Importing ST HAL examples into OpenSTM32 System Workbench

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Contents

1. About

This document explains how to import an existing project from ST HAL libraries then build and create debug configuration. For now it not show how to Debug the project on target microcontroller.

The example used here is GPIO_IOToggle project from STM32Cube_FW_F4_V1.8.0 HAL library. This example runs on NUCLEO-F401RE board.

I use below procedure to import ST HAL projects into System Workbench and it works for all projects that I have try, excepting projects that have a *syscall.c* file, where an additional simple procedure is required – described in OpenSTM32 forum.

I hope this document will be useful for people who are new to System Workbench and ST HAL library.

2. Importing existing project from HAL library

2.1. Workspace selection

Start System Workbench (SW). When the dialog box from Figure 2-1 Workspace dialog box is shown press ***Browse*** button.

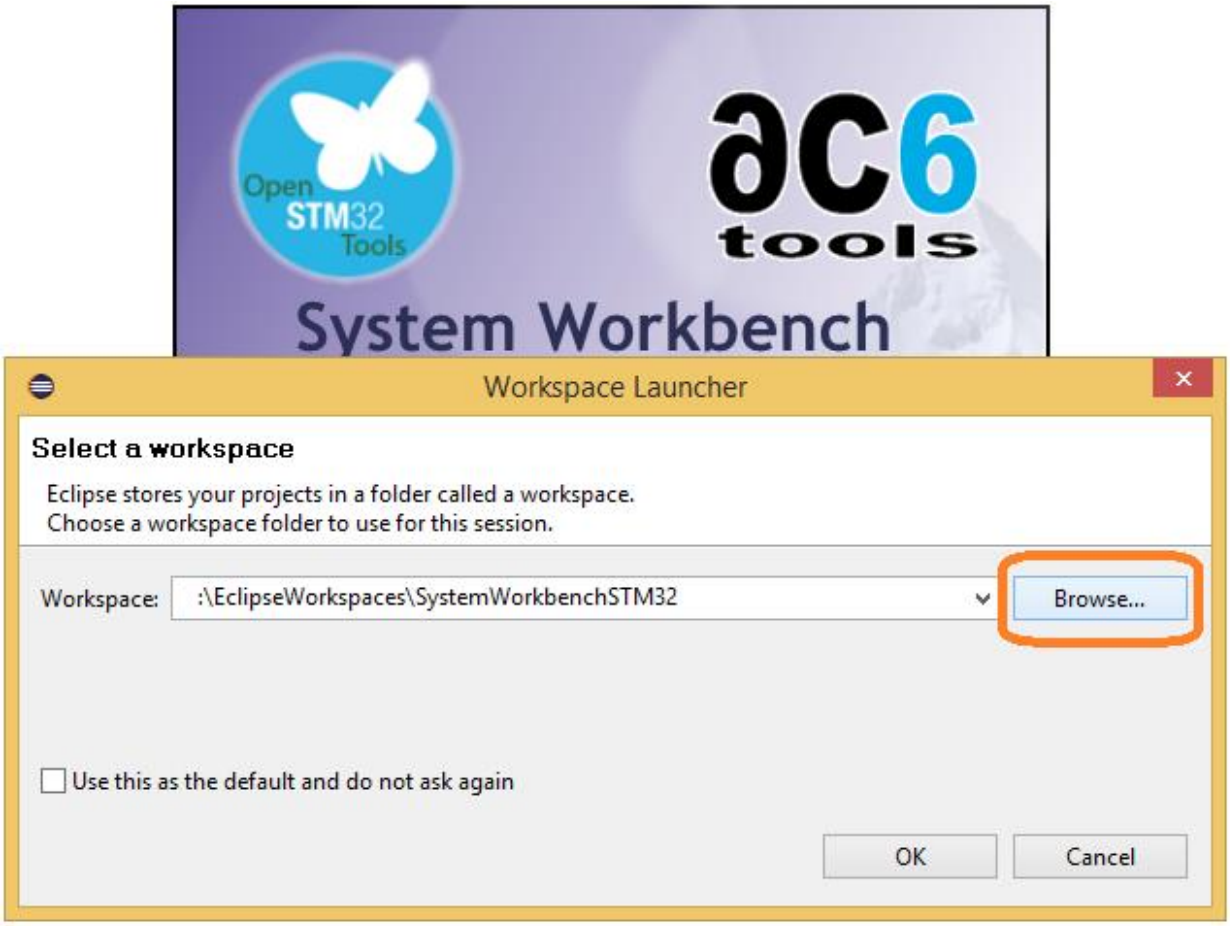

Figure 2-1 Workspace dialog box

Navigate where the project for OpenSTM32 is located, see below figure. The path should end like this

