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NW-304

Installing Ganache

Task 1:

```
Microsoft Windows [Version 10.0.26100.4061]
(c) Microsoft Corporation. All rights reserved.

E:\pintero\Pintero ganache>npm install -g ganache-cli
npm warn deprecated ganache-cli@6.12.2: ganache-cli is now ganache; visit https://trfl.io/g7 for details

added 1 package in 3s

2 packages are looking for funding
  run `npm fund` for details
```

Task 2:

```
Private Keys
==================
(0) 0x6741a4a3884d0ec6f38933f9fdb68cc8f32f2ca394e65253a2dba19581438fcb
(1) 0x639e320b2109ff3413343e9a66a8f0f7095fb9a8c53fb522efdbd1822bba2337
(2) 0x4243d73f9705c68770f607564f3bd4e0cc467143cac8b4d3732eb98a4e42ba77
(3) 0xb29d226e0258d9651bb84fb7dff3817e35848c7815845dc310c06f153d78350b
(4) 0xf34d350185afe1d44000cd35fd30ff737281cf468a2f6ac09e37e842d2af6f11
(5) 0x2a500f1d4edfc80dbb2ec40260814d9bd9c79d3b90263154bd506a48e2b716ad
(6) 0xdc4eeee0508570d9ea6970919358588c9a51f6f89a44b684f03403e442e9a41c
(7) 0x90643bfd42df891b47fa1217f6d7209f9ce257243d045528b62486ddd6f41560
(8) 0x11e6032aa3282d9871e571f7b834556f7b039394e142d7107b09079d95bb1c27
(9) 0x3ba2cdf20e7ca581afff75276d2fc51d66d7a3f2f51a6c83abcc3c2a7a78f44b

HD Wallet
==================
Mnemonic:      rookie plug switch copper argue season submit coast panda warm excess own
Base HD Path:  m/44'/60'/0'/0/{account_index}

Gas Price
==================
20000000000

Gas Limit
==================
6721975

Call Gas Limit
==================
9007199254740991
```

