

Devacademy.nordicsemi tutorial. Full run through time estimation 8-10h+
<https://academy.nordicsemi.com/courses/cellular-iot-fundamentals/>

github for tutorial exercises:

<https://github.com/NordicDeveloperAcademy/Cellular-IoT-Fundamentals>

lesson 6 exercise 1 is the one we used as test for thursday 2.2.23.

Required software

- Visual studio Code
- Putty
<https://www.putty.org/>
- nrf Connect for desktop
<https://www.nordicsemi.com/Products/Development-tools/nrf-connect-for-desktop>
 - Launch app and install "Programmer" and "Toolchain Manager"
 - Inside the Toolchain Manager install the nRF Connect SDK v2.2.0, select yes to install add-ons for vs code.

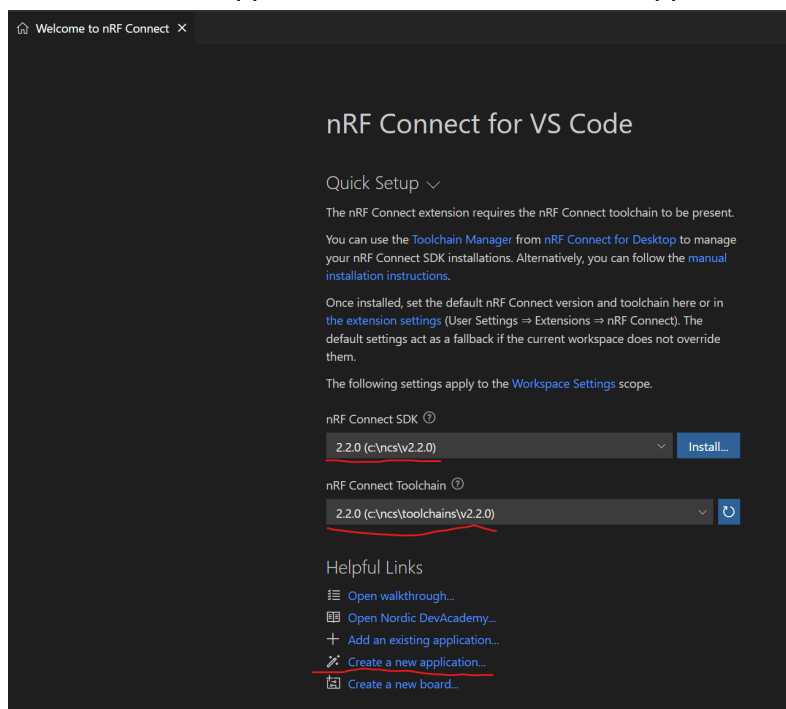
Make sure the thingy 91 is updated, follow the getting started guide if necessary.

https://developer.nordicsemi.com/nRF_Connect_SDK/doc/latest/nrf/ug_thiny91_gsg.html

In Vs Code the welcome to nRF Connect tab should open automatically.

Select the 2.2.0 SDK and toolchain.

To create a new application select "create a new application"



Feel free to select a template, note not all templates are supported by all boards.
Type application name “hello_world2” is used here as “hello_world” already exists.

New Application

Application type

☒ Freestanding ☐ Workspace

Freestanding applications require and use a locally installed nRF Connect SDK.

nRF Connect SDK ⓘ

2.2.0 (c:\ncs\v2.2.0) Install...

An SDK is already selected in this workspace, so another cannot be selected.

nRF Connect Toolchain ⓘ

2.2.0 (c:\ncs\toolchains\v2.2.0) Refresh

Application location

c:\Users\espo_\Documents\Skole\DIGSEC\Telenor\thingy\test ...

Application template

zephyr/samples/hello_world Browse...

Application name

hello_world2 Refresh

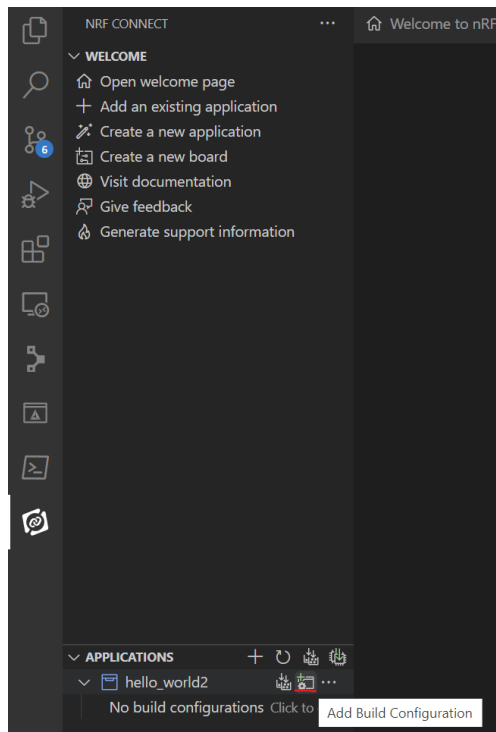
Create Application

Be aware that some includes will give errors until the file is built

Select nRF Connect on the toolbar.