..\STM32Cube_FW_F4_V1.8.0\Projects\STM32F401RE-Nucleo\Examples\GPIO\GPIO_IOToggle

First part depends where the ST HAL library is installed.

Select the folder named *SW4STM32* (this folder contains the project created for System Workbench).

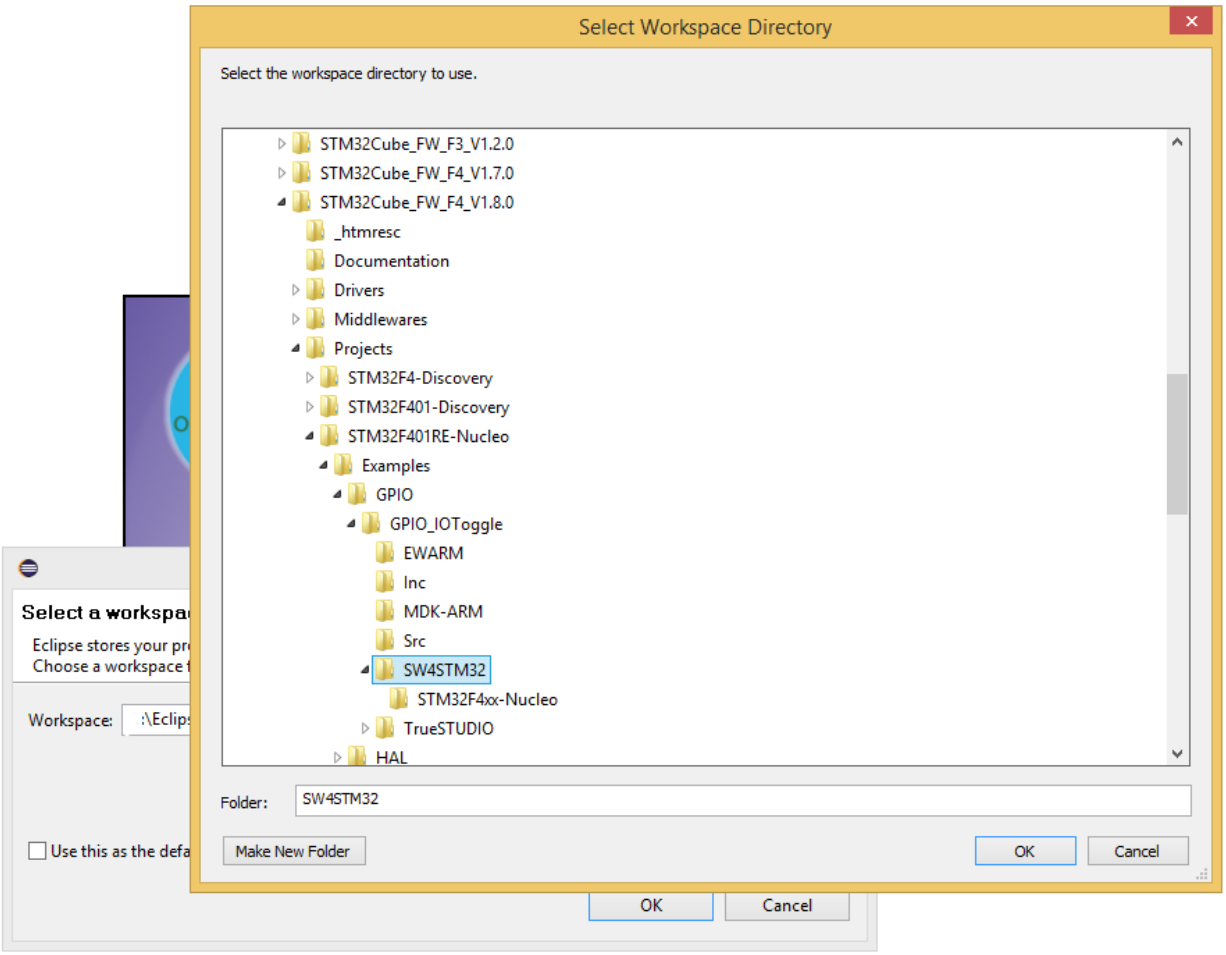

Figure 2-2 Locate HAL example project