Task 3:

```
(9) 0x3ba2cdf20e7ca581afff75276d2fc51d66d7a3f2f51a6c83abcc3c2a7a78f44b

HD Wallet
==================
Mnemonic:      rookie plug switch copper argue season submit coast panda warm excess own
Base HD Path:  m/44'/60'/0'/0/{account_index}

Gas Price
==================
20000000000

Gas Limit
==================
6721975

Call Gas Limit
==================
9007199254740991

Listening on 127.0.0.1:8545

E:\pintero\Pintero ganache>mkdir ganacheapp

E:\pintero\Pintero ganache>cd ganacheapp

E:\pintero\Pintero ganache\ganacheapp>npm install etherium/web3js --save
|info: please complete authentication in your browser...
||
```

```
E:\pintero\Pintero ganache>cd ganacheapp

E:\pintero\Pintero ganache\ganacheapp>npm install etherium/web3js --save
|info: please complete authentication in your browser...
npm error code 128
npm error An unknown git error occurred
npm error command git --no-replace-objects ls-remote ssh://git@github.com/etherium/web3js.git
npm error kex_exchange_identification: read: Software caused connection abort
npm error banner exchange: Connection to 20.205.243.166 port 22: Software caused connection abort
npm error fatal: Could not read from remote repository.
npm error
npm error Please make sure you have the correct access rights
npm error and the repository exists.
npm error A complete log of this run can be found in: C:\Users\SOC\AppData\Local\npm-cache\_logs\2026-01-20T04_46_22_730
Z-debug-0.log

E:\pintero\Pintero ganache\ganacheapp>
```
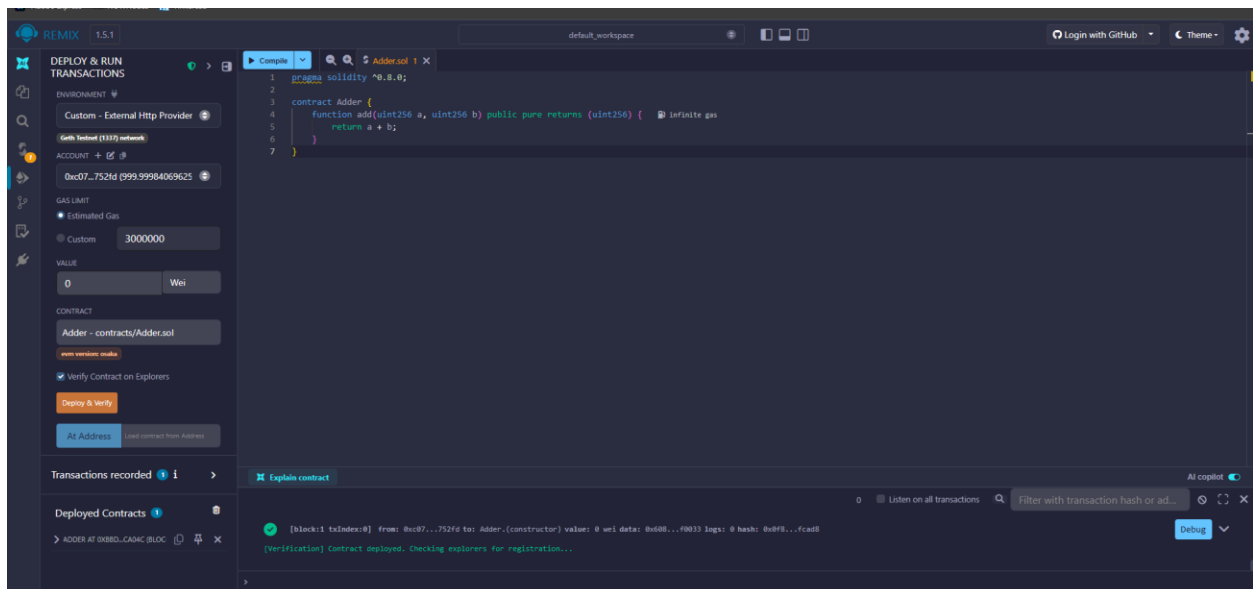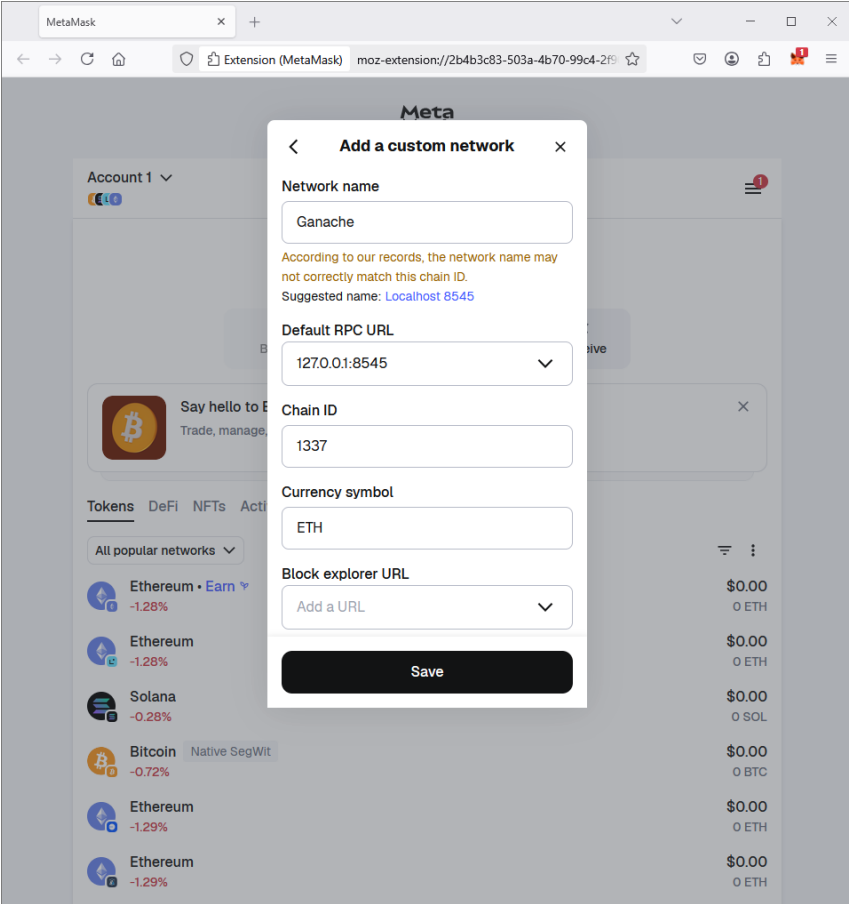
Task 4:

```
eth_chainId
eth_chainId
eth_getBlockByNumber
eth_chainId
eth_chainId
eth_accounts
eth_getBalance
eth_getBlockByNumber
eth_getBalance
eth_chainId
eth_getBalance
eth_chainId
eth_getBalance
eth_chainId
eth_getBalance
eth_chainId
eth_getBalance
eth_chainId
eth_getBalance
eth_chainId
eth_getBlockByNumber
eth_getBalance
eth_chainId
eth_getBalance
eth_chainId
eth_getBalance
eth_chainId
eth_getBalance
eth_chainId
eth_getBalance
eth_chainId
```

