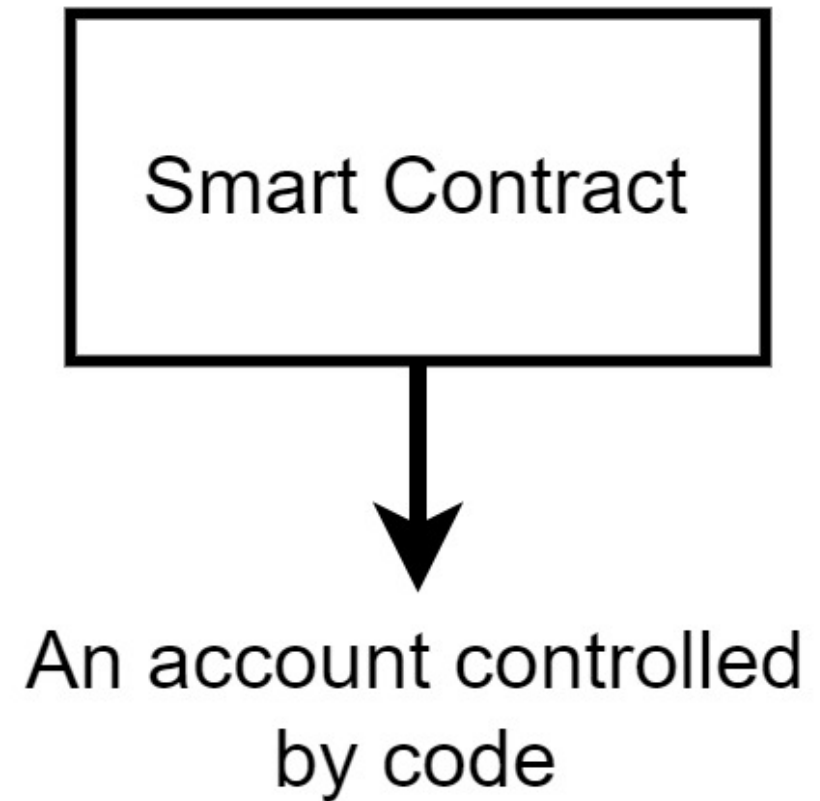


Blockchain for Industrial Engineers: Decentralized Application Development

**บล็อกเชนสำหรับวิศวกรอุตสาหกรรม: การพัฒนาแอปพลิเคชันแบบ
กระจายศูนย์**

Smart contract

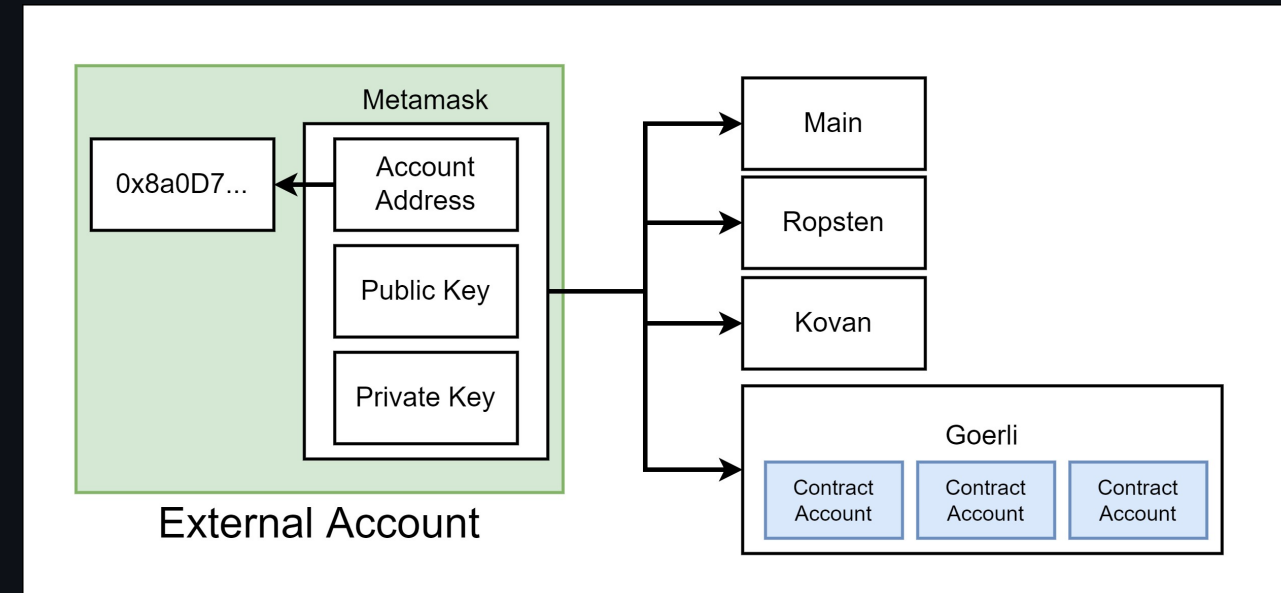
- A smart contract is an account controlled by code.
- The code instructs the account how to behave.



