AWaDH
Agriculture and Water
Technology Development Hub

EXPERIMENT – 1.1

BLINK LED ON DEV BOARD/NODE

What will you learn from this module:

How to blink onboard led using Development kit/Node.

Requirements:

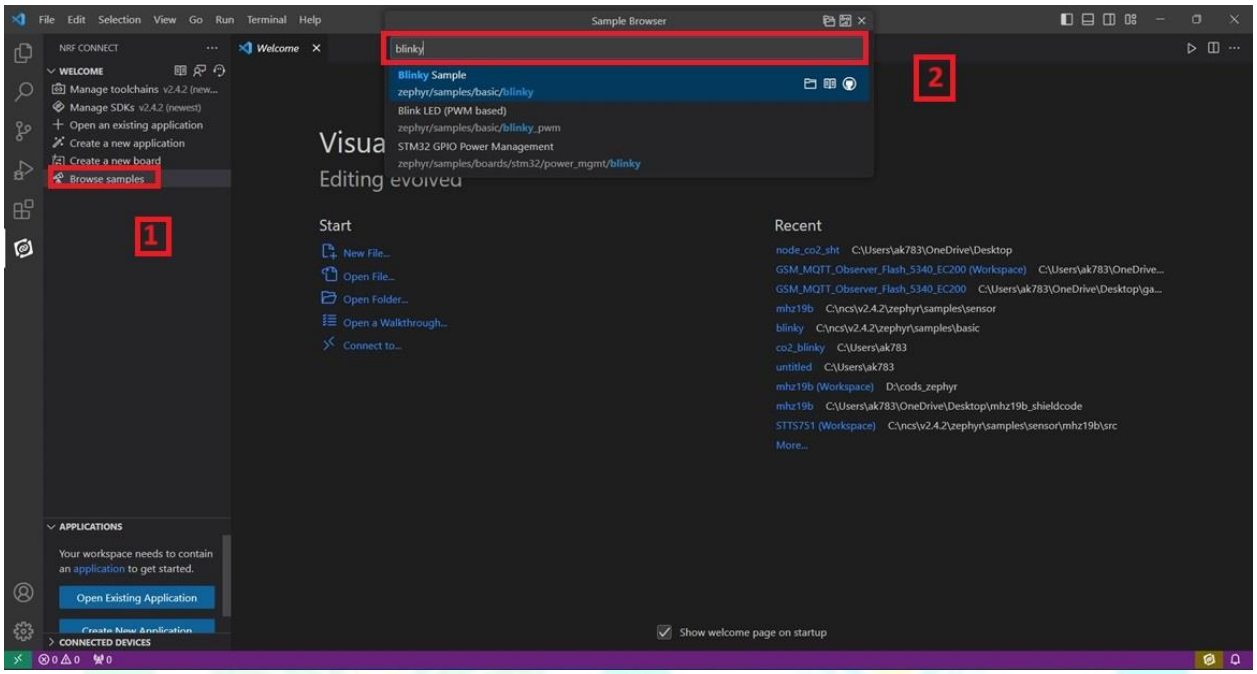
- nRF Connect for desktop software.
- nRF Command line tools.
- Visual studio code.
- USB cable.
- nRF52832 Development Board/Node.

Prerequisites:

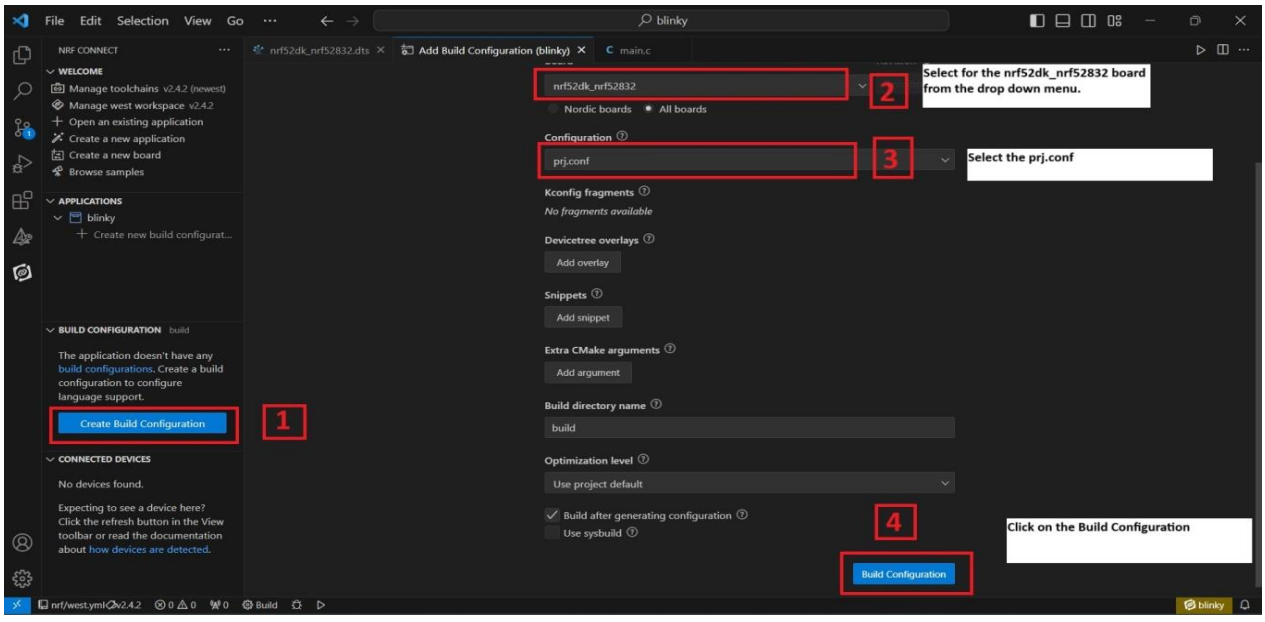
- Basic knowledge of C/C++
- Basic knowledge of communication protocol.
- Basic project setup.

Setup and Configuration:

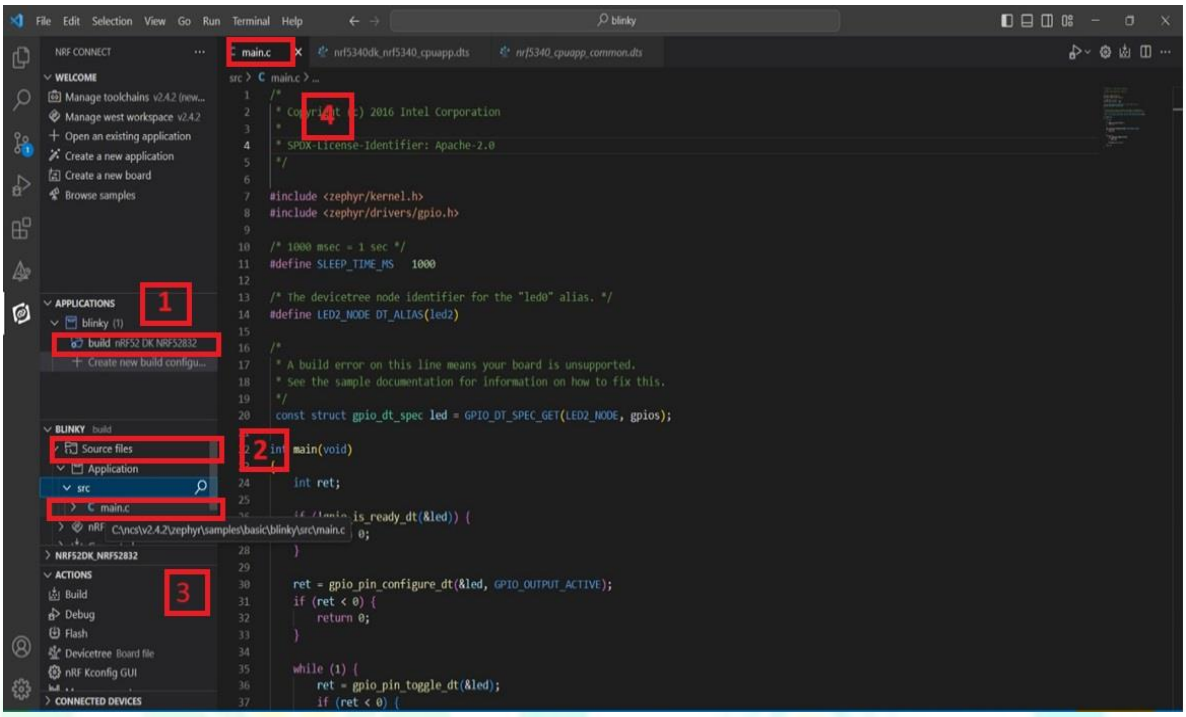
- Open VS Code and go to **Browse samples [1]** and search **Blinky [2]**.