Task 5:
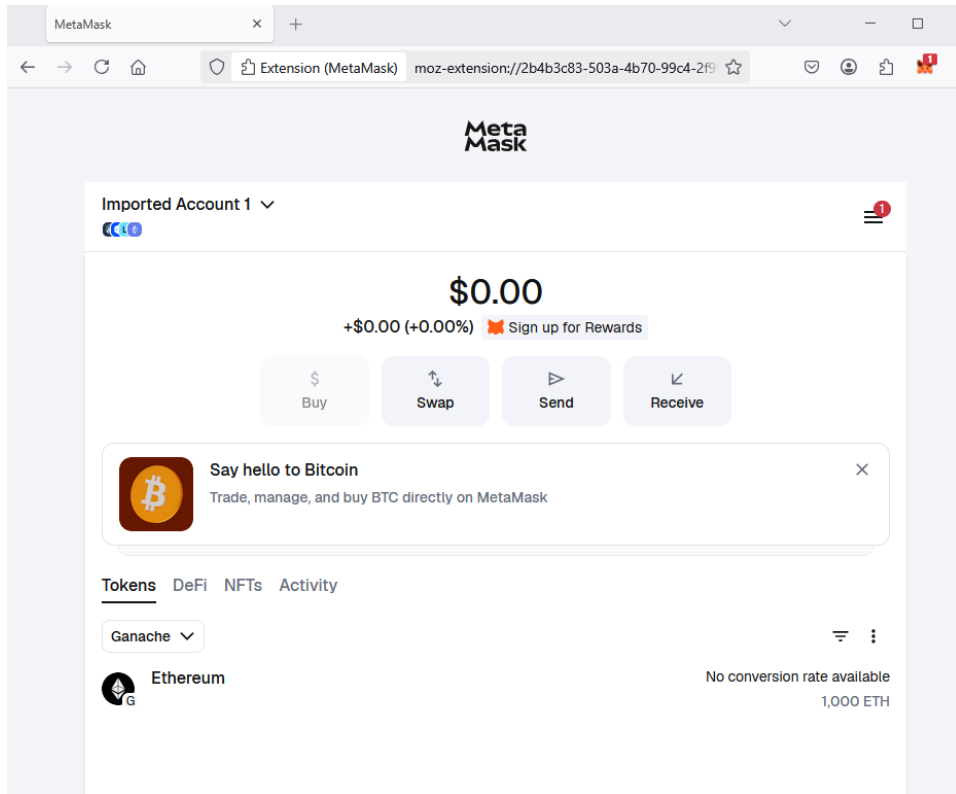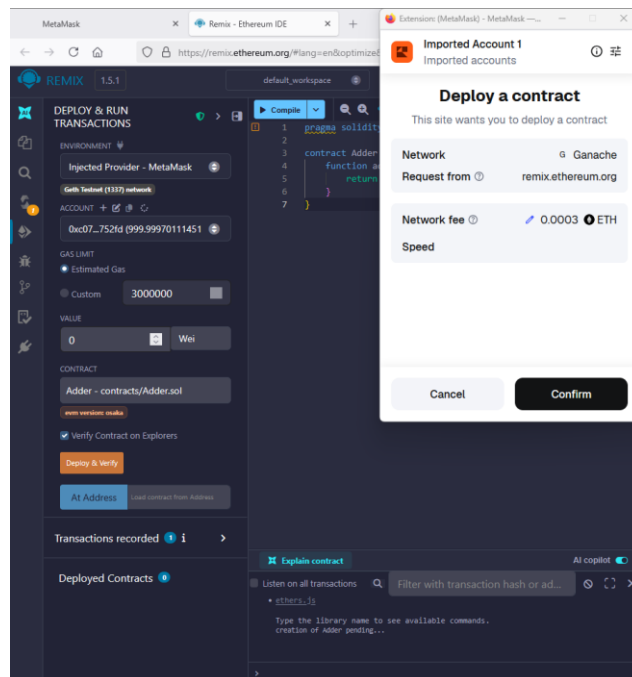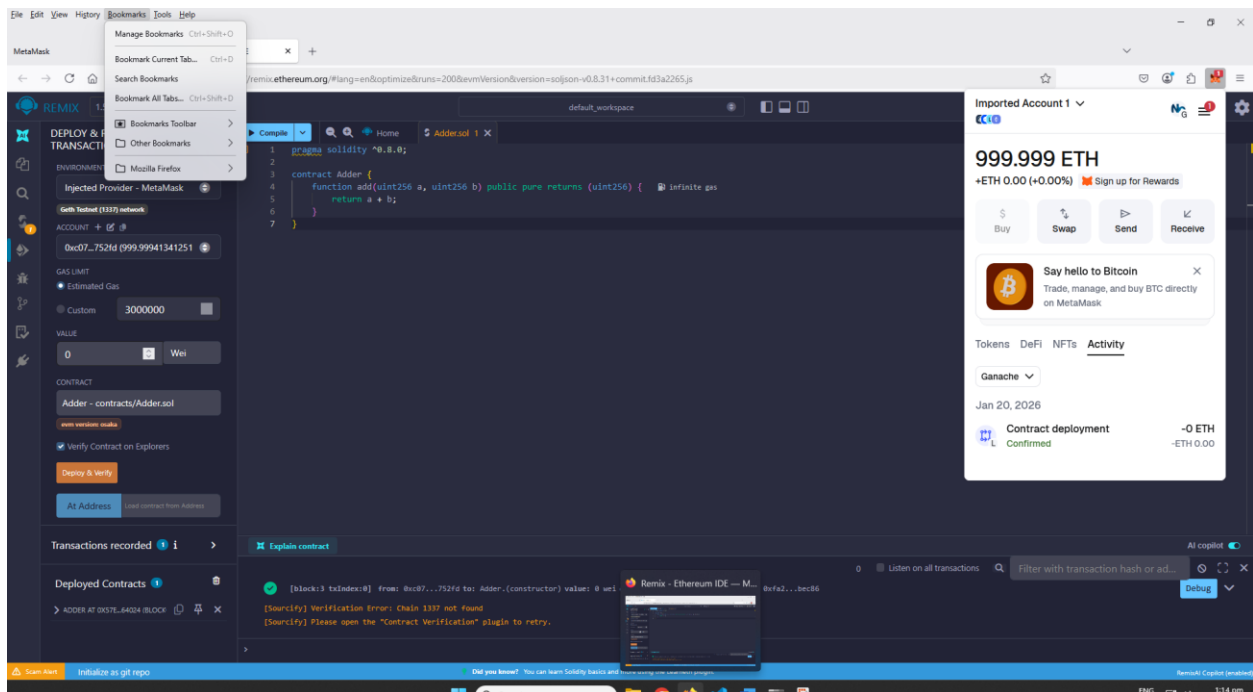

