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)"

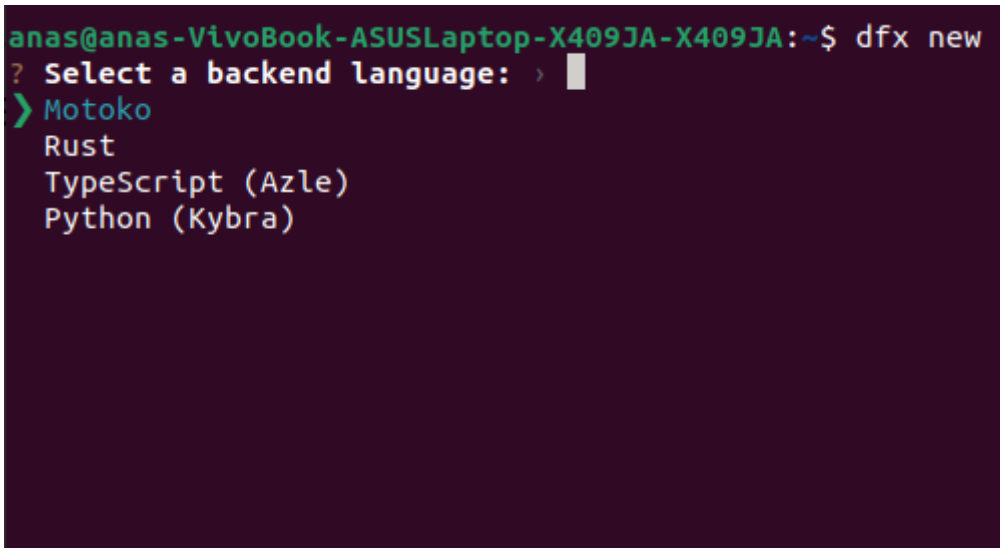
Install project:

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.



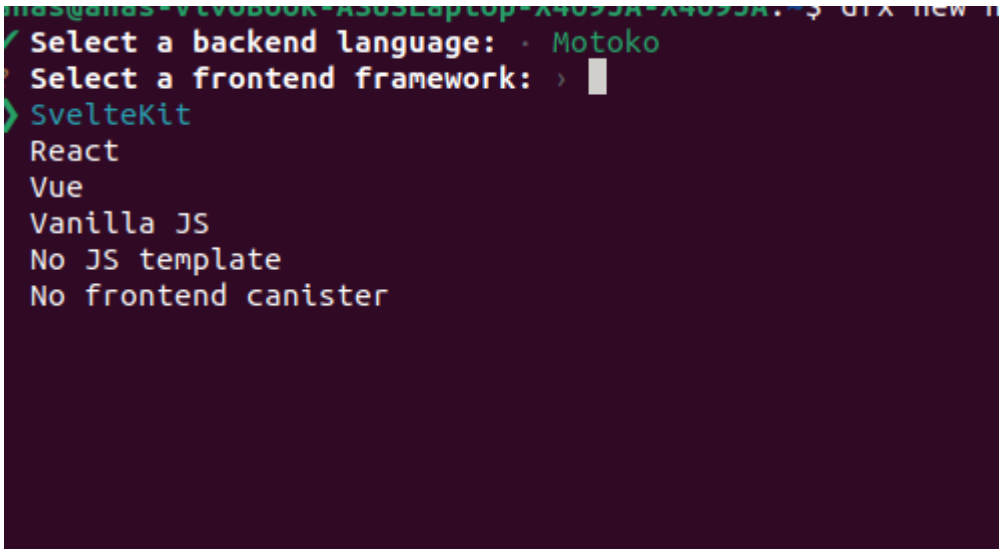
Select Backend Language:-

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.

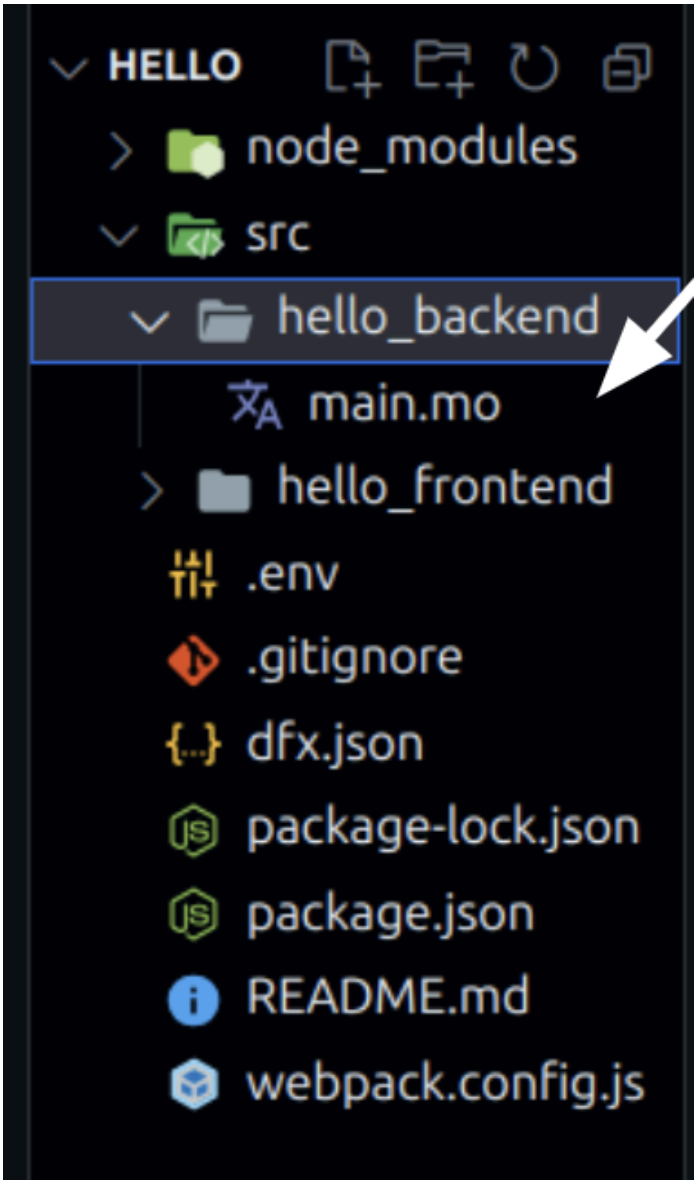
code ./ after running this command vs code will open.

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:

Unset

```
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:

Unset

```
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:

```
Unset

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