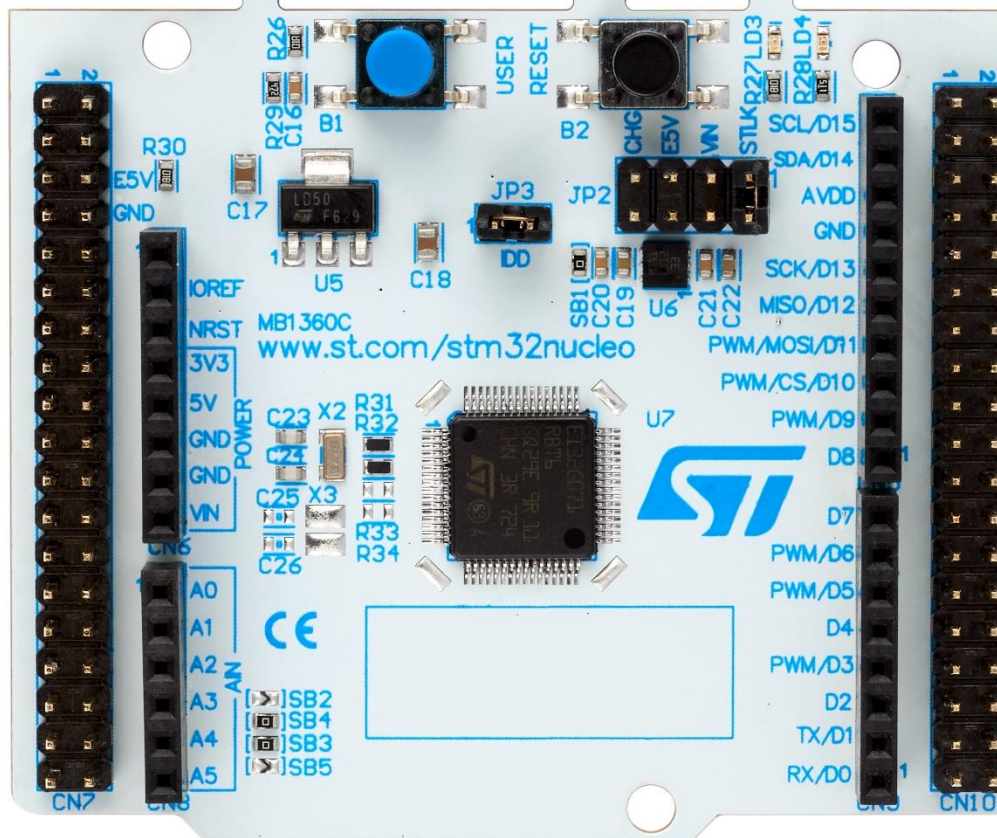
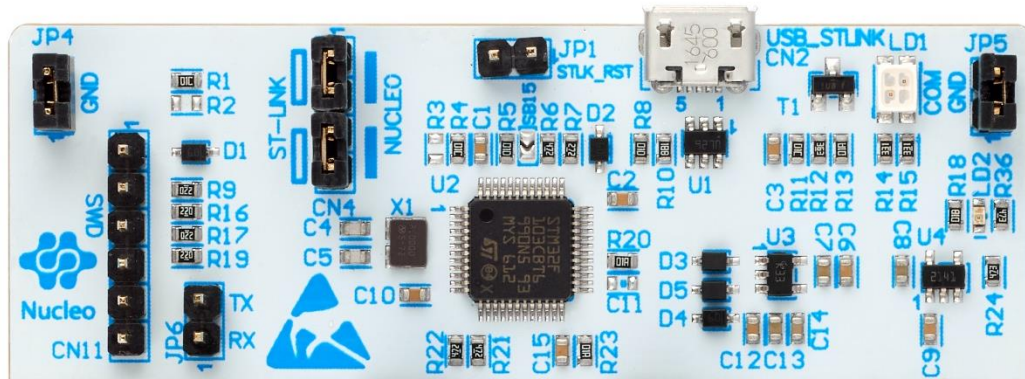




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# Led blinking hands-on

## Key learning

- Practice STM32CubeMX project source code generation
- Test the tools & hw setup