The path is now in *Workspace* text box (see below figure). Press ***OK*** button in Workspace Launcher dialog box.

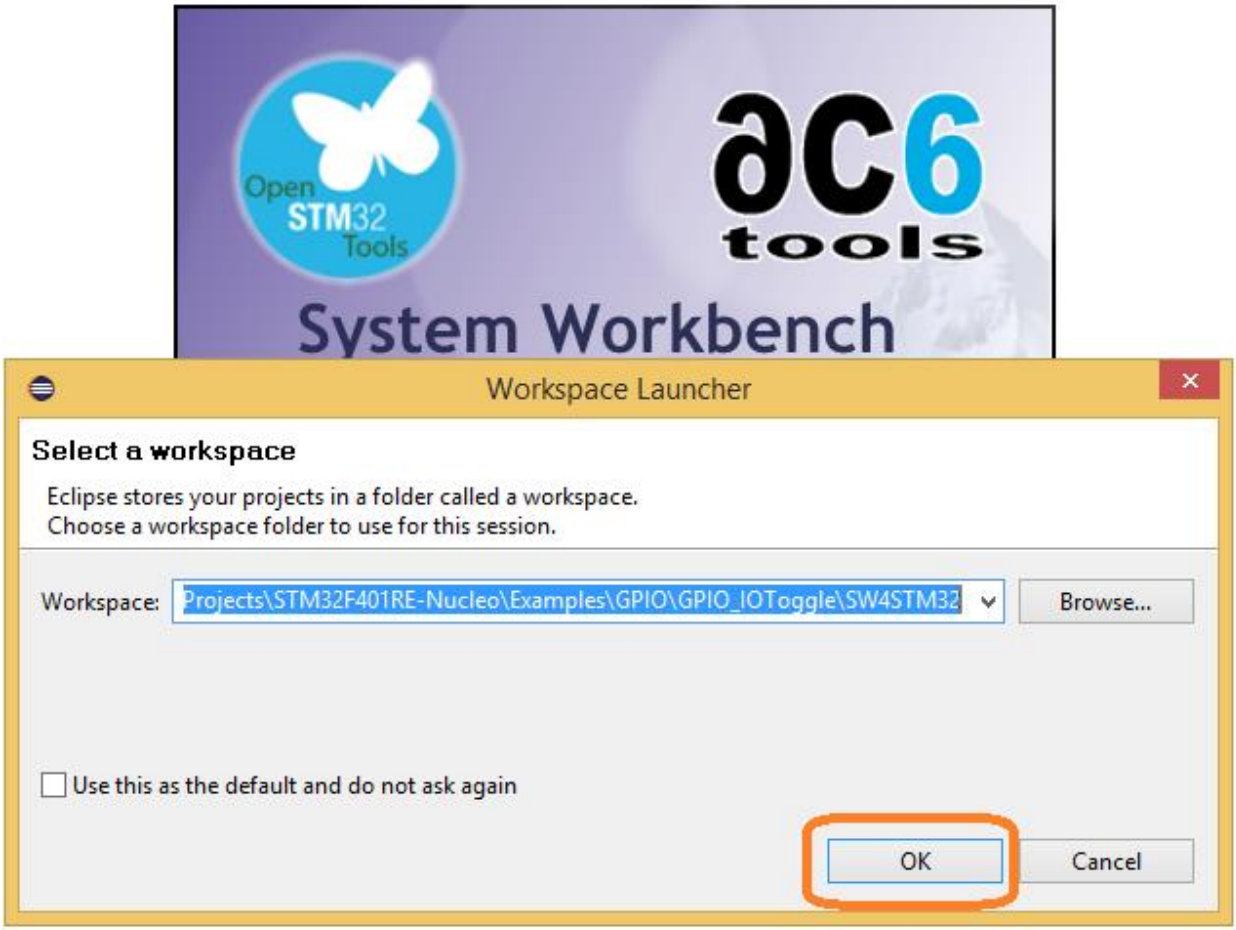

Figure 2-3 Workspace selection

Note: I don't know if it is really necessary to set the workspace in the project folder but I remember that I read somewhere this and after I try this and it works I didn't try other ways.