Hit the build configuration button.



Select the board you want to build for, in this case you should select thingy91_nrf9160_ns. as of now it seems all other settings can be left as is. Hit build configuration.

Add Build Configuration

Select configuration options for hello_world2:

Board Revision ?

thingy91_nrf9160_ns default

☒ Nordic boards ☐ All boards

Configuration

prj.conf

Kconfig fragments ?

No fragments available

Extra CMake arguments ?

Add argument

Build directory name

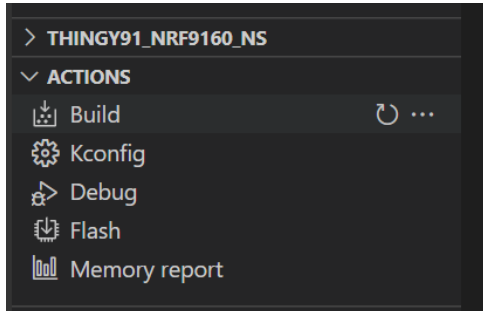
build

☒ Build after generating configuration

☐ Enable debug options

Build Configuration

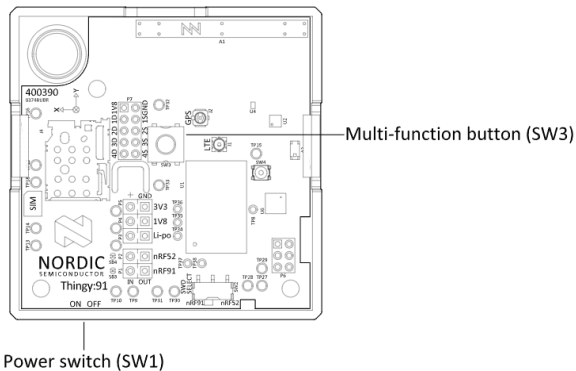
To build the app hit either the build line for a soft build or the rewind icon for a pristine build. The first build of an app should always be pristine. Not sure exactly where the threshold of having to do a new pristine build goes.



To flash the app to the thingy open the Programmer in nRF connect for desktop.

connect the device using usb.

Start the device while holding down the sw3 button.



Select the thingy device from the dropdown menu.

Select add file and navigate to appname/build/zephyr/app_signed.hex

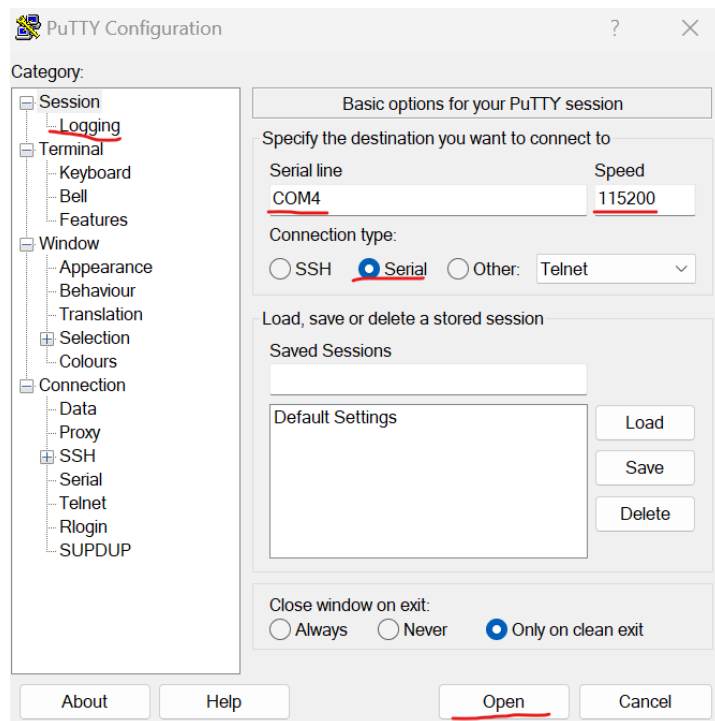
Hit write and then write in the popup window. When it is finished hit ok and shut down the device

To see output in putty, open putty and select serial. The correct COM should be used in my case it is COM4 but this can change depending on hardware. See your device manager to find the correct one.

Set speed to 115200.

Start the device, wait a little bit then hit open.

if you want the output to be logged to a file go to logging and select folder and filename + filetype.



If your application has terminal output it should now be visible in the putty terminal.