Follow instruction from the Link

<https://docs.zephyrproject.org/latest/getting_started/index.html>

1.Select and Update OS

sudo apt update

sudo apt upgrade

2.Install Dependencies

$sudo apt install --no-install-recommends git cmake ninja-build gperf \

ccache dfu-util device-tree-compiler wget \

python3-dev python3-pip python3-setuptools python3-tk python3-wheel xz-utils file \

make gcc gcc-multilib g++-multilib libsdl2-dev

3.Verify Version of cmake

cmake --version

4.Add the Kitware signing key

$wget -O - https://apt.kitware.com/keys/kitware-archive-latest.asc 2>/dev/null | sudo apt-key add -

OR

$wget -O - <https://apt.kitware.com/keys/kitware-archive-latest.asc> 2>/dev/null | gpg --dearmor - | sudo tee /etc/apt/trusted.gpg.d/kitware.gpg >/dev/null

5.Add the Kitware apt repository for Ubuntu 20.04 foxy OS release

$sudo apt-add-repository 'deb https://apt.kitware.com/ubuntu/ focal main'

$sudo apt-get update

6.Install the updated cmake with apt

$sudo apt update

$sudo apt install cmake

7.Get Zephyr and Install Python Dependencies

#Install west, and make sure ~/.local/bin is on your PATH [environment variable](https://docs.zephyrproject.org/latest/guides/env_vars.html" \l "env-vars):

$pip3 install --user -U west

$echo 'export PATH=~/.local/bin:"$PATH"' >> ~/.bashrc

$source ~/.bashrc

8.Get the Zephyr source code

$west init ~/zephyrproject

$cd ~/zephyrproject

$west update

9.Export a [Zephyr CMake package](https://docs.zephyrproject.org/latest/guides/zephyr_cmake_package.html" \l "cmake-pkg).

[ This allows CMake to automatically load boilerplate code required for building Zephyr applications.]

$west zephyr-export

10.Zephyr’s scripts/requirements.txt file declares additional Python dependencies.

pip3 install --user -r ~/zephyrproject/zephyr/scripts/requirements.txt

11.Install Toolchain

#Download the [latest SDK installer](https://github.com/zephyrproject-rtos/sdk-ng/releases)

$cd ~

$wget https://github.com/zephyrproject-rtos/sdk-ng/releases/download/v0.12.2/zephyr-sdk-0.12.2-x86\_64-linux-setup.run

$chmod +x zephyr-sdk-0.12.2-x86\_64-linux-setup.run

./zephyr-sdk-0.12.2-x86\_64-linux-setup.run -- -d ~/zephyr-sdk-0.12.2

12.Install [udev](https://en.wikipedia.org/wiki/Udev) rules, which allow you to flash most Zephyr boards as a regular user.

$sudo cp ~/zephyr-sdk-0.12.2/sysroots/x86\_64-pokysdk-linux/usr/share/openocd/contrib/60-openocd.rules /etc/udev/rules.d

$sudo udevadm control --reload

Build Blinky Testing

$cd ~/zephyrproject/zephyr

#west build -p auto -b <your-board-name> samples/basic/blinky

$west build -p auto -b stm32f429i\_disc1 samples/basic/blinky

$west flash

If there is error, just delete the folder name "build" under zephyrproject/zephyr/.

Rebuild again.

$west build -p auto -b stm32f429i\_disc1 samples/basic/blinky

#Hex File can be found in the following location

zephyrproject/zephyr/*build/zephyr*