## Task

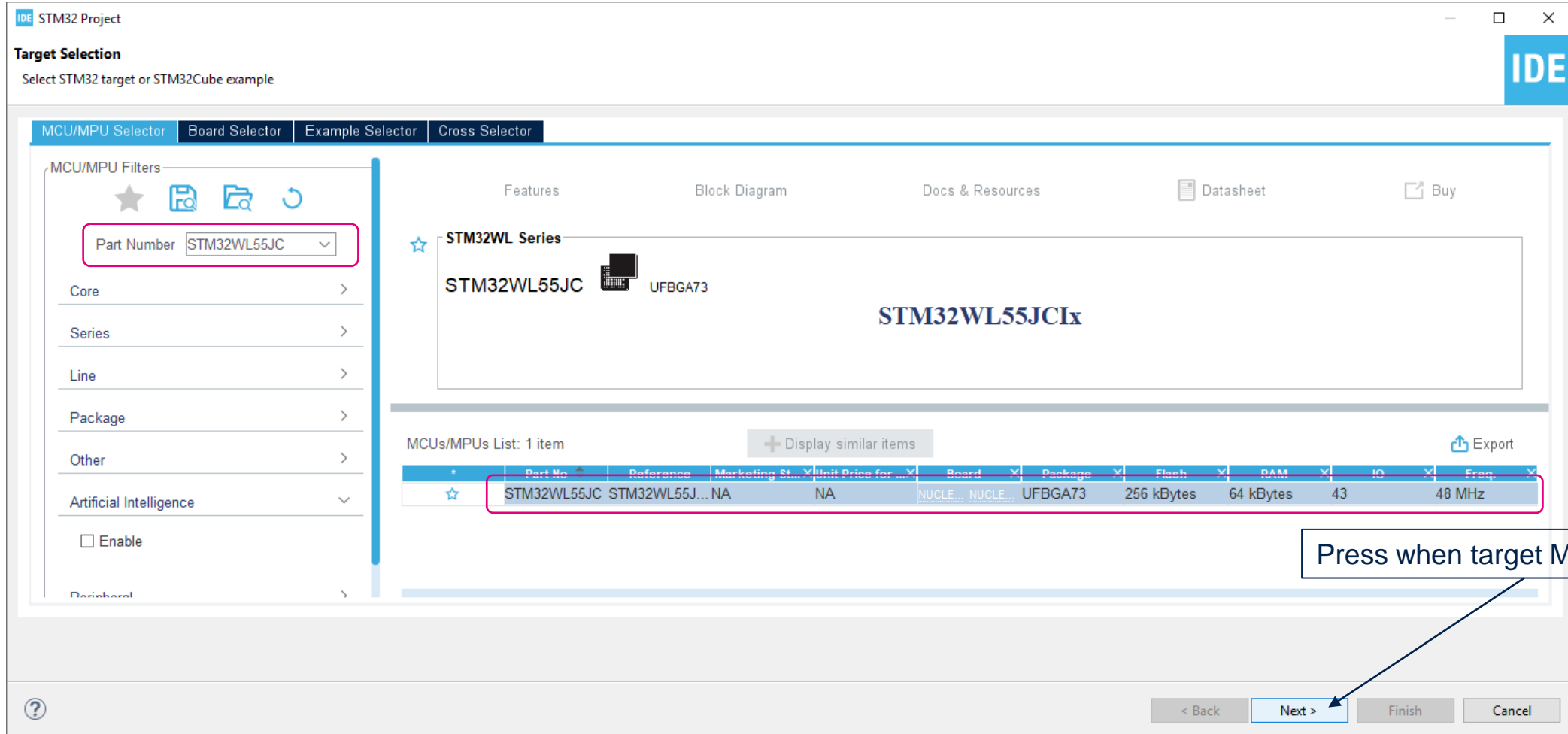
- Prepare simple project for STM32WL55JCTx populated on Nucleo board
- PB15 as GPIO output push-pull
- Periodically toggle the LED\_Blue connected to PB15
- **Cortex-M4 only** to simplify the task