2.2. Importing

The *Eclipse for C/C++* welcome screen is displayed – see below figure. Close Welcome screen using ***X*** button (highlighted red).

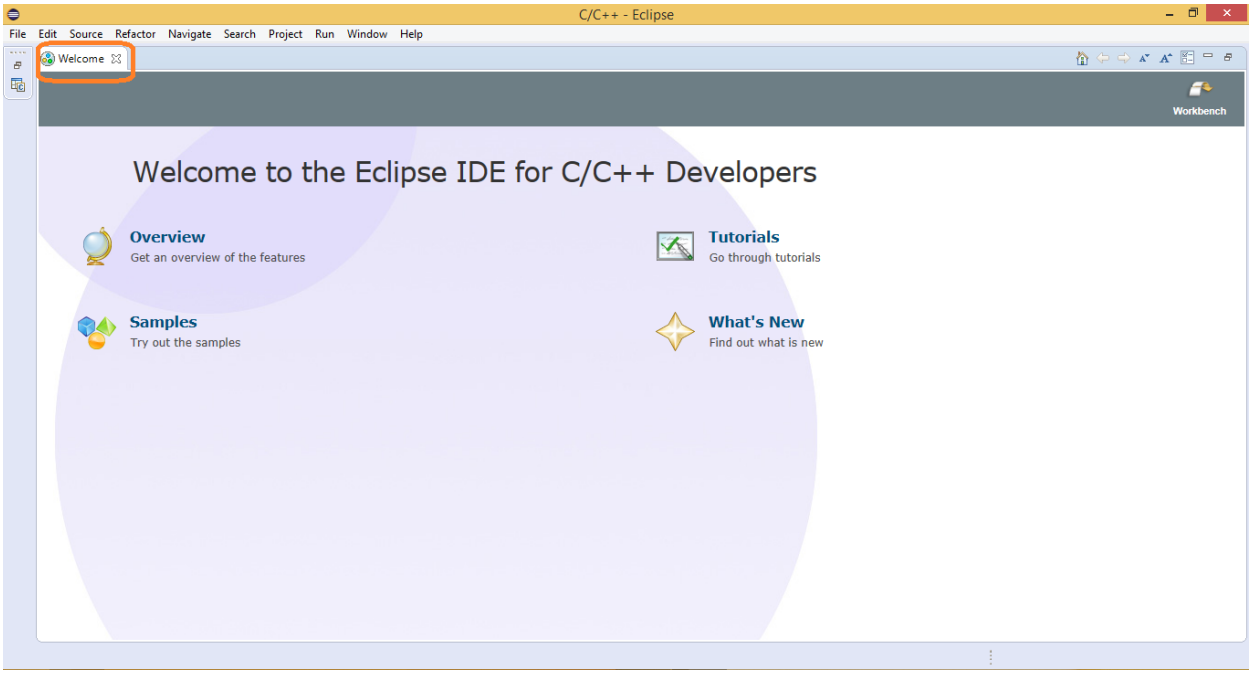

Figure 2-4 Eclipse Welcome screen

After closing Welcome screen the C/C++ Perspective is displayed. No project is in the *Project Explorer* window (leftmost window in System Workbench).

C/C++ perspective is used for editing the source code – the layout is organized in such way.

