

# Difference JavaScript VM vs injected Web3

There is a difference between 'JavaScript VM' and 'Web3' in terms of blockchain development:

## 1. Injected Web3:

- **Real Ethereum Network:** "Injected Web3" connects Remix to a real Ethereum network via a browser extension like MetaMask or any other Web3 provider you have installed in your browser.
- **Real Gas and Transactions:** When using "Injected Web3," you are dealing with real Ethereum transactions and gas costs. This environment is suitable for deploying contracts and performing transactions on the main Ethereum network or testnets.
- **Actual Blockchain Interaction:** It allows you to interact with the actual Ethereum blockchain, meaning that your smart contracts will be deployed on a real network, and transactions will be recorded on the blockchain.

## 2. JavaScript VM:

- **Local Development:** The JavaScript VM (Virtual Machine) is a built-in Ethereum environment within Remix. It runs entirely in your browser, and it's ideal for local development and testing of smart contracts without interacting with a real blockchain.
- **Instant Transactions:** Transactions in the JavaScript VM are instantaneous and don't require mining, which makes it suitable for quick testing and debugging.
- **No Real Blockchain Interaction:** This environment doesn't connect to a real Ethereum blockchain. It simulates the blockchain behavior, including mining and contract execution, within Remix itself.