1. Open STM32CubeIDE v1.5.0



# Hands-on

2. File → New → STM32 Project → Part Number STM32WL55JC



## Enter project name and location

The screenshot shows the 'STM32 Project' dialog box in the IDE. It has a title bar with 'IDE', a minimize button, a maximize button, and a close button. A warning icon and text 'Project location already exists' are at the top. The 'Project' section contains a 'Project Name' field with 'GPIO\_toggle' and a 'Location' field with 'C:\STM32WL\_WS\Hands-on\Led\_Blinking'. There is a 'Browse...' button next to the location field. The 'Options' section has several groups: 'Targeted Language' with radio buttons for 'C' (selected) and 'C++'; 'Targeted Device Usage' with a checkbox for 'Enable Multi Cpus Configuration'; 'Targeted Binary Type' with radio buttons for 'Executable' (selected) and 'Static Library'; and 'Targeted Project Type' with radio buttons for 'STM32Cube' (selected) and 'Empty'. At the bottom are buttons for '?', '< Back', 'Next >', 'Finish', and 'Cancel'. Annotations with arrows point to various elements: 'Uncheck' points to the 'Use default location' checkbox; 'GPIO\_toggle' points to the 'Project Name' field; '...\STM32\_WL\Hands-on\Led\_Blinking' points to the 'Location' field; 'Uncheck Cortex-M4 only' points to the 'Enable Multi Cpus Configuration' checkbox; and 'Press when finished, wait until project creation' points to the 'Finish' button.

IDE STM32 Project

⚠ Project location already exists

Project

Project Name: GPIO\_toggle

☐ Use default location

Location: C:\STM32WL\_WS\Hands-on\Led\_Blinking Browse...

Options

Targeted Language

☒ C ☐ C++

Targeted Device Usage

☐ Enable Multi Cpus Configuration

Targeted Binary Type

☒ Executable ☐ Static Library

Targeted Project Type

☒ STM32Cube ☐ Empty

? < Back Next > Finish Cancel

Uncheck

GPIO\_toggle

...\STM32\_WL\Hands-on\Led\_Blinking

Uncheck Cortex-M4 only

Press when finished, wait until project creation

## Select debug interface as “Serial Wire”

Pinout & Configuration

Clock Configuration

Project Manager

Tools

Software Packs

Pinout

DEBUG Mode and Configuration

Mode

JTAG and TraceSerial Wire

☐ Sub-GHz radio Reset monitoring

☐ Sub-GHz radio HSE32 clock ready monitoring

☐ Sub-GHz radio SMPS ready monitoring

☐ Sub-GHz radio LDO ready monitoring

☐ Sub-GHz radio Internal signals monitoring

☐ Power Control LDO ready monitoring

☐ Power Control Vddio status monitoring

☐ Power Control Main power supply status monitoring

Configuration

Warning: This peripheral has no parameters to be configured

Categories

A->Z

System Core

Analog

Timers

Connectivity

Multimedia

Security

Computing

Middleware

Trace and Debug

DEBUG

Pinout view

System view

VSSSM

VDDSM

DEBUG

VDDA

VDD

VBAT

PA12

VLXSM

VFBSM

PA15

PB15

VREF+

PC14-O

VSS

DEBUG

PA11

PB3

PB4

PB7

PB9

PC15-O

PB14

PC13

PA10

PB5

PB8

PC2

PC3

PA0

PB13

PB2

VSS

PB6

VDD

VSS

PC5

PA9

PB12

PB1

VDDRF

VDD

PC1

PC0

PC4

PA6

NRST

PB0-VD

VDDRF

OSC\_O

PC6

PA1

PB11

VSS

VSSRF

VSSRF

VSSRF

OSC\_IN

PA3

PA2

PA7

PB10

VDD

VSSRF

RFL\_N

VDDPA

VR\_PA

PA4

PA5

PA8

PH3-B

RFL\_P

RFO\_LP

RFO\_HP

UFPGA73 (Top view)

Configure PB15 as “Output Push-Pull” (Blue LED is connected to)