Now to finally add some code, from SW menu, select ***File*** and then ***Import…*** as below:

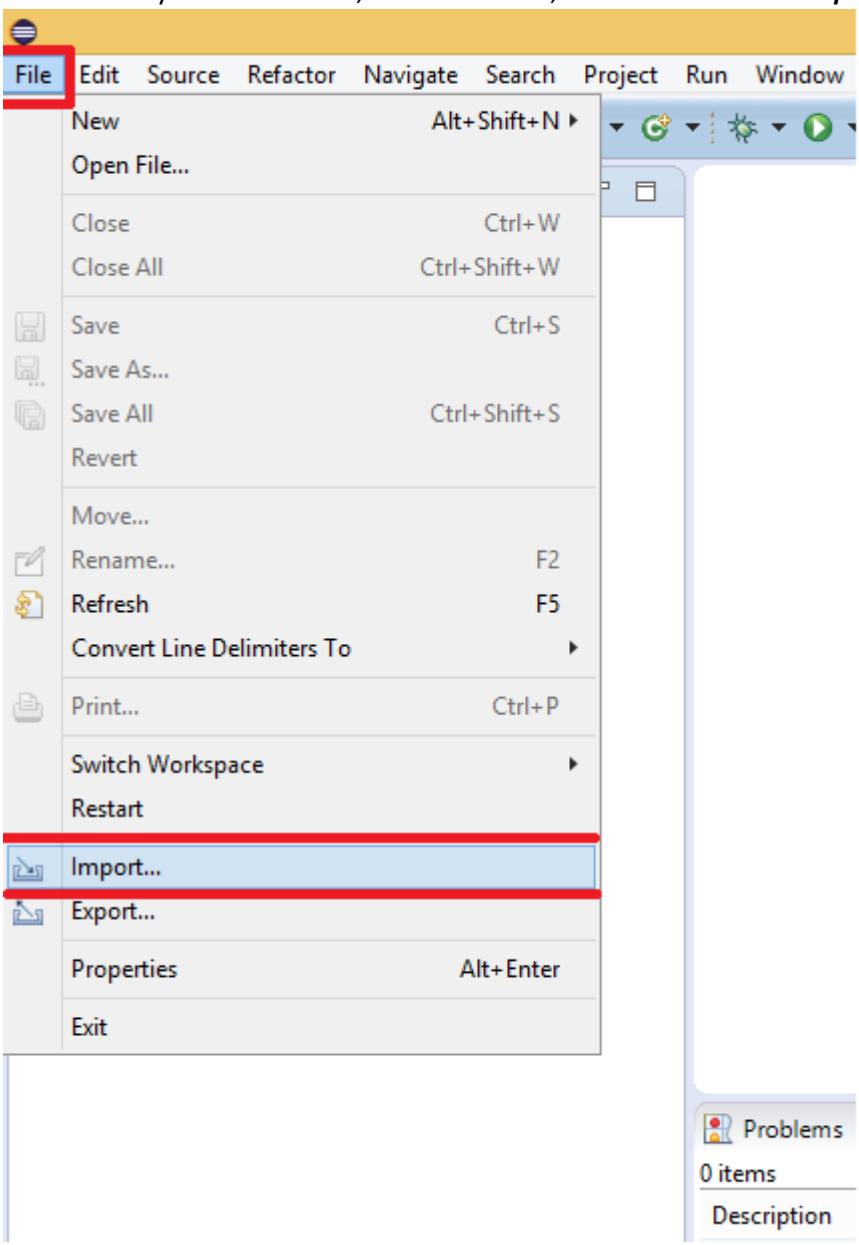

Figure 2-5 File Import

After pressing ***Import…*** a new window is open. In this window (Import) select ***General*** > ***Existing Project into Workspace*** – see below image. Press ***Next*** button.

