



AWaDH
Agriculture and Water
Technology Development Hub

EXPERIMENT -15

INTERFACING OLED DISPLAY WITH DEVELOPMENT BOARD

What will you learn from this module:

Interfacing OLED Display with Development Board &
Print Hello World on OLED Display.

Requirements:

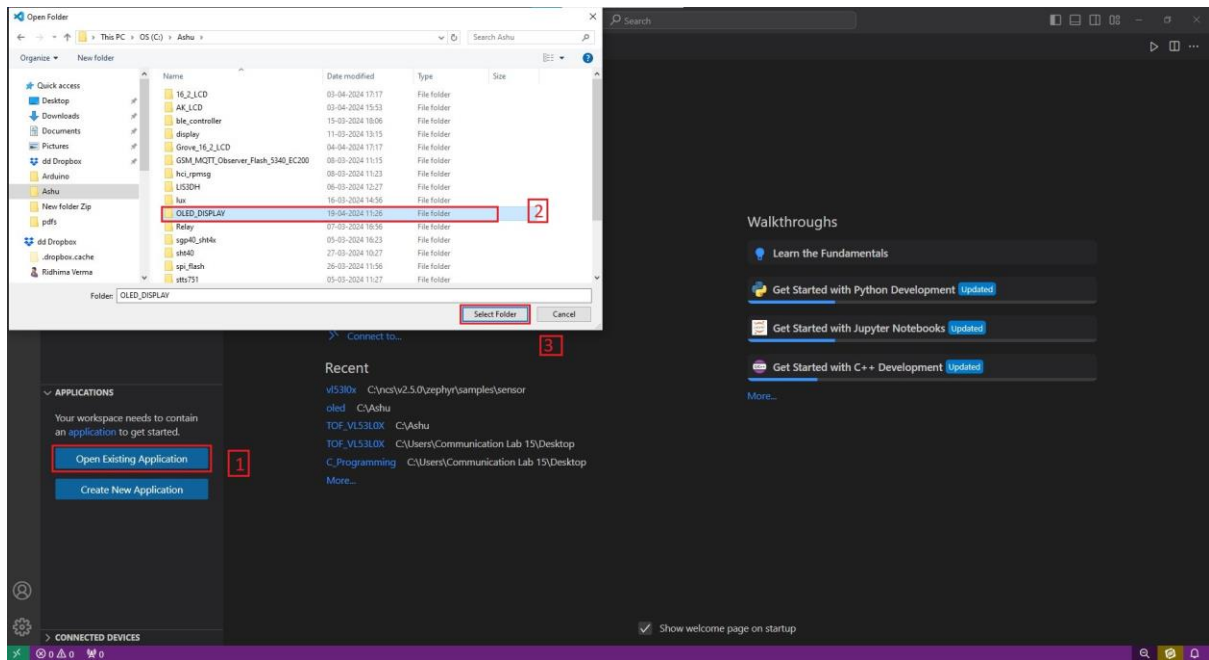
- nRF connect desktop software.
- nRF Command line tools.
- Visual studio code.
- USB cable.
- nRF52832 Development Board.
- SSD1306 OLED Display.

Prerequisites:

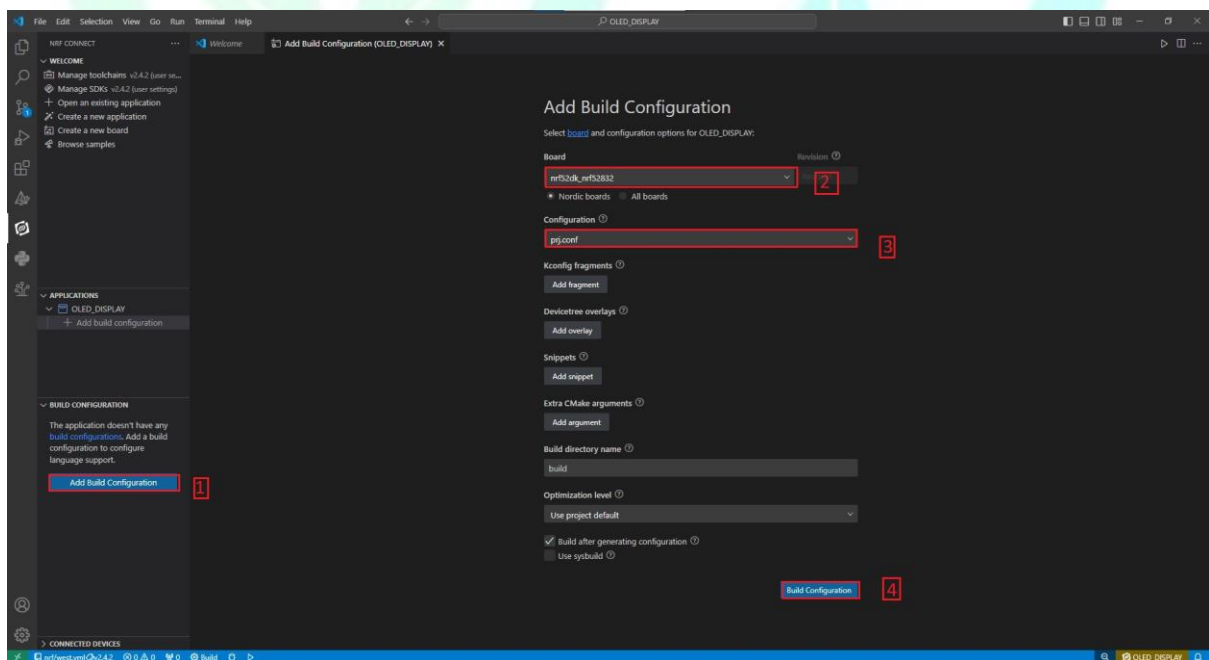
- Basic knowledge of C/C++
- Basic knowledge of communication protocol.
- Basic project setup.

Setup and Configuration:

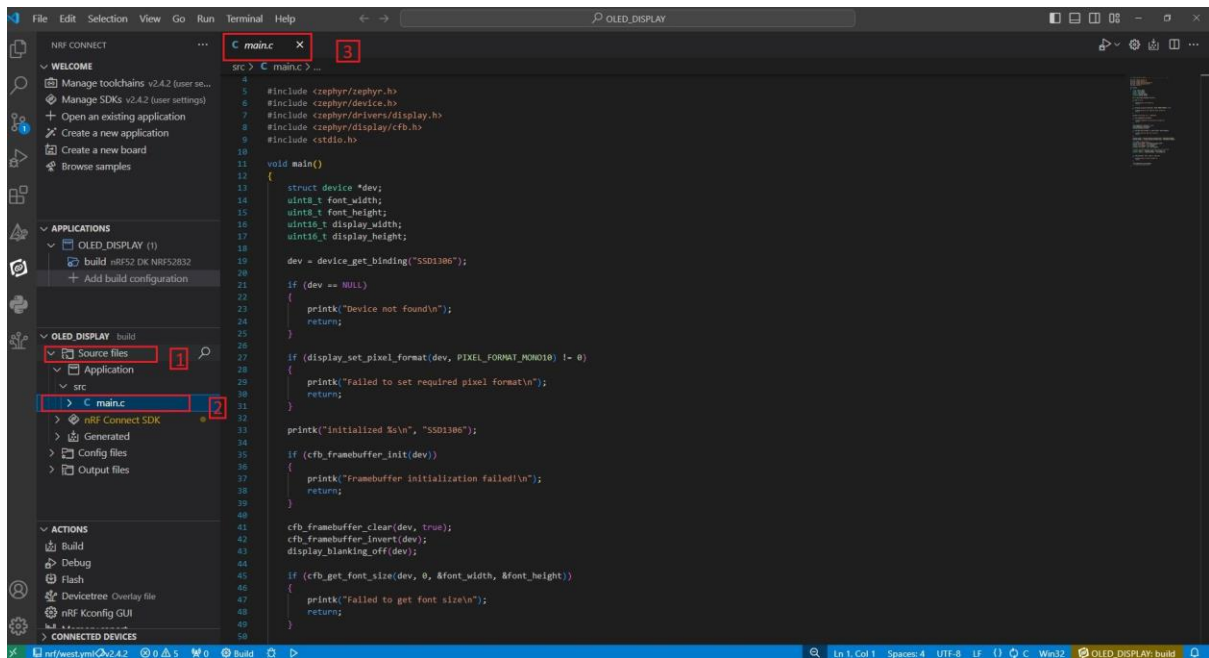
- Open VS Code and click on **Open Existing Application [1]** > click on **OLED_DISPLAY [2]** > **Open [3]** as shown in the picture below.



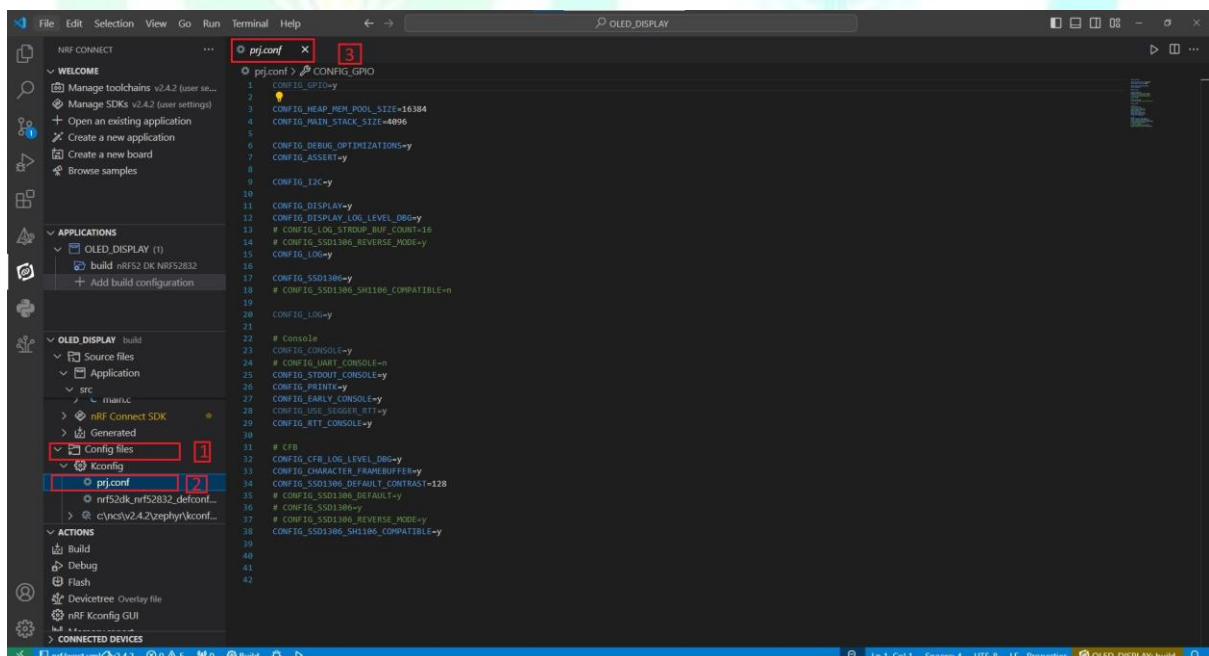
- Click on **Create new build configuration** [1]. Here you can change the board version, if you are using nRF52832, then select **nrf52dk_nrf52832** [2] or you can change from dropdown menu for another version like nRF52833 etc.
- Click on the Configuration and select **prj.conf** [3] from dropdown menu and then click on the **Build Configuration** [4] as shown below in the picture.



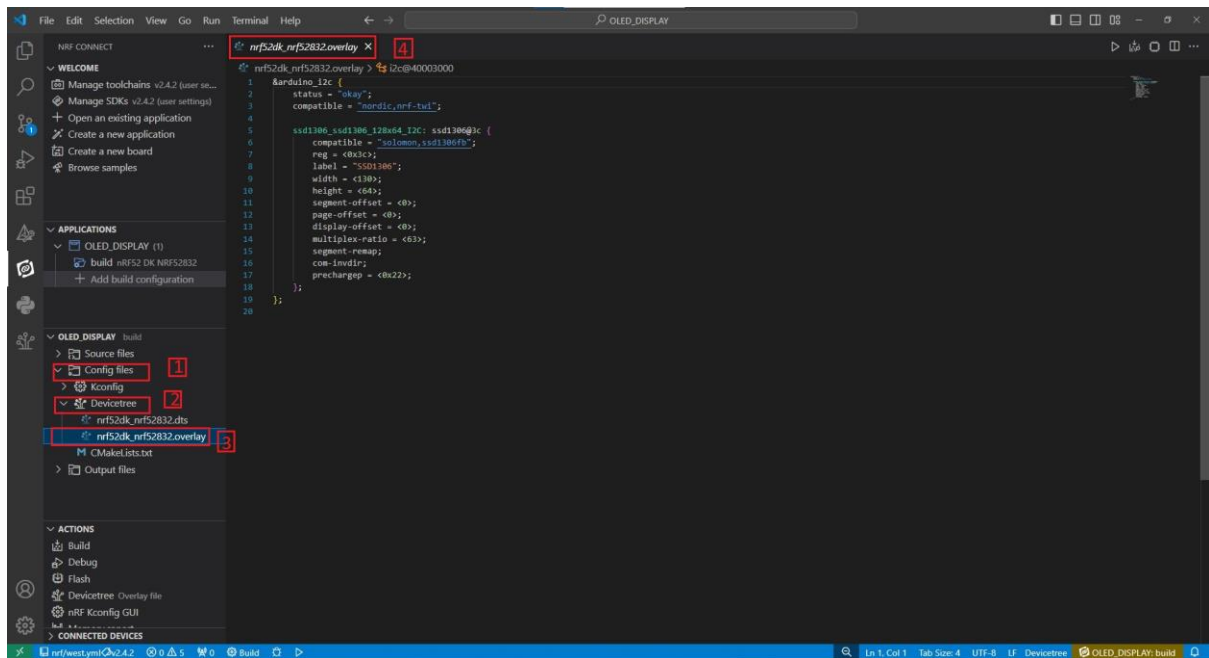
- Go to source file, click **source file** [1] > click on **Application** > click on **src** > click on **main.c** [2].
- By clicking on **main.c** file and you will see the code on your screen [3].



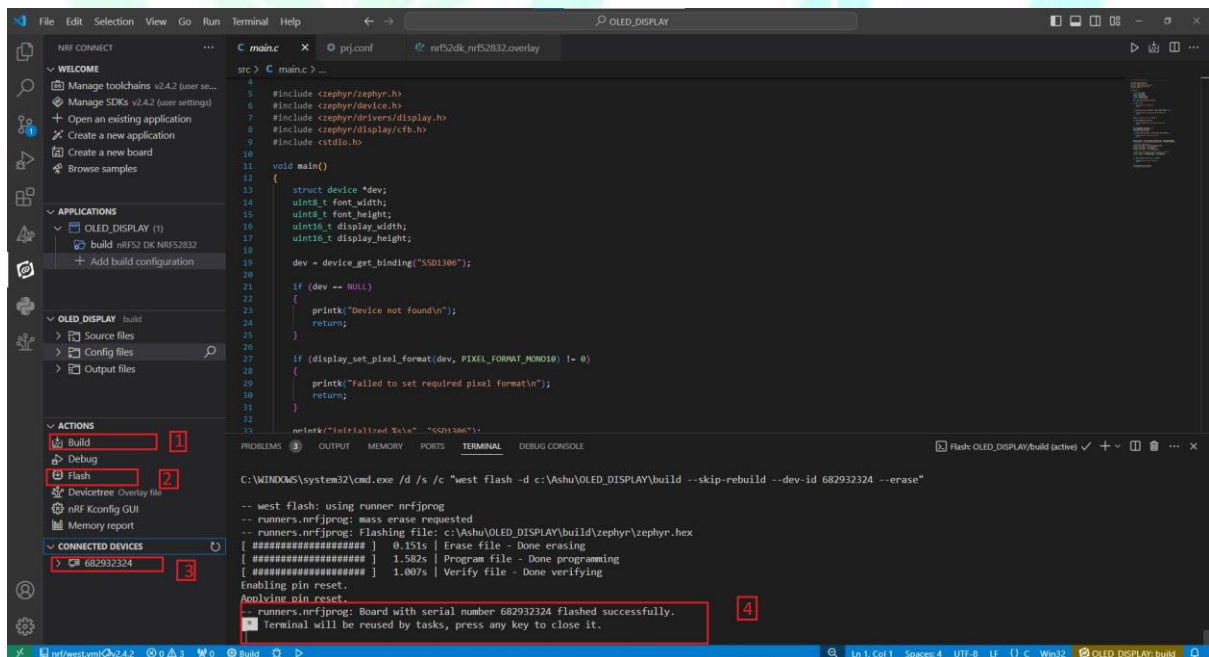
- To configure the prj configuration, click on **Config files** [1] > click on **Kconfig** > click on **prj.conf** [2].
- The prj configuration will appear on your screen [3] as shown in the picture below.



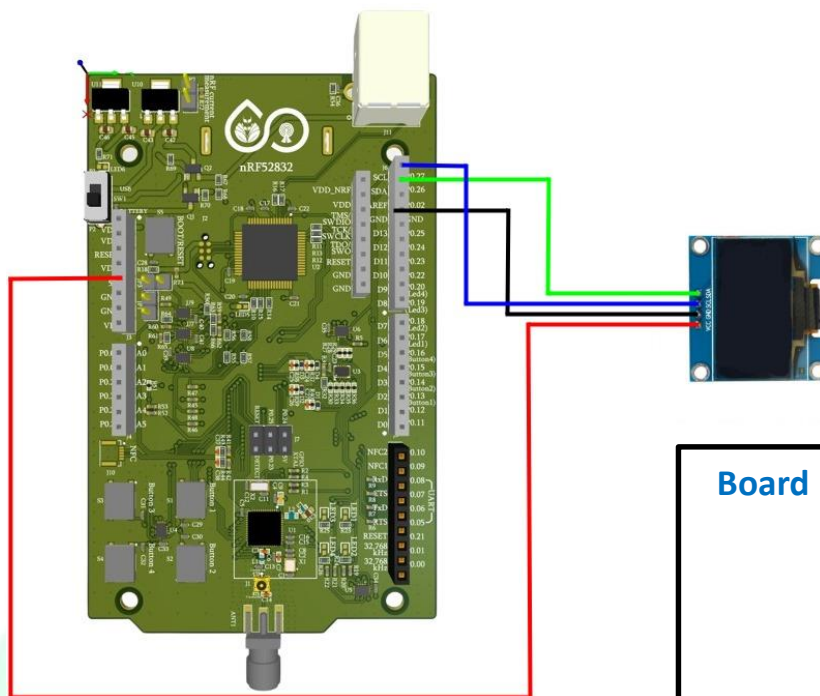
- To configure the i2c protocol, you have to enable it in the **.overlay file**.
- Click on the **Config files** [1] > click on **Kconfig** > click on **Devicetree** [2] > click on **nrf52dk_nrf52832.overlay** [3].
- The .overlay file will appear on your screen and add the given code to the .overlay file as shown in the picture given below [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.



❖ PIN CONFIGURATION



Board Pins -> SSD1306(OLED)

VDD(5V) -> VDD

GND -> GND

SDA -> P0.26

SCL -> P0.27

❖ OUTPUT

