Installation and Setup for ICP

Windows OS

For Internet Computer Web3 Application Development Requirements

• Windows 10 or higher (version 2004 or higher). Build 19041.xxx or higher.

• 64-bit machine (System type x64 based PC)

Steps

- Find the **CMD** in your Start menu and run it **as the Administrator**.
- Enter the command:-
- **wsl –install** (only for windows 11) for reference : Install WSL | Microsoft Learn
- Windows 10 command :- **Install WSL | Old Version**

Steps 3,4,5 Only for Windows 10 Users

- As in the docs above, we need to paste these commands into **CMD** and hit enter:
- Open Microsoft Store and Install Ubuntu
- Open Ubuntu it will take some time to install.

Installation Issue:-

https://learn.microsoft.com/en-us/windows/wsl/troubleshooting#installation-issues

- Now Ubuntu will ask to set up **username** and **Password**

(**Don't forget Password and password characters are not Visible**).

- Now run the command **sudo apt update** to update **ubuntu**.

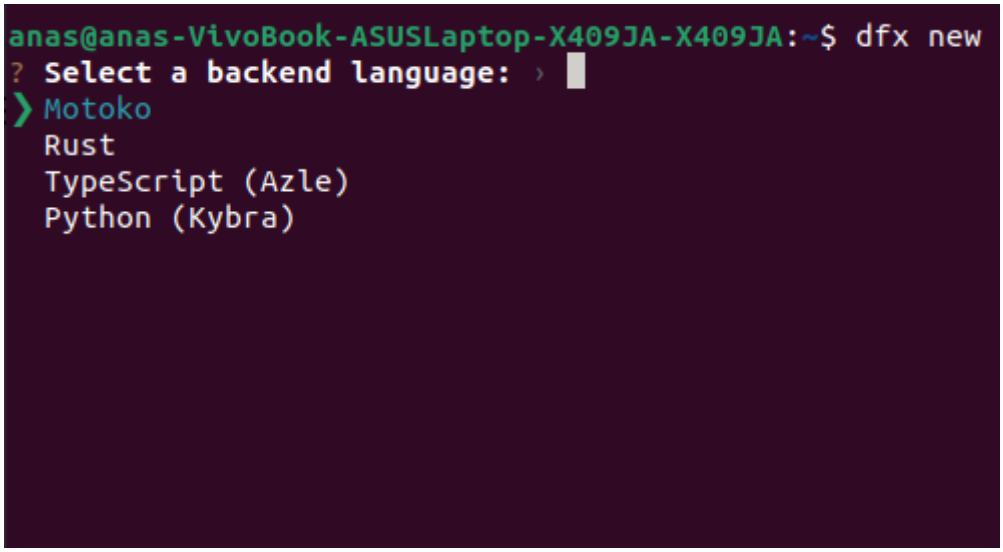
- **Install Curl**
- Run command **sudo apt install curl** to install curl in ubuntu.

- **Install NVM Commands:**
- **curl -o- https://raw.githubusercontent.com/nvm-sh/nvm/v0.39.1/install.sh | bash**
- **Copy paste the command :- export NVM_DIR="$HOME/.nvm"**

[-s "$NVM_DIR/nvm.sh"] && \. "$NVM_DIR/nvm.sh" # This loads nvm

[-s "$NVM_DIR/bash_completion"] && \. "$NVM_DIR/bash_completion" # This loads nvm bash_completion

- Check nvm version by running this command : **nvm --version**
- **source ~/.bashrc**
- **nvm install node**
- Install **dfx (ICP SDK)** :
- Run command: sh -ci "$(curl -fsSL https://sdk.dfinity.org/install.sh)"
- Install project:
- search ubuntu in Searchbar and run **ubuntu,** then run following command to proceed further:
- **mkdir ic_project**
- **cd ic_project**
- **dfx new hello** to install the hello world application of IC.