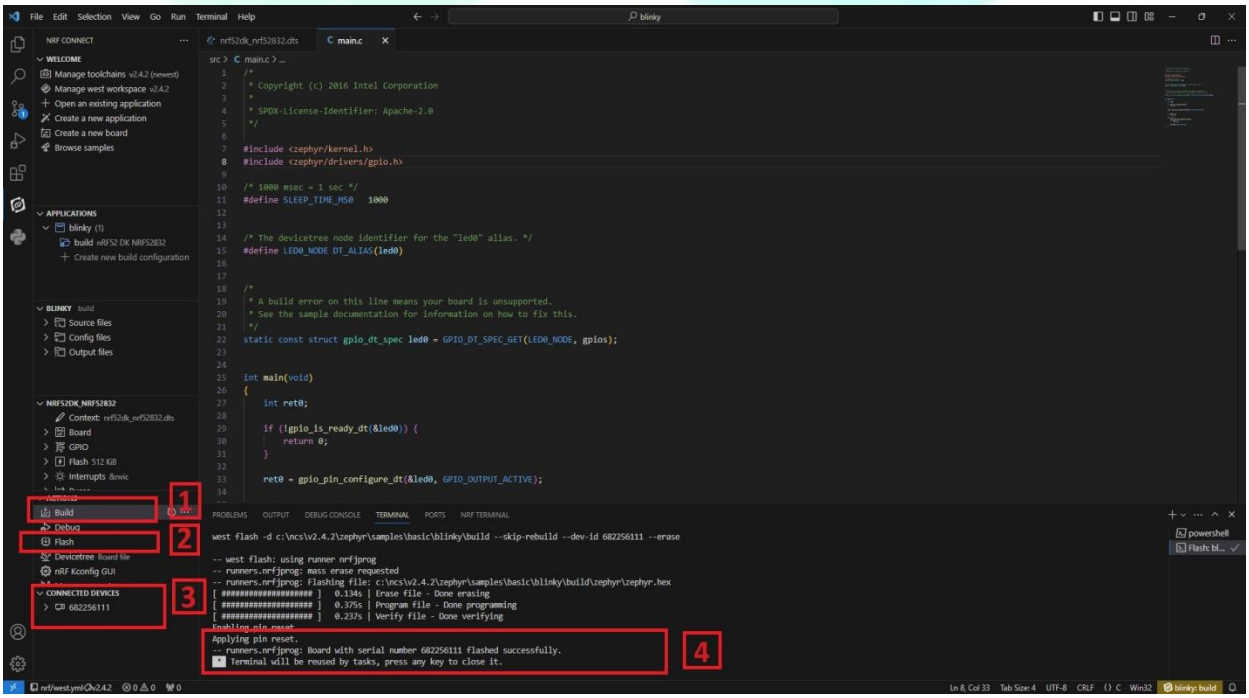
- Click on **Create new build configuration**. Here you can change the board version, if you are using nRF52832, then select **nrf52dk_nrf52832** or you can change from dropdown menu for another version like nRF52833 etc.
- Click on the Configuration and select **prj.config [3]** from dropdown menu and then **click on the Build Configuration [4]**.



- Go to source file, click **source file [2]** > click on **Application** > click on **src** > click on **main.c [3]**.
- By Clicking on **main.c** file and you will see the code on your screen **[4]**.