Field	Description
Balance	Amount of ether this accoun owns. (Similar to EOA)
Storage	Data storage for this contract
Code	Raw machine code for this contract

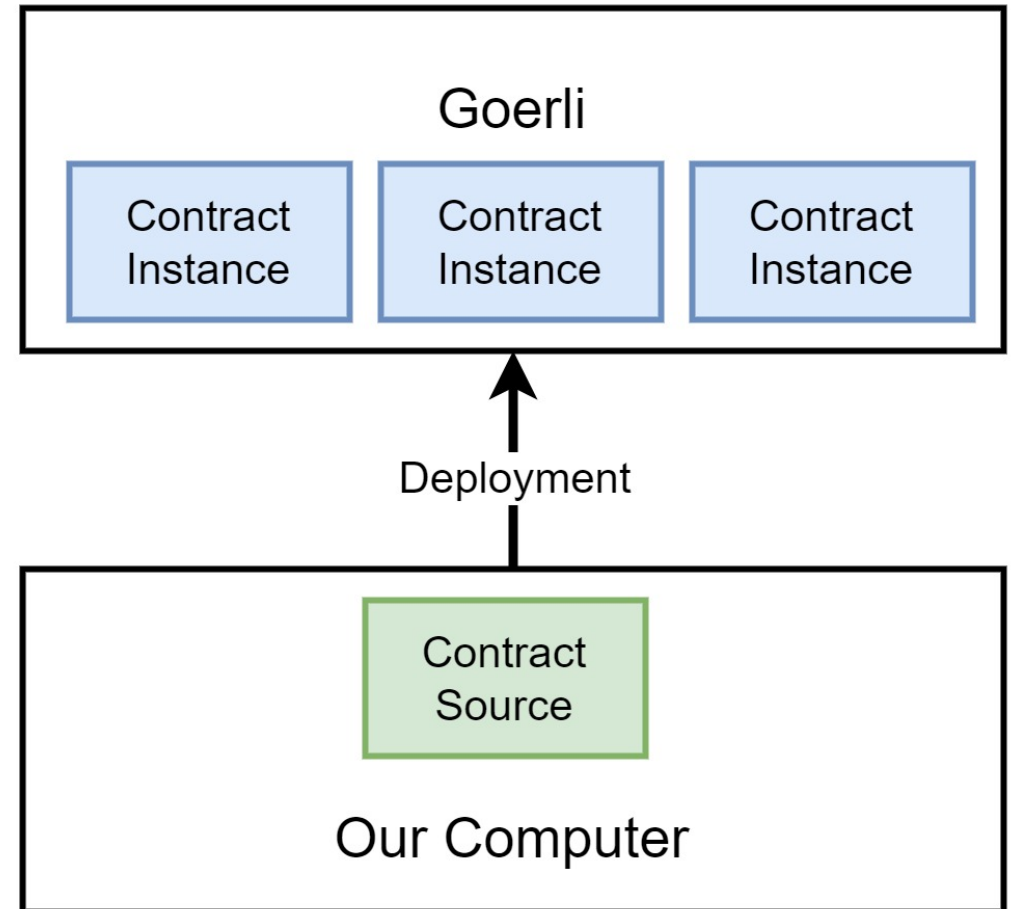
Contract account deployment

- A particular EOA is valid in all networks.
- CA is locally available in the deployed network.