# Hands-on

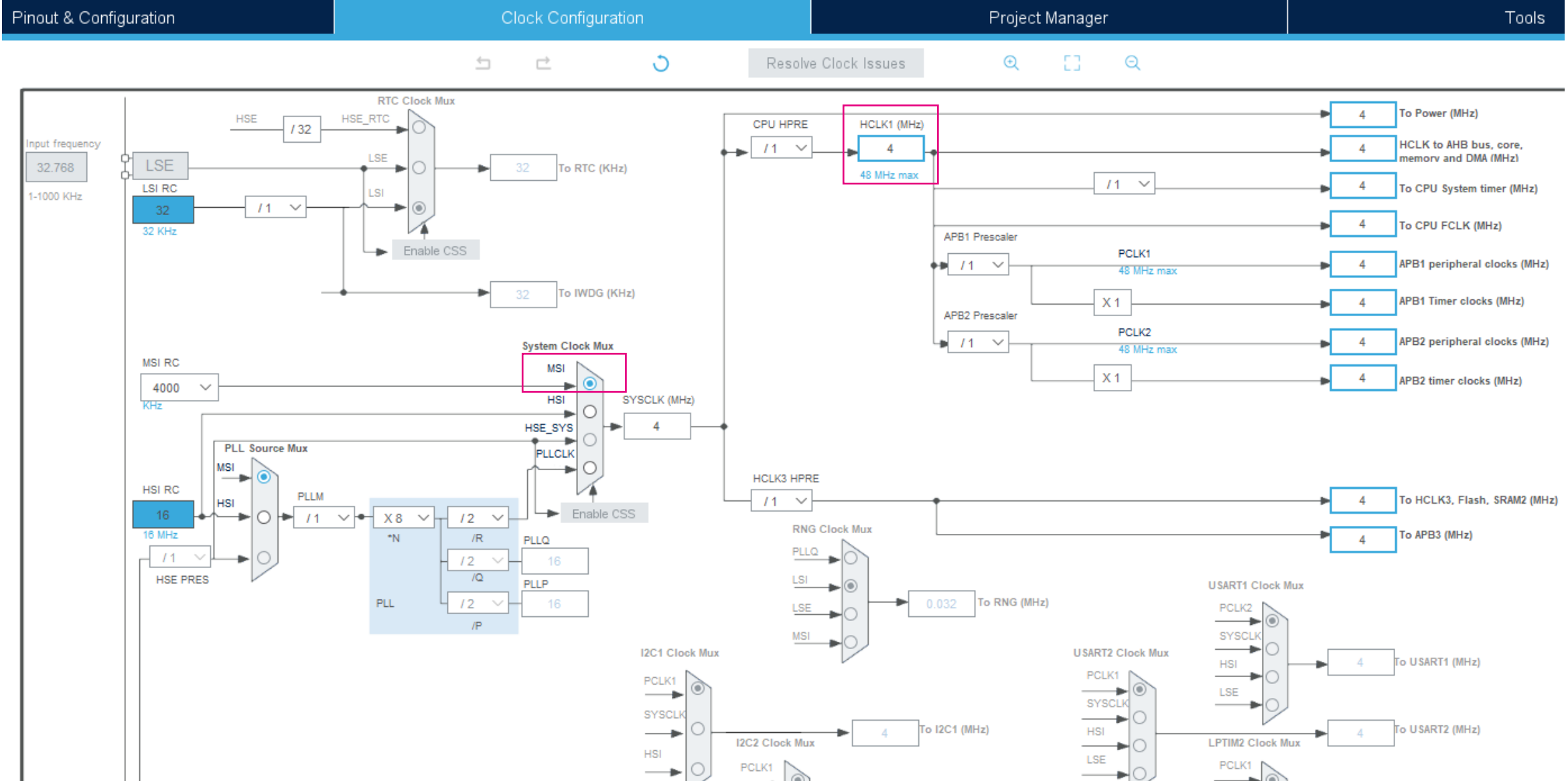


It is possible to use find option



# Keep the default clock tree configuration: MSI = 4MHz system clock

# Hands-on

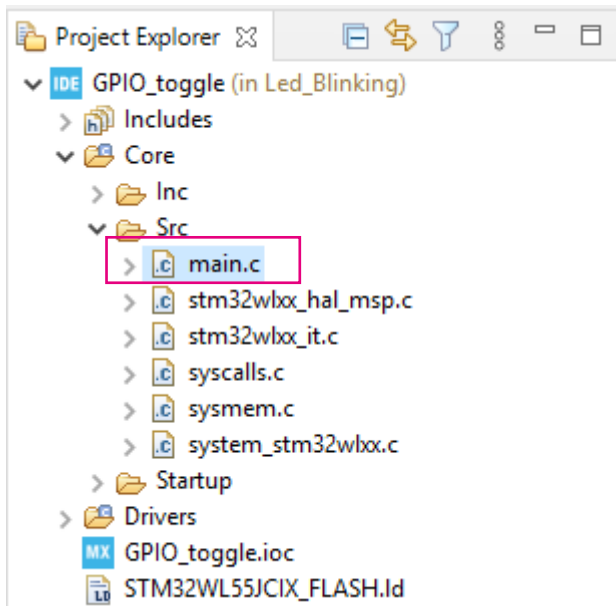


1. Generate code



2. Open main main.c and navigate to main loop USER CODE BEGIN 3 comment

3. Add user codev to toggle GPIO PB15



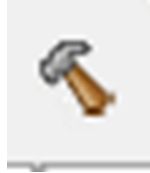
```
/* Infinite loop */
/* USER CODE BEGIN WHILE */
while (1)
{
    /* USER CODE END WHILE */

    /* USER CODE BEGIN 3 */
    HAL_GPIO_TogglePin(GPIOB,GPIO_PIN_15);
    HAL_Delay(1000);
}
/* USER CODE END 3 */
```