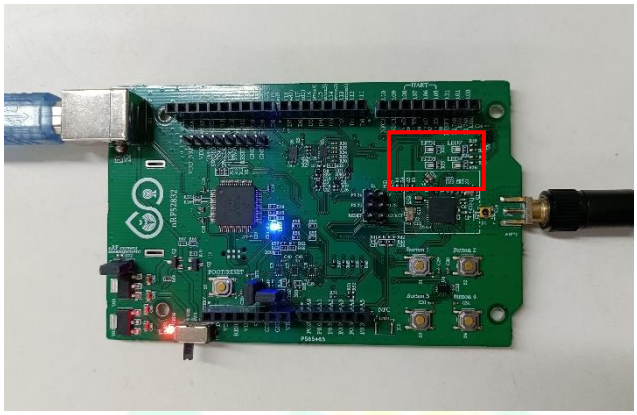


- Click on **Build [1]** configuration again and check the **CONNECTED DEVICES [2]**.
- If device id is visible, then **Flash [3]** the code in dev kit.
- If **flashed successfully [4]** message is displayed on serial terminal, then flash process is complete.

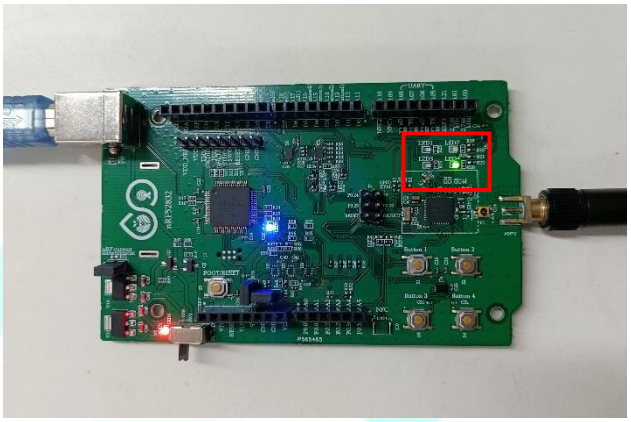


❖ OUTPUT

- nRF52832 board Before flash the code



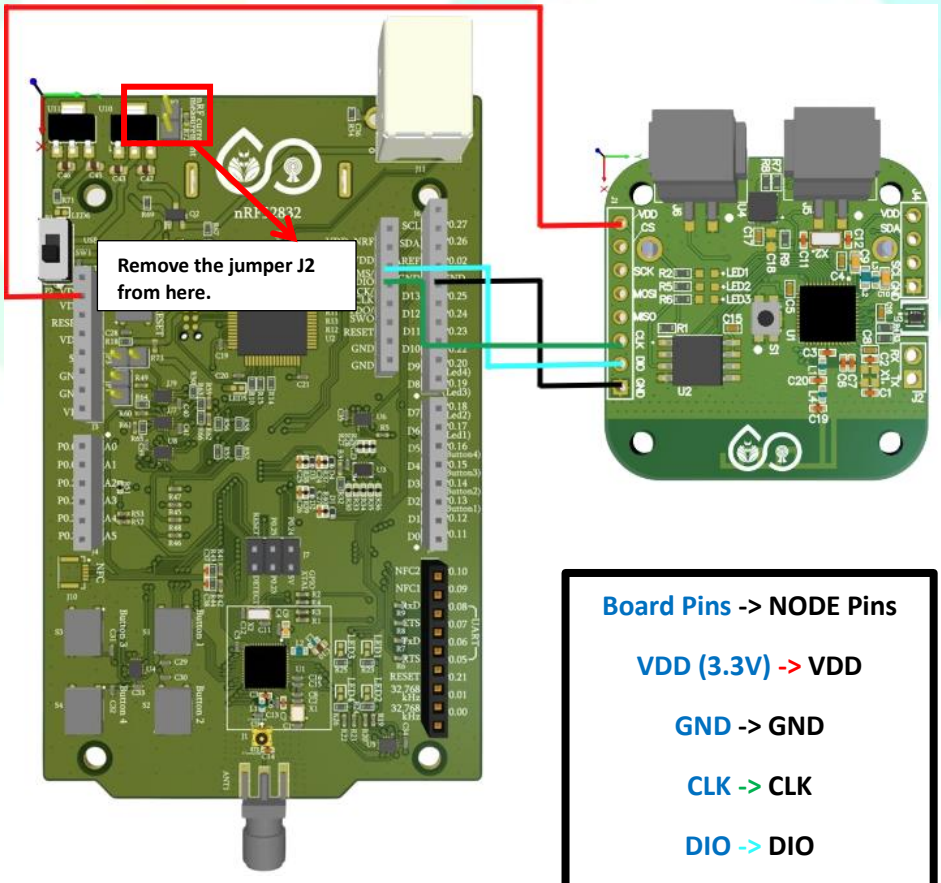
- nRF52832 board after flash the code



❖ WITH THE HELP OF NODE

- For Node programing remove the jumper J2 from the development board.
- Change the led0 Pin number in .dts file from 17 to 2.