Task 6:

Extension (MetaMask) moz-extension://2b4b3c83-503a-4b70-99c4-2f9

Meta

Account 1 ⌄

← Add a custom network ✕

Network name

Ganache

According to our records, the network name may not correctly match this chain ID.
Suggested name: Localhost 8545

Default RPC URL

127.0.0.1:8545 ⌄

Chain ID

1337

Currency symbol

ETH

Block explorer URL

Add a URL ⌄

Save

Say hello to B
Trade, manage,

Tokens   DeFi   NFTs   Acti

All popular networks ⌄

Ethereum • Earn ⌄ $0.00
-1.28%   0 ETH

Ethereum $0.00
-1.28%   0 ETH

Solana $0.00
-0.28%   0 SOL

Bitcoin Native SegWit $0.00
-0.72%   0 BTC

Ethereum $0.00
-1.29%   0 ETH

Ethereum $0.00
-1.29%   0 ETH

Task 7:

Task 8:

Reflection:

Reflection Questions:

1. What is the purpose of Ganache in blockchain development?

   - The purpose of Ganache in blockchain development: Ganache serves as a personal, local blockchain environment used to deploy contracts, develop applications, and run tests safely without incurring real-world costs. Your activity demonstrated this by using Ganache to provide ten local accounts with 100 ETH each for testing the Adder.sol contract

2. Why is MetaMask required for Injected Provider deployment?

   Metamask is required because it serves as the "Injected Provider" that bridges the web browser to the blockchain, securely managing the private keys needed to sign transactions. In your Task 8, MetaMask was necessary to provide a popup interface where you could manually confirm and authorize the contract deployment.

3. What happens if Ganache is stopped while MetaMask is connected?

   If Ganache is stopped, the underlying local network disappears, causing MetaMask to lose its connection to the RPC server at 127.0.0.1:8545. This results in a connection error, and any data or deployed contracts from that session are lost because the temporary blockchain state is reset.

4. What is the difference between External HTTP Provider and Injected Provider?

    The External HTTP Provider allows Remix to communicate directly with a local node like Ganache using a specific URL. In contrast, the Injected Provider—such as MetaMask—acts as a secure intermediary that requires user interaction to approve every transaction before it is sent to the network.