EXPERIMENT – 1.2

INTERFACING AN EXTERNAL LED WITH DEV BOARD/NODE

What will you learn from this module:

Blink external led using Development kit/Node.
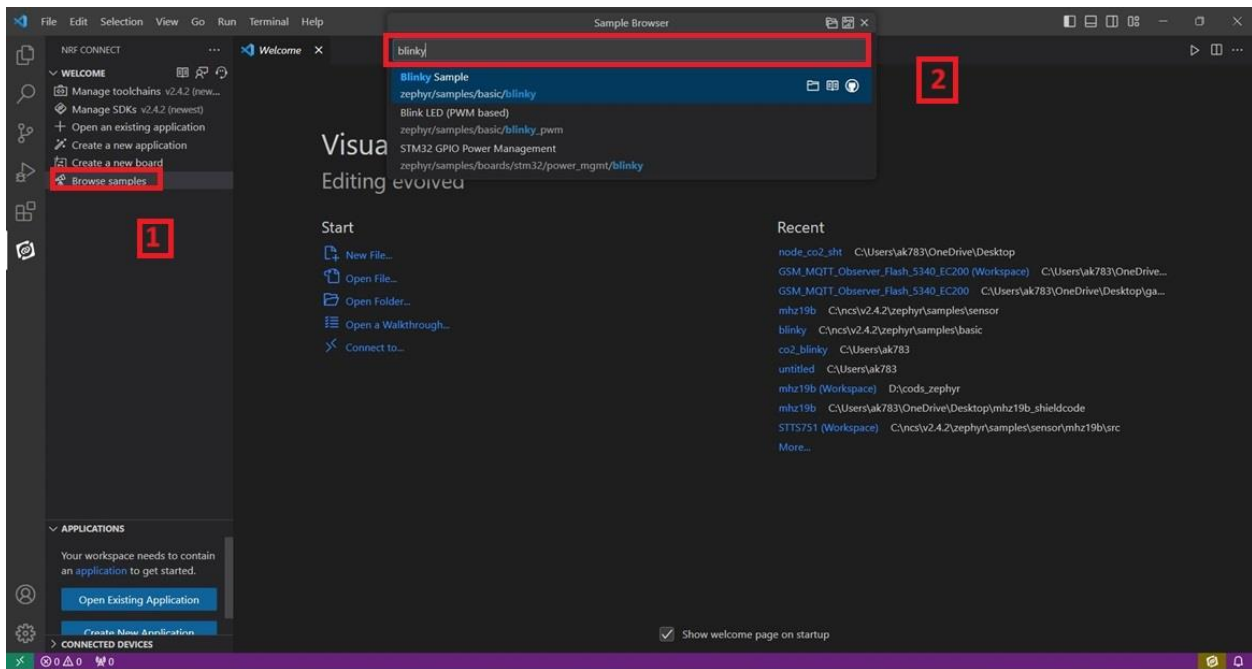
Requirements:

- ➤ nRF connect desktop software.
- ➤ nRF Command line tools.
- ➤ Visual studio code.
- ➤ USB cable.
- ➤ nRF52832 Development Board/Node.
- ➤ LED's.