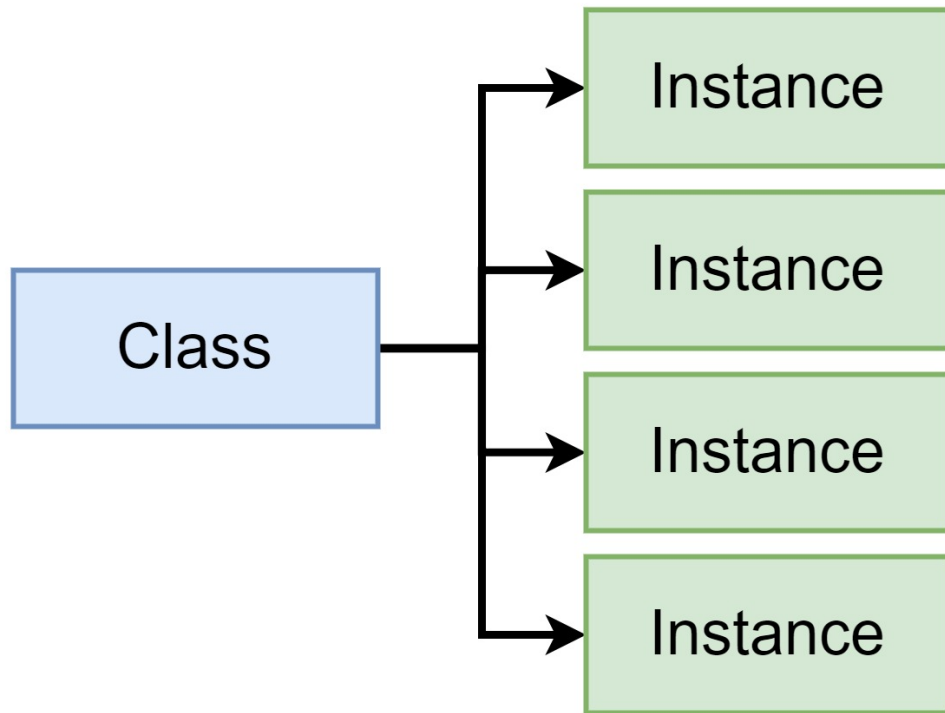


Contract account deployment

- We write source code.
- We deploy contract to a network.
 - Create an *instance* of a contract (or **contract account**)
- There can be multiple instance of a contract.



