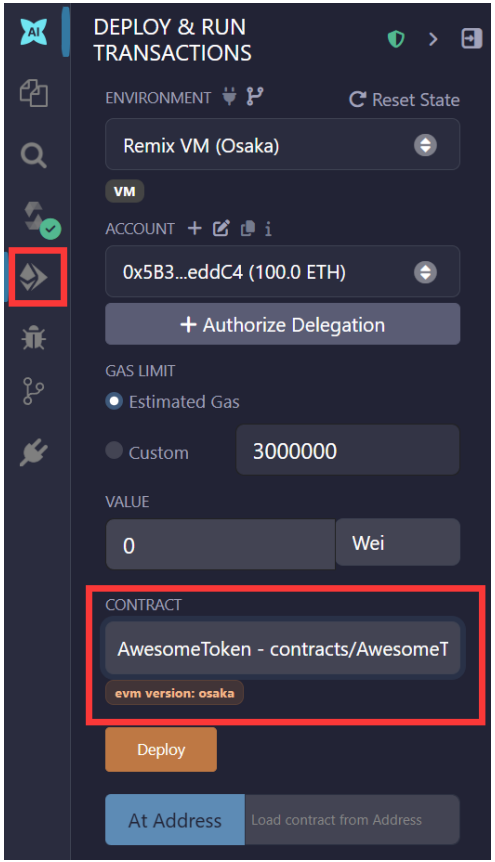


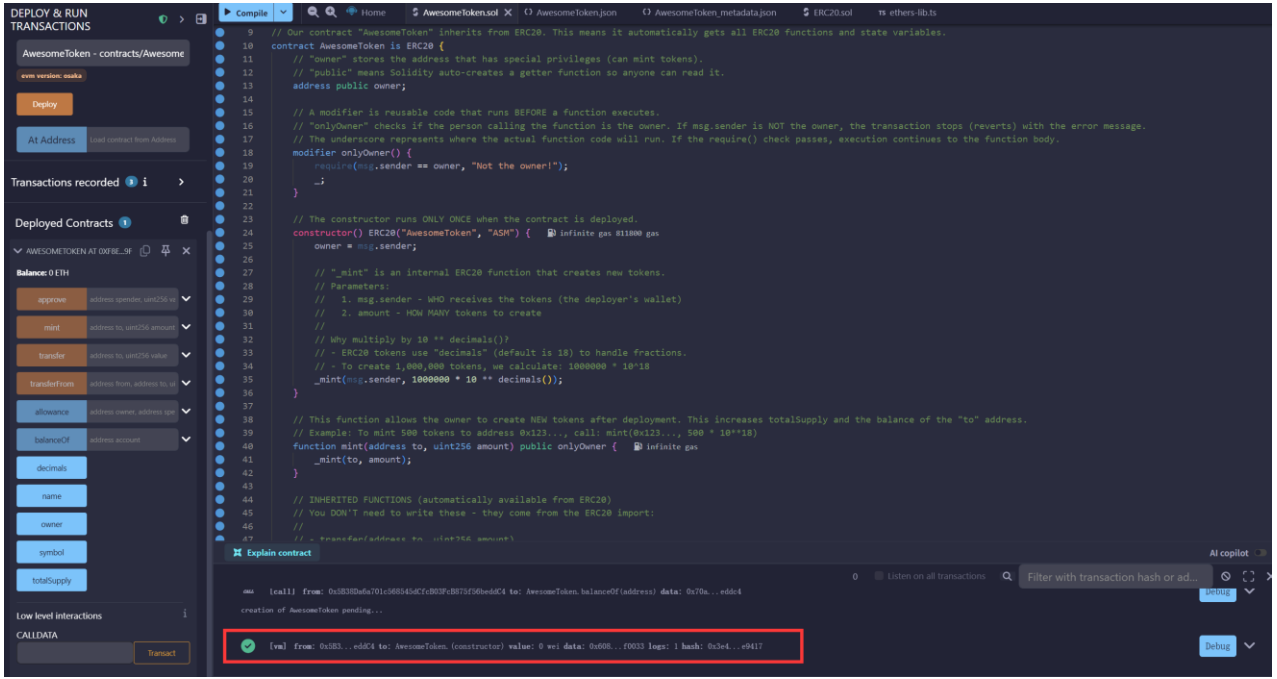


Task 1: Compile smart contract



Task 1: Deploy smart contract





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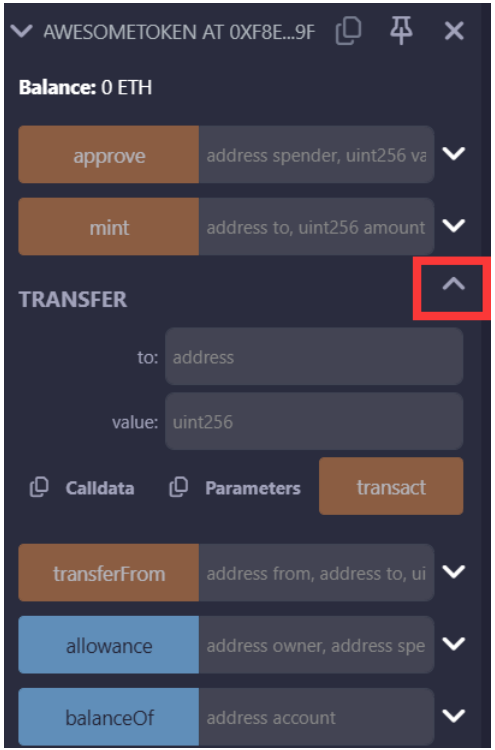
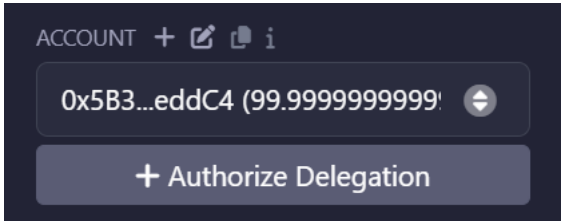
Task 2: Transfer the ERC-20 Token

- **Account 1 (Owner):** 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
- **Account 2:** 0xAb8483F64d9C6d1EcF9b849Ae677dD3315835cb2

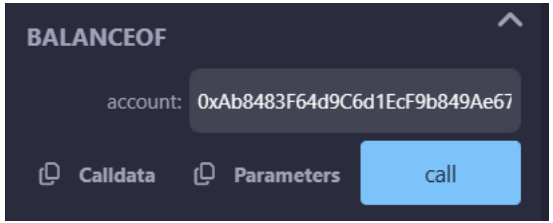




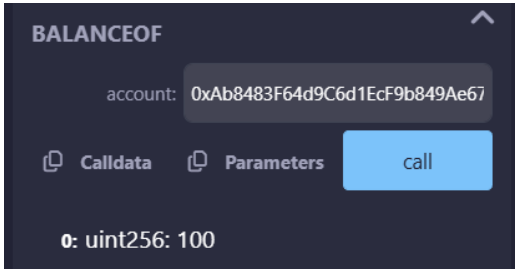
Make sure to use the correct account to sign the TxN.

