## Hardhat DeFi & Aave:

DeFi adalah istilah umum untuk layanan keuangan di blockchain publik, terutama Ethereum. Dengan DeFi, pengguna dapat melakukan sebagian besar hal yang didukung bank seperti mendapatkan bunga, meminjam, meminjamkan, dan banyak lagi tetapi lebih cepat dan tidak memerlukan dokumen atau pihak ketiga. Seperti kripto pada umumnya, DeFi bersifat global, peer-to-peer dan terbuka untuk semua.

Diperlukan url mainnet rpc untuk mencoba berinteraksi dengan smart contract secara lokal, kita dapat membuat lagi mainnet untuk kasus ini menggunakan alchemy.



Dan menaruh url tersebut pada .env

Jangan lupa untuk menjalankan perintah yarn sebelum melanjutkan.

```
gitpd /workspace/new_folder/hardhat-defi-fcc (main) $ yarn
yarn install v1.22.19

[1/4] Resolving packages...
[2/4] Fetching packages...
[3/4] Linking dependencies...
warning " > prettier-plugin-solidity@1.0.0-beta.19" has unmet peer dependency "prettier@^2.3.0".
warning " > @nomiclabs/hardhat-waffle@2.0.2" has incorrect peer dependency "@nomiclabs/hardhat-ethers@^2.0.0".
warning "ethereum-waffle > @ethereum-waffle/compiler > typechain > ts-essentials@6.0.7" has unmet peer dependency "typescript@>=3.7.0".
warning " > hardhat-deploy@0.9.29" has unmet peer dependency "@ethersproject/hardware-wallets@^5.0.14".

[4/4] Building fresh packages...
Done in 19.94s.
```

Setelah itu kita dapat menjalankan script aaveBorrow untuk meminjam sejumlah ETH

```
> OPEN EDITORS
                                                       hardhat-defi-fcc > scripts > JS aaveBorrow.js > .
Ф
    ✓ NEW_FOLDER
                                                          1 const { ethers, getNamedAccounts, network } = require("hardhat")
                                      ា<u>គេប</u>នា
                                                               const { BigNumber } = require("@ethersproject/bignumber")
const { getWeth, AMOUNT } = require("../scripts/getWeth.js")
const { networkConfig } = require("../helper-hardhat-config")
        > ethers-simple-storage

∨ hardhat-defi-fcc

         > contracts
                                                                     await getWeth()
                                                                    const { deployer } = await getNamedAccounts()
                                                                     const lendingPool = await getLendingPool(deployer)

√ scripts

                                                                    const wethTokenAddress = networkConfig[network.config.chainId].wethToken
         JS aaveBorrow.js
                                                                     await approveErc20(wethTokenAddress, lendingPool.address, AMOUNT, deployer)
          JS getWeth.js
                                                                     console.log("Depositing \ WETH...") \\ await \ lendingPool.deposit(wethTokenAddress, \ AMOUNT, \ deployer, \ \theta) 
.env.example
         gitignore
let { availableBorrowsETH, totalDebtETH } = await getBorrowUserData(lendingPool, deployer)
          .npmignore
                                                                    const daiPrice = await getDaiPrice()

    □ .prettierignore

                                                                    const amountDaiToBorrow = availableBorrowsETH.toString() * 0.95 * (1 / daiPrice.toNumber())
         ■ .prettierrc
                                                                   const amountDaiToBorrowWei = ethers.utils.parseEther(amountDaiToBorrow.toString())
console.log(`You can borrow ${amountDaiToBorrow.toString()} DAI`)
         {} .solhint.json
         networkConfig[network.config.chainId].daiToken,
         JS hardhat.config.js
         JS helper-hardhat-config.js
         ₹ LICENSE
                                                                         amountDaiToBorrowWei.
         {} package.json
                                                                    await getBorrowUserData(lendingPool, deployer)
         yarn.lock
                                                                         amountDaiToBorrowWei.
                                                                         networkConfig[network.config.chainId].daiToken,
         > hardhat-fund-me-fcc
```

## Eksekusi dengan perintah yarn hardhat run scripts/aaveBorrow.js

```
gitpod /workspace/new folder/hardhat-defi-fcc (main) $ yarn hardhat run scripts/aaveBorrow.js
yarn run v1.22.19
Downloading compiler 0.4.19
Compiling 1 file with 0.4.19
Downloading compiler 0.6.12
Compiling 5 files with 0.6.12
contracts/interfaces/IERC20.sol: Warning: SPDX license identifier not provided in source file. Bef
source file. Use "SPDX-License-Identifier: UNLICENSED" for non-open-source code. Please see https:
Solidity compilation finished successfully
Got 100000000000000000 WETH
Approved!
Depositing WETH...
Desposited!
You have 0 worth of ETH borrowed.
You can borrow 8250000000000000 worth of ETH.
The DAI/ETH price is 821486400000000
You can borrow 95.40632687284902 DAI
You've borrowed!
You have 100000000276542553 worth of ETH deposited.
You have 78374999999999999 worth of ETH borrowed.
You can borrow 4125000228147607 worth of ETH.
Approved!
You have 100000000470122341 worth of ETH deposited.
You have 1888527419 worth of ETH borrowed.
You can borrow 82499998499323512 worth of ETH.
Done in 23.10s.
gitpod /workspace/new_folder/hardhat-defi-fcc (main) $
```

## Interaksi yang terjadi dapat juga dilihat dari dashboard alchemy