- Now flash the code with the help of nRF52832 development board as shown below in the figure.

❖ PIN CONFIGURATION



Board Pins -> NODE Pins

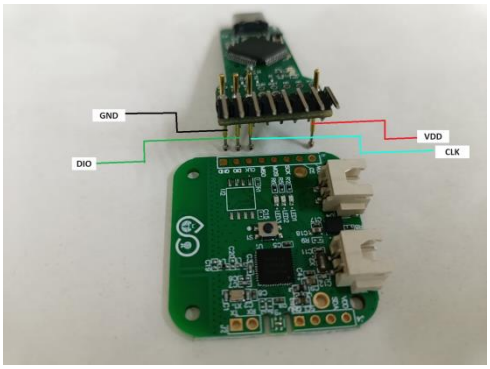
VDD (3.3V) -> VDD

GND -> GND

CLK -> CLK

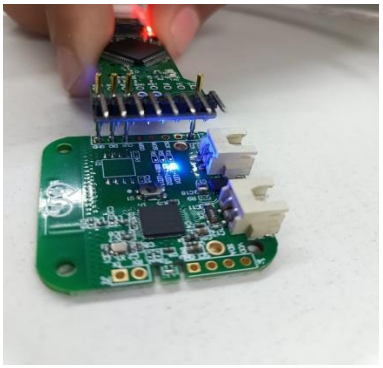
DIO -> DIO

- There is another way of flashing the code with the help of Node Programmer as shown in the picture below.



- NODE without connection.

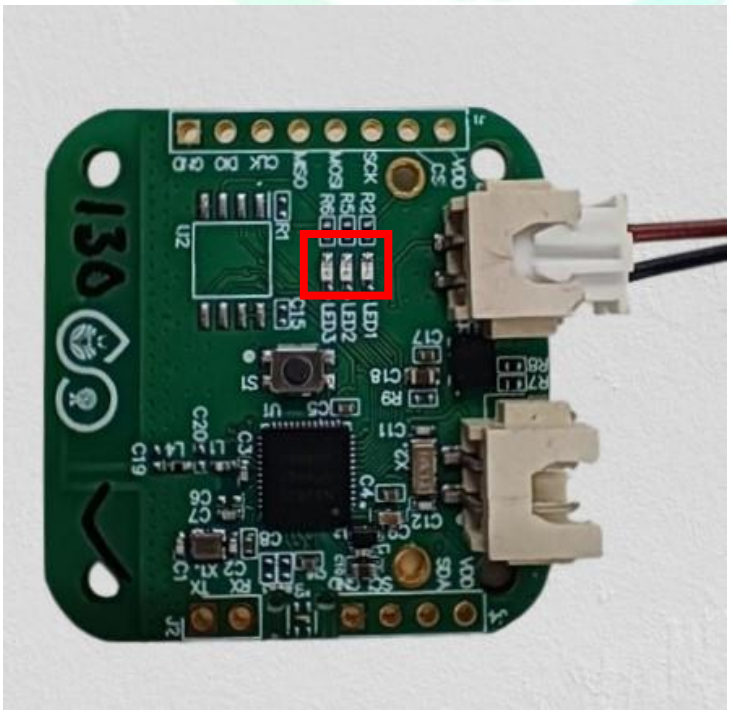
- NODE with connection.



- NODE after program.

❖ OUTPUT

- NODE Before flash the code.



- NODE after flash the code.