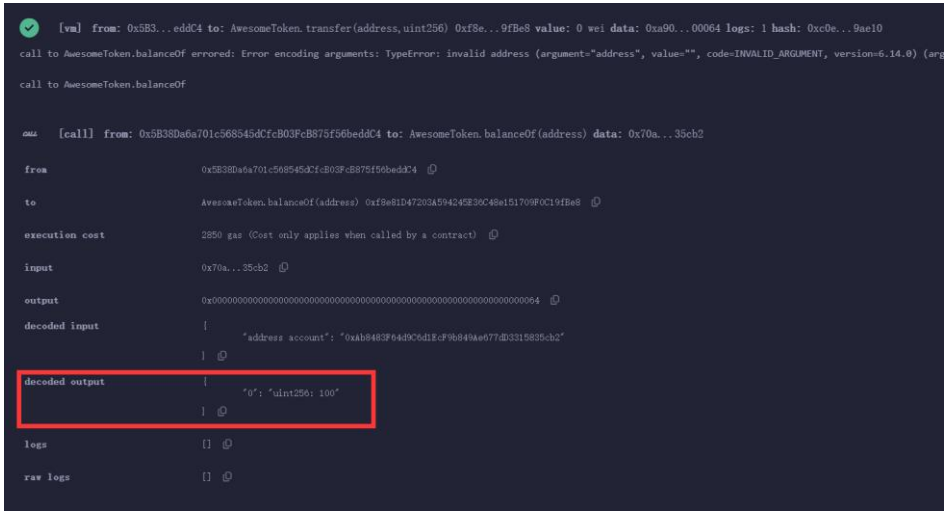
Task 2: Check the token balance

- **Account 1 (Owner):** 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
- **Account 2:** 0xAb8483F64d9C6d1EcF9b849Ae677dD3315835cb2



Check the balance of Account 2.





- PolyLink is a universal paradigm, providing a practical path from DePINs to RWA interconnections: http://polylink.evan.cafe/
- If you are interested in this project, you may contact me and **GET INVOLVED**!
  - Email: dong-bin.bai@connect.polyu.hk

Scan to check PolyLink's detailed introduction.

Thank You!

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