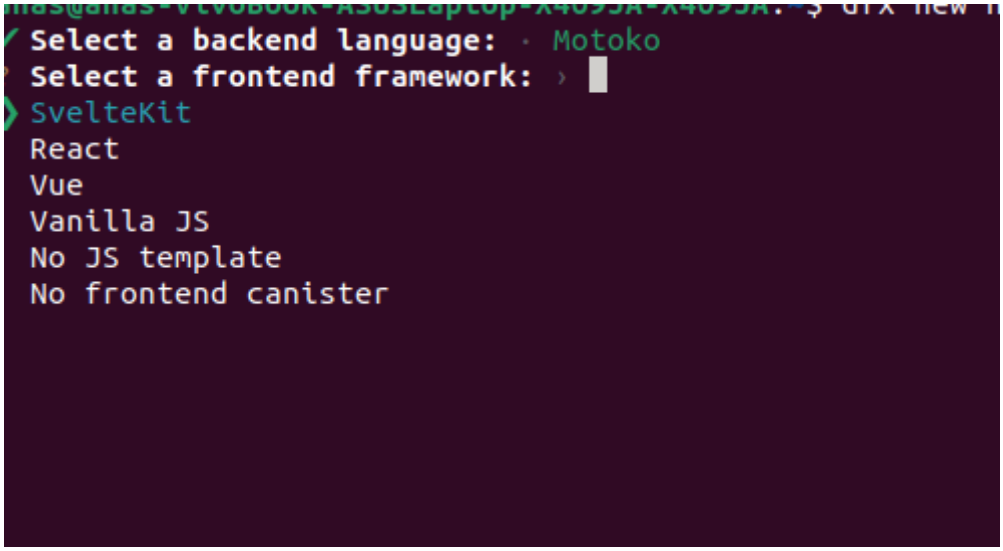
Select Backend Language:-

Motoko

Rust

TypeScript

Python



Select Frontend Framework

SvelteKit

React JS

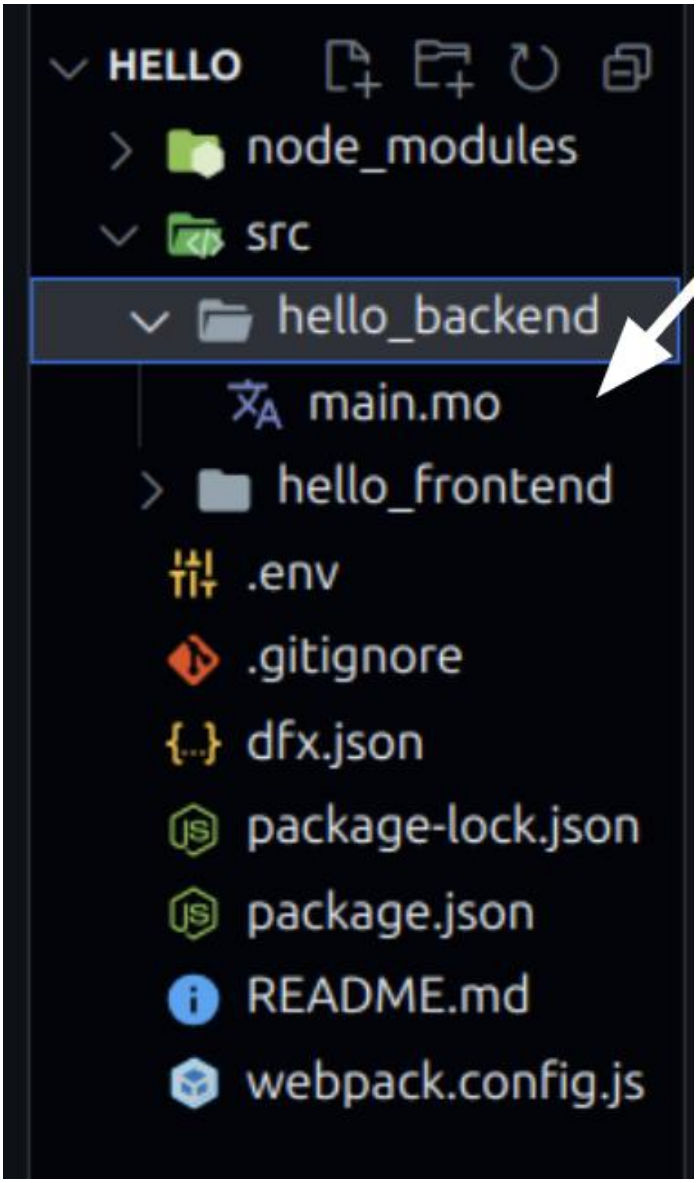
Vanilla JS

No JS Template

No Frontend Canister

- Now **cd hello** to get inside the hello directory.
- **code ./** after running this command vs code will open.
- **Write Motoko code**
- **Motoko file**
- Inside src/hello_backend there would be a main.mo file.

- Click on the file and start writing motoko code



- **Develop frontend**
- **HTML and CSS**
- Inside src/hello_frontend there would be index.js,index.Html a file.
- Css file would be in the Assets folder
- **React.js**
- For React.js refer to: https://internetcomputer.org/docs/current/developer-docs/frontend/custom-frontend.
- **Deploy your Project**
- **Dfx command for local deployment**
- Use command to start dfx : dfx start --background
- Use command to deploy: dfx deploy

Sample Codes

- Dacade typescript course: https://dacade.org/communities/icp
- Link of all sample code :Click here.
- Youtube playlist to learn ICP : Click Here
- Check Out Other resources : Click here

For Mac OS

Requirements:

- MacOS 12.* Monterey or later

Follow these steps:

- Open terminal
- Install **Homebrew**:
- /bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)
- **Install nvm**
- brew install nvm
- Add nvm to your shell profile(e.g., ~/.bash_profile or ~/.zshrc)
- source $(brew --prefix nvm)/nvm.sh
- Install Node.js
- Run command
- nvm install node
- Install dfx
- Run command:
- sh -ci "$(curl -fsSL https://internetcomputer.org/install.sh)"
- Create New Project
- Open terminal run following command:
- mkdir ic_project
- cd ic_project
- dfx new hello to install hello world application of IC.
- Now cd hello to get inside the hello directory.
- code ./ after running this command vs code will open.

Step: Create a new identity to claim your cycles.

To create a new identity, use the command:

dfx identity new MyNewIdentity

Your identity's seed phrase will be returned. Be sure to save this in a secure location.

Then, set this identity to be used by default:

dfx identity use MyNewIdentity

Step: Claim your cycles.

This workflow utilizes the cycles ledger feature. If you'd like to use the cycles wallet instead, view the cycles wallet documentation.

You will need to claim your free cycles by running this command:

dfx cycles --network ic redeem-faucet-coupon <your-coupon-code>

Dfx command for main net deployment

Use command to start dfx : dfx start --background

Use command to deploy: dfx deploy -—network ic