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 [1]**. Here you can change the board version, if you are using nRF52832, then select **nrf52dk_nrf52832 [2]** or you can change from dropdown menu for another version like nRF52833 etc.
> ➤ After that click on the Configuration and select **prj.config [3]** from dropdown menu and then **click on the Build Configuration [4]**.
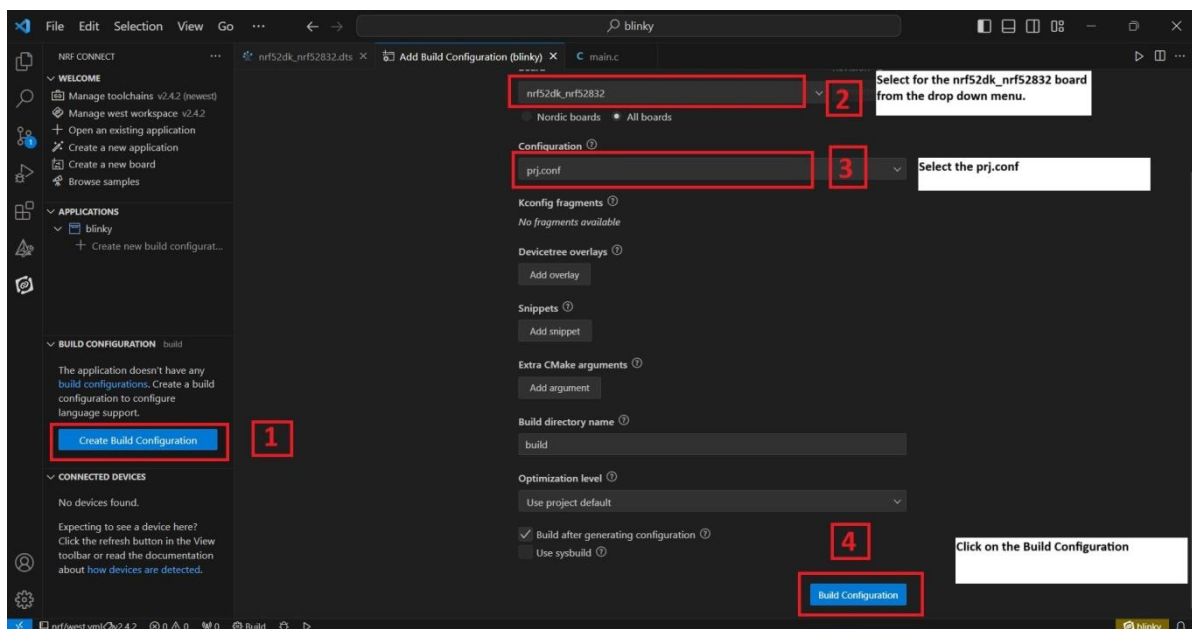
> ➢ Go to **source file**, click **source file [2]** > click on **Application** > click on **src [3]** > click on **main.c [4]**.
> ➢ After Click on **main.c** file and you will see the code on your screen **[4]**.