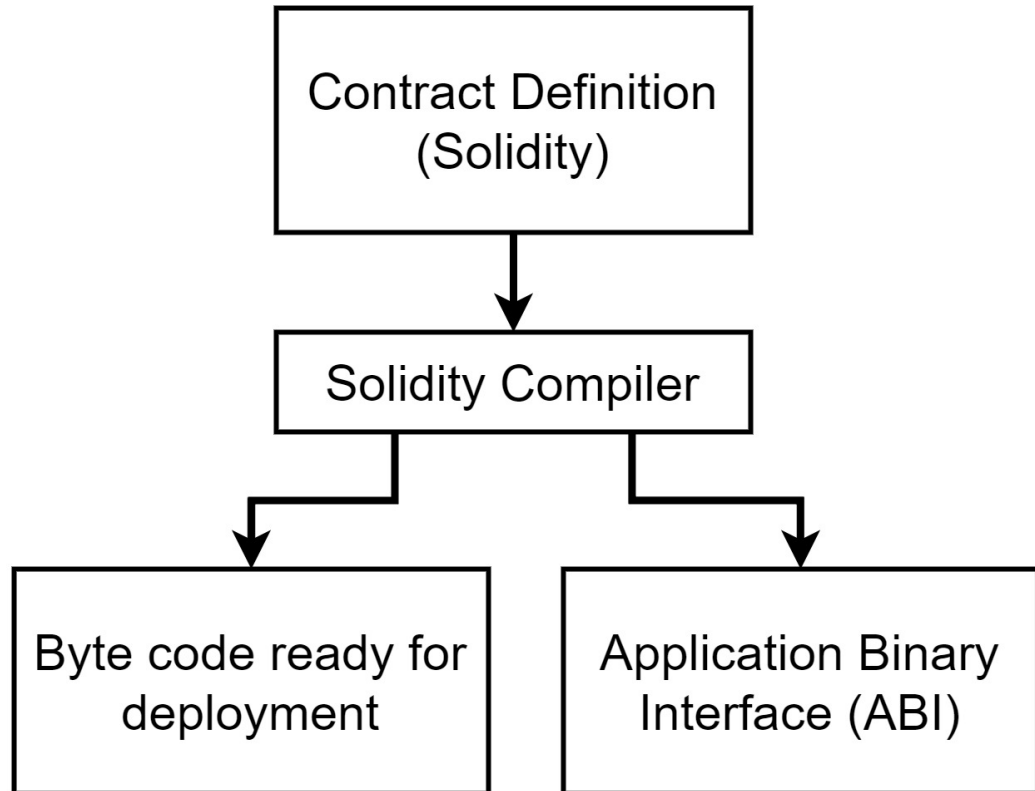
Class



Solidity programming language

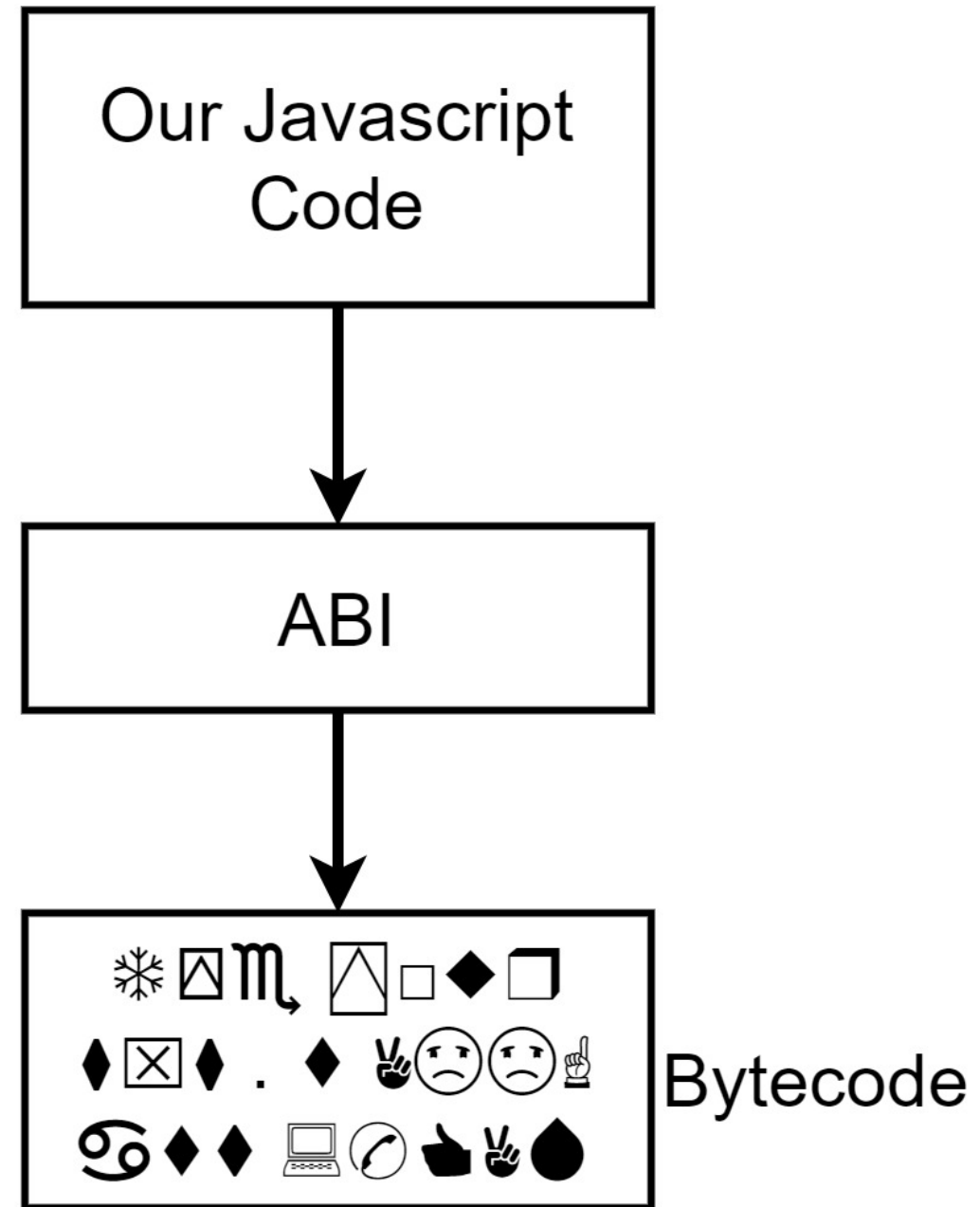
- Language that we will use to write the source code of a smart contract.
- Written in `.sol` files
- Strongly typed

Workflow



ABI

- Application Binary Interface
- Defines the structures and methods to interact with the binary contract.



JavaScript VM

- A simulated Blockchain Environment that only exists in your browser.
- It also only exists as long as you keep the browser-tab open. Close it or reload it, you start from scratch.
- Two flavors
 - Berlin
 - London (more updated)

Let's code (... actually not yet)

<https://remix.ethereum.org/>