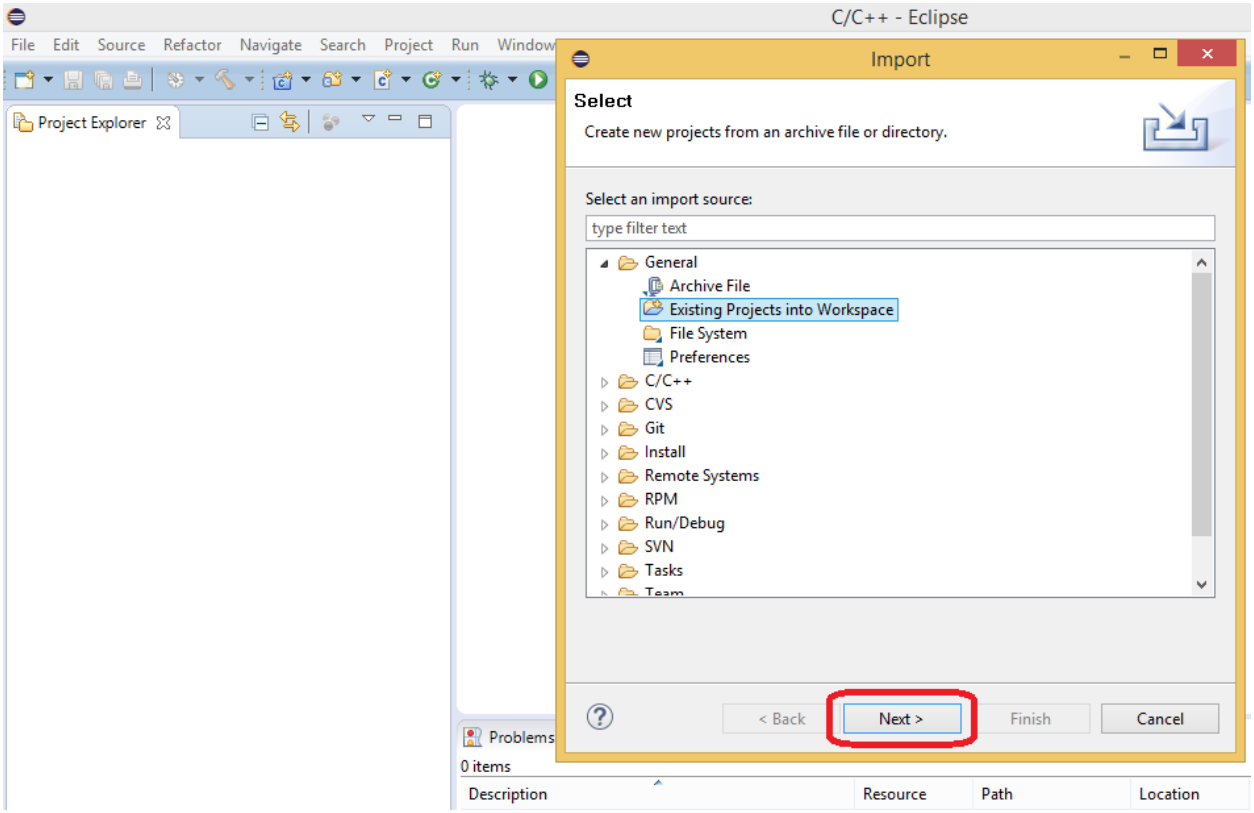

Figure 2-6 Select Existing Projects into Workspace

In the windows that opens after pressing ***Next*** button, press ***Browse*** button and then go to the folder where the project is located – in this case is *SW4STM32\STM32F4xx-Nucleo.* See below picture:

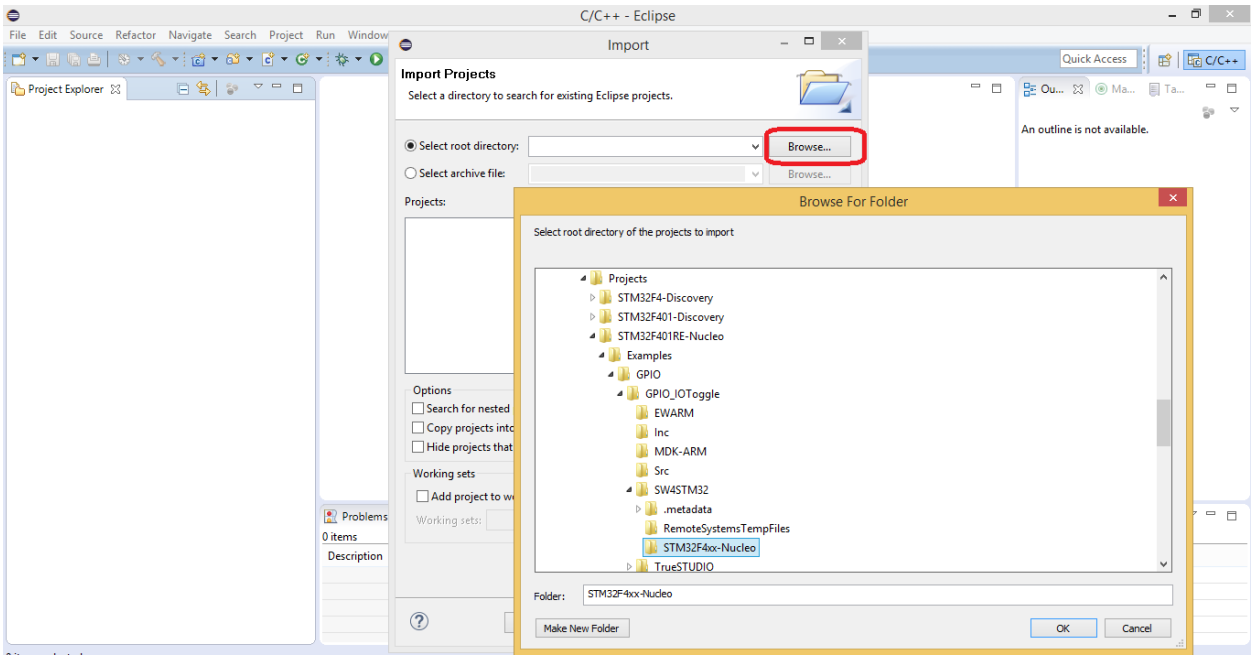

Figure 2-7 Browse for project

Press ***OK*** button in ***Browse for Folder*** window. After that the window from Figure 2-8 should appear. In select root directory field is the path that was selected on previous step and in ***Projects*** textbox, project name should be displayed by Eclipse (red highlighted). Press ***Finish*** button.

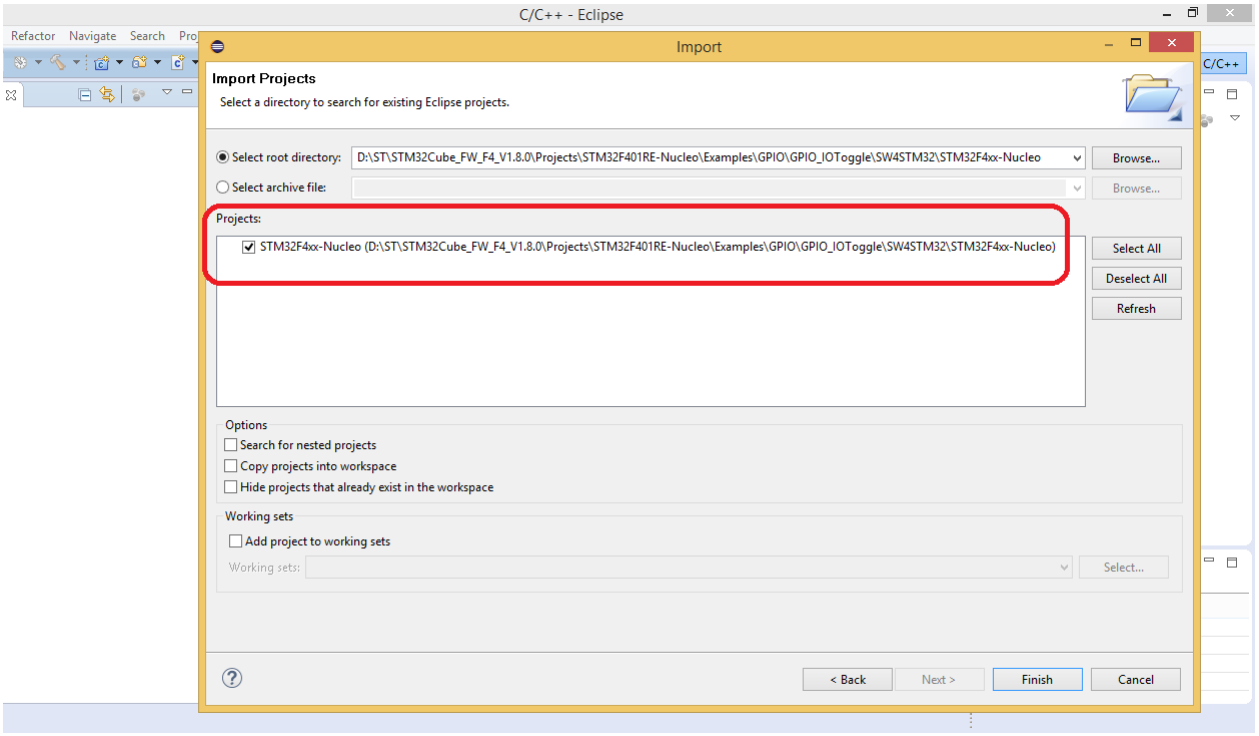

Figure 2-8 Project

After pressing ***Finish*** button, Eclipse should came back to C/C++ perspective and now in the ***Project Explorer*** window imported project should be present – see below picture.

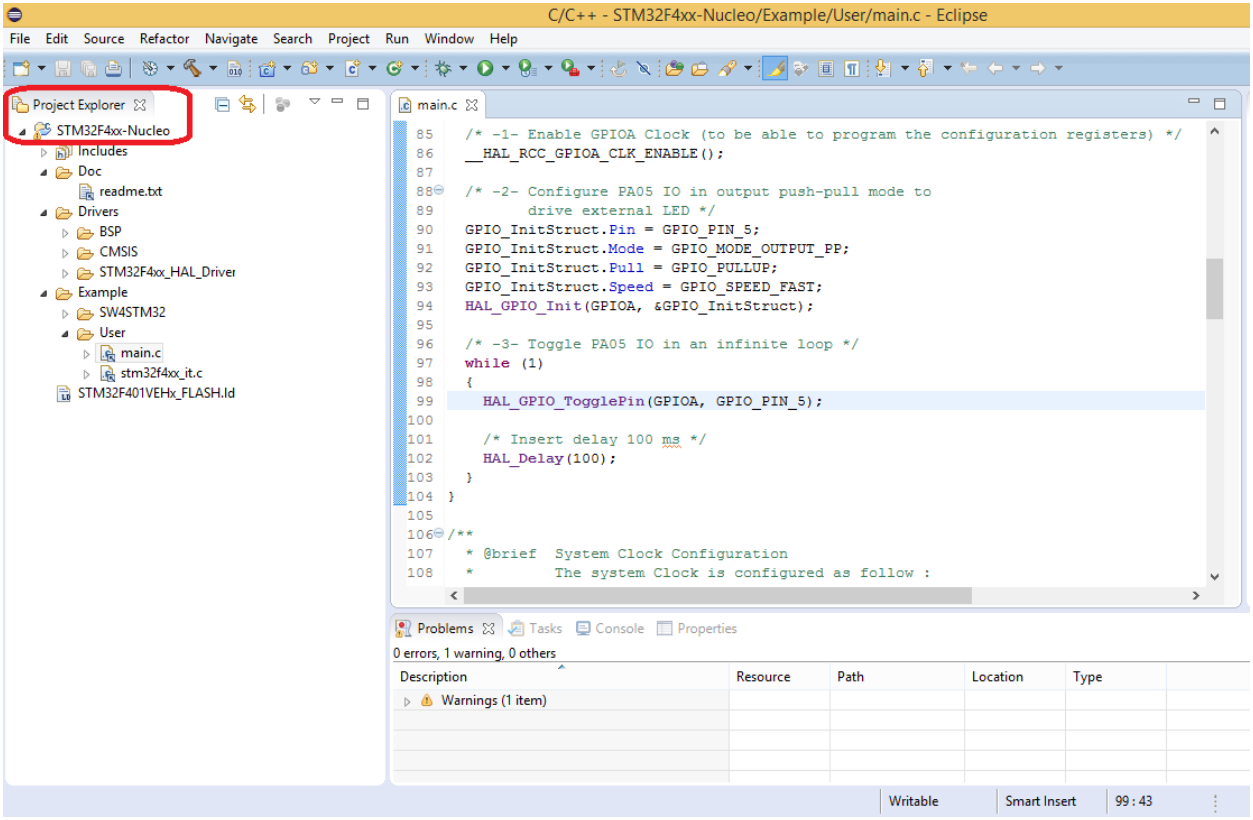

Figure 2-9 Project explorer

3. Building imported project