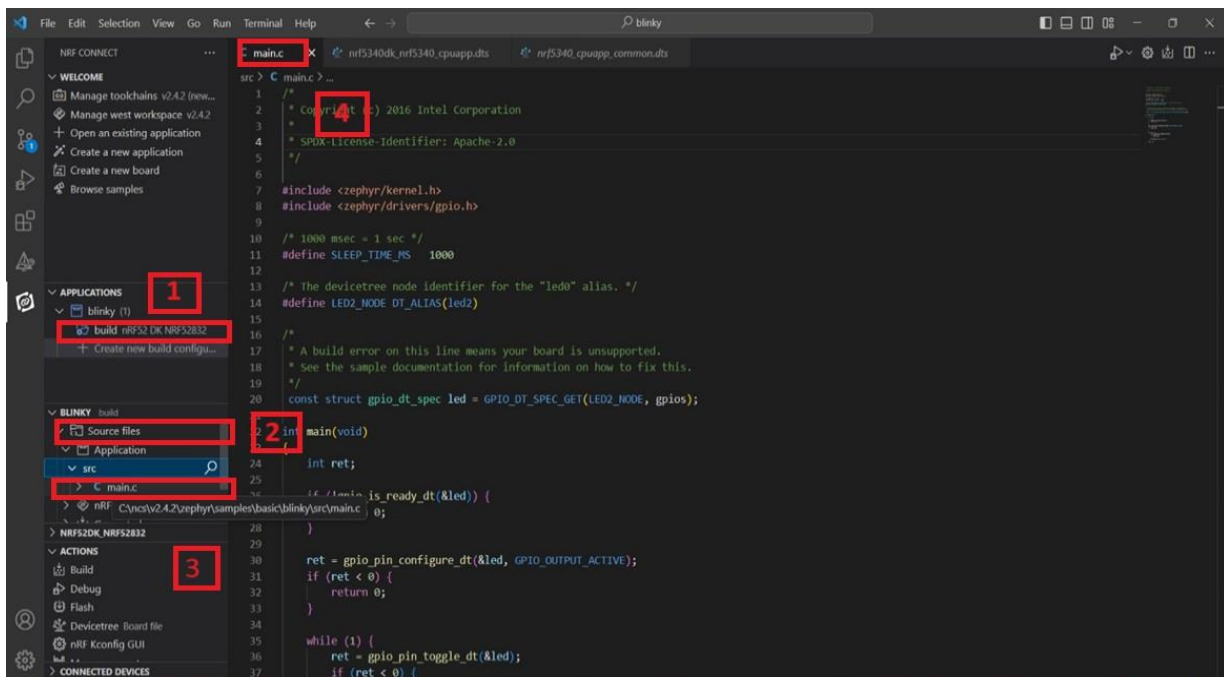
> ➢ Click on the **Config files [1]** > **Devicetree** > **.dts file [2]**.
> ➢ After that **change the gpio pin no... [3]** with the **pin that is used by the external led** on the nRF board. (for example, if led's **+ve** terminal is connected to **P0.25** on the development board & **-ve** terminal to **GND**, then change the gpio pin no. to 25 in the .dts file as shown in the figure.
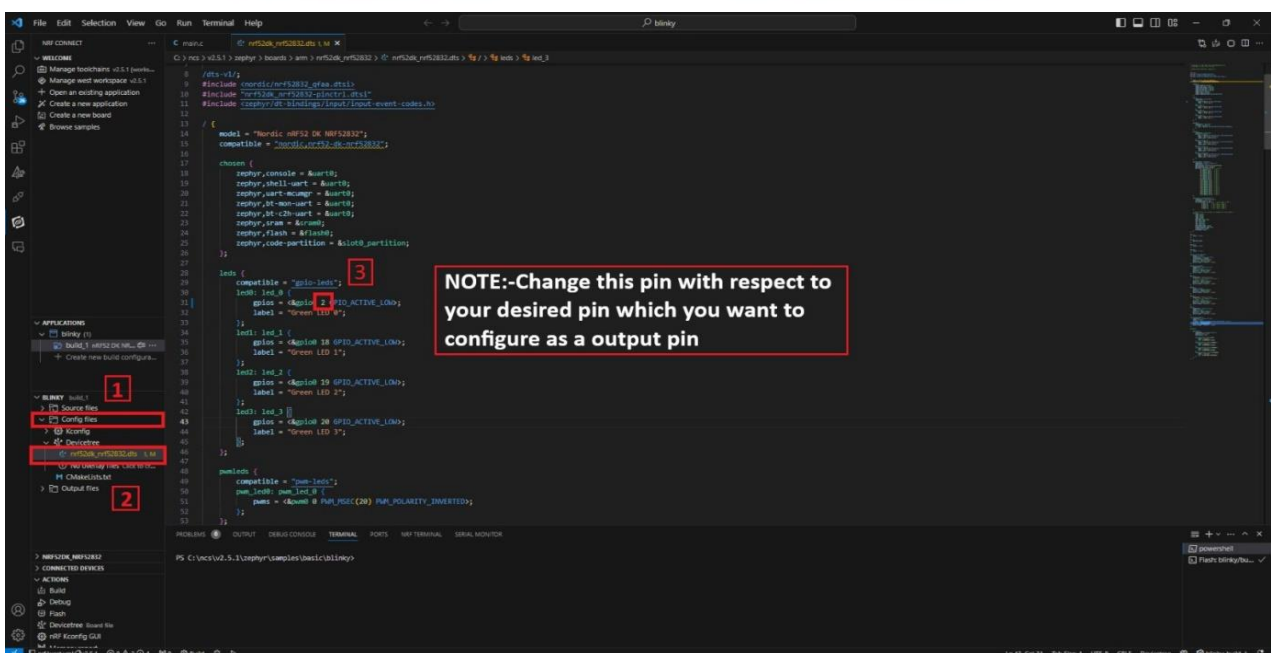
➤ Click on **Build [1]** configuration again and check the **CONNECTED DEVICES [2].**

➤ If device id is visible, then **Flash [3]** the code in Development Kit.

➤ If **flashed successfully [4]** message is displayed on serial terminal, then flash process is complete.
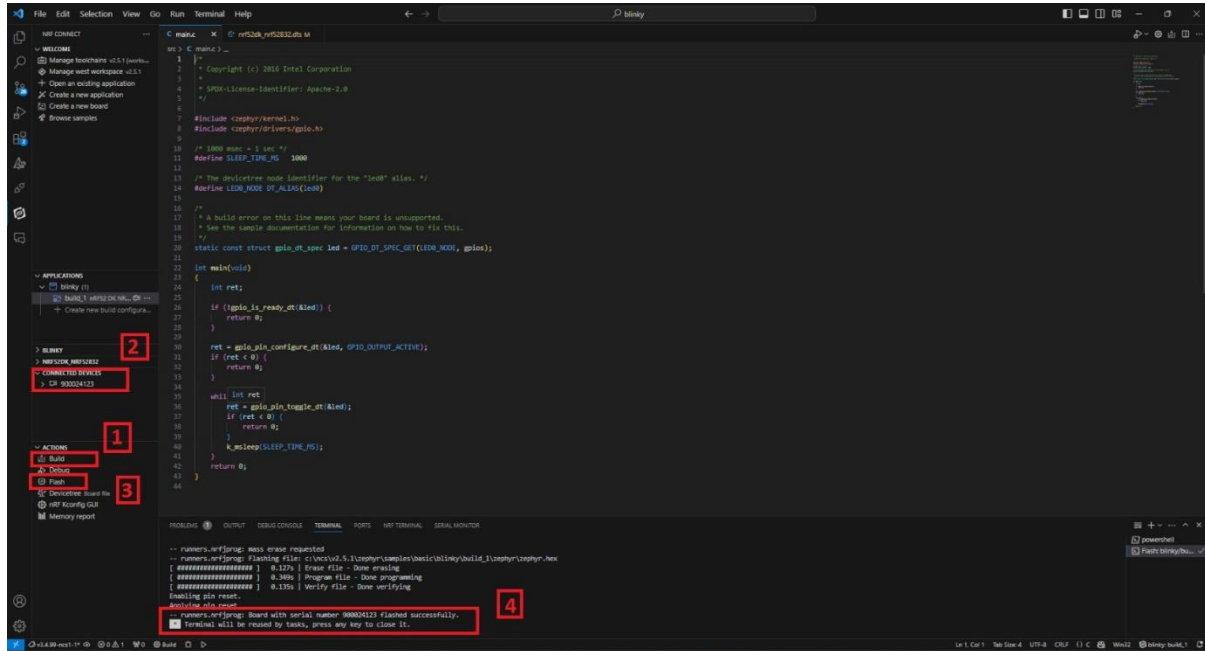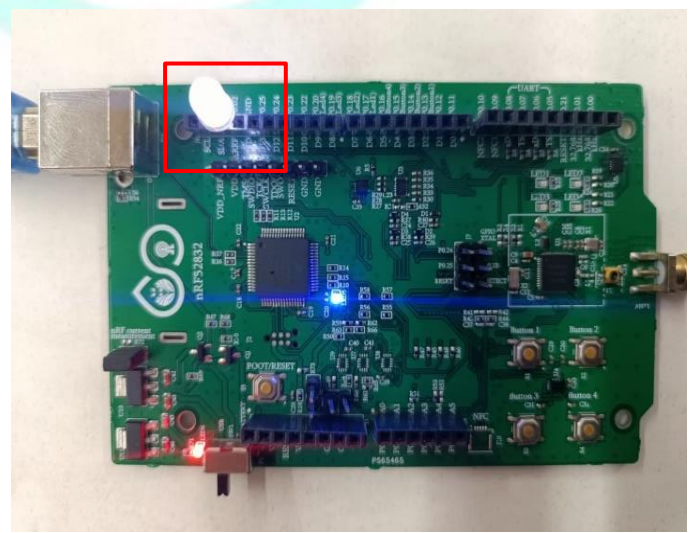
❖ PIN CONFIGURATION OF EXTERNAL LED WITH THE BOARD
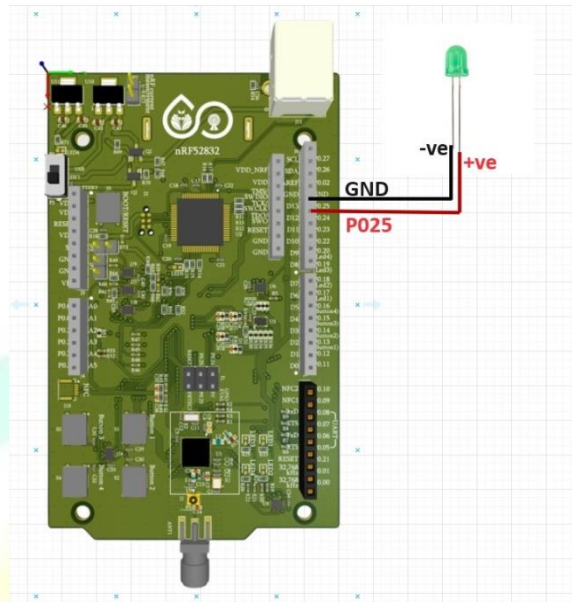
❖ OUTPUT
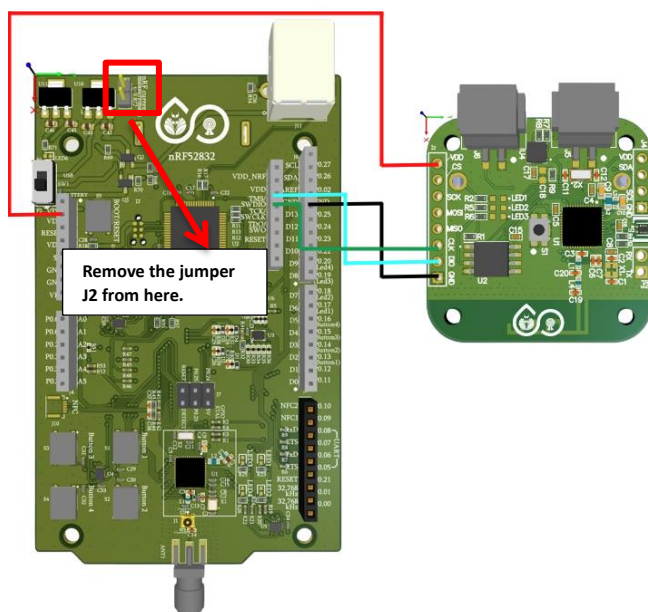
➢ nRF52832 board before flash the code.	➢ nRF52832 board after flash the code.

❖ WITH THE HELP OF NODE

➢ For Node programing remove the jumper **J2** from the development board.
➢ Now flash the code with the help of nRF52832 development board as shown below in the figure.

❖ PIN CONFIGURATION

Remove the jumper J2 from here.

Board Pins -> NODE Pins
VDD -> VDD
GND -> GND
CLK -> CLK
DIO -> DIO

❖ OUTPUT

➢ NODE Before flash the code.

➢ NODE after flash the code.