# Hands-on

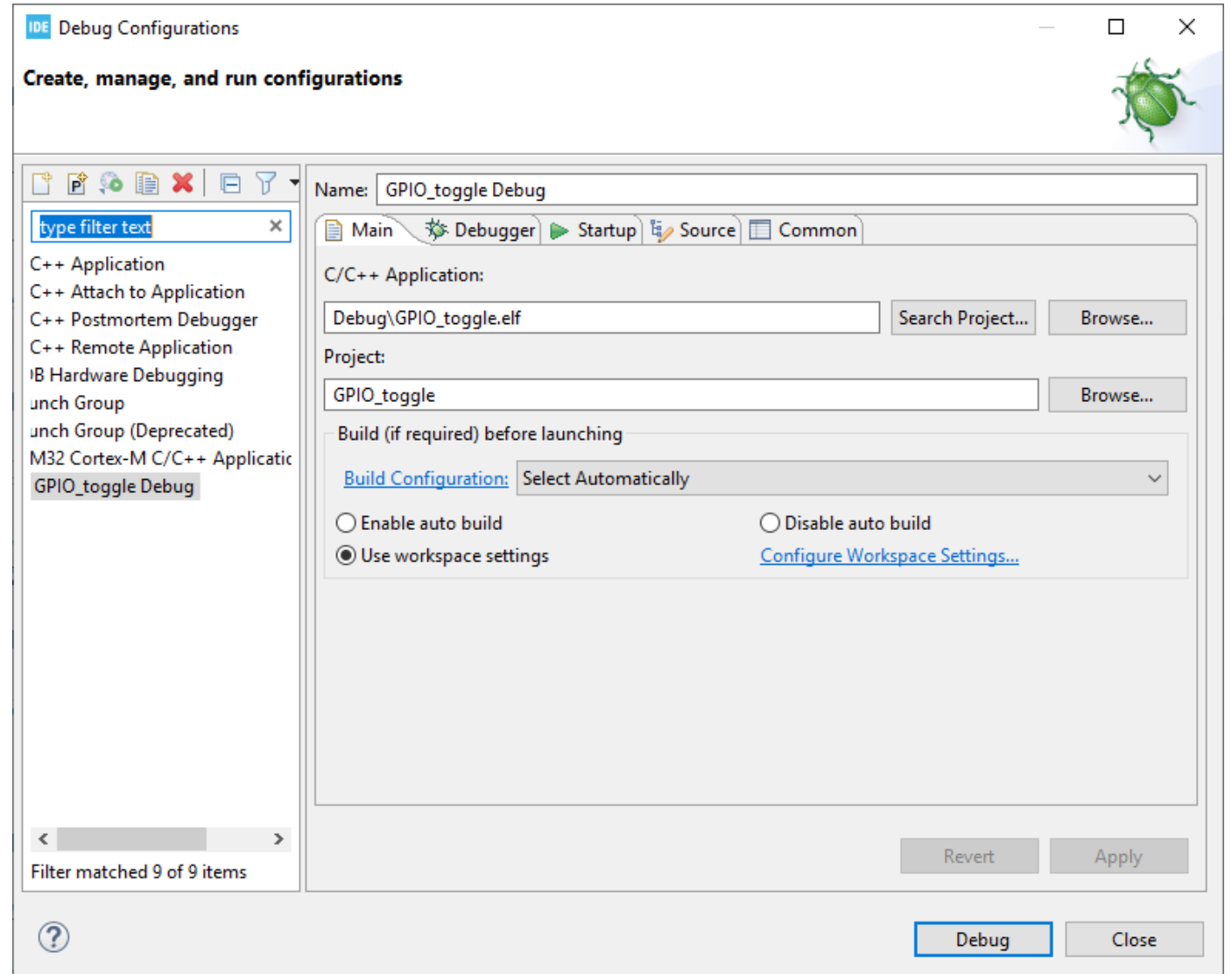
Build



Debug



Run



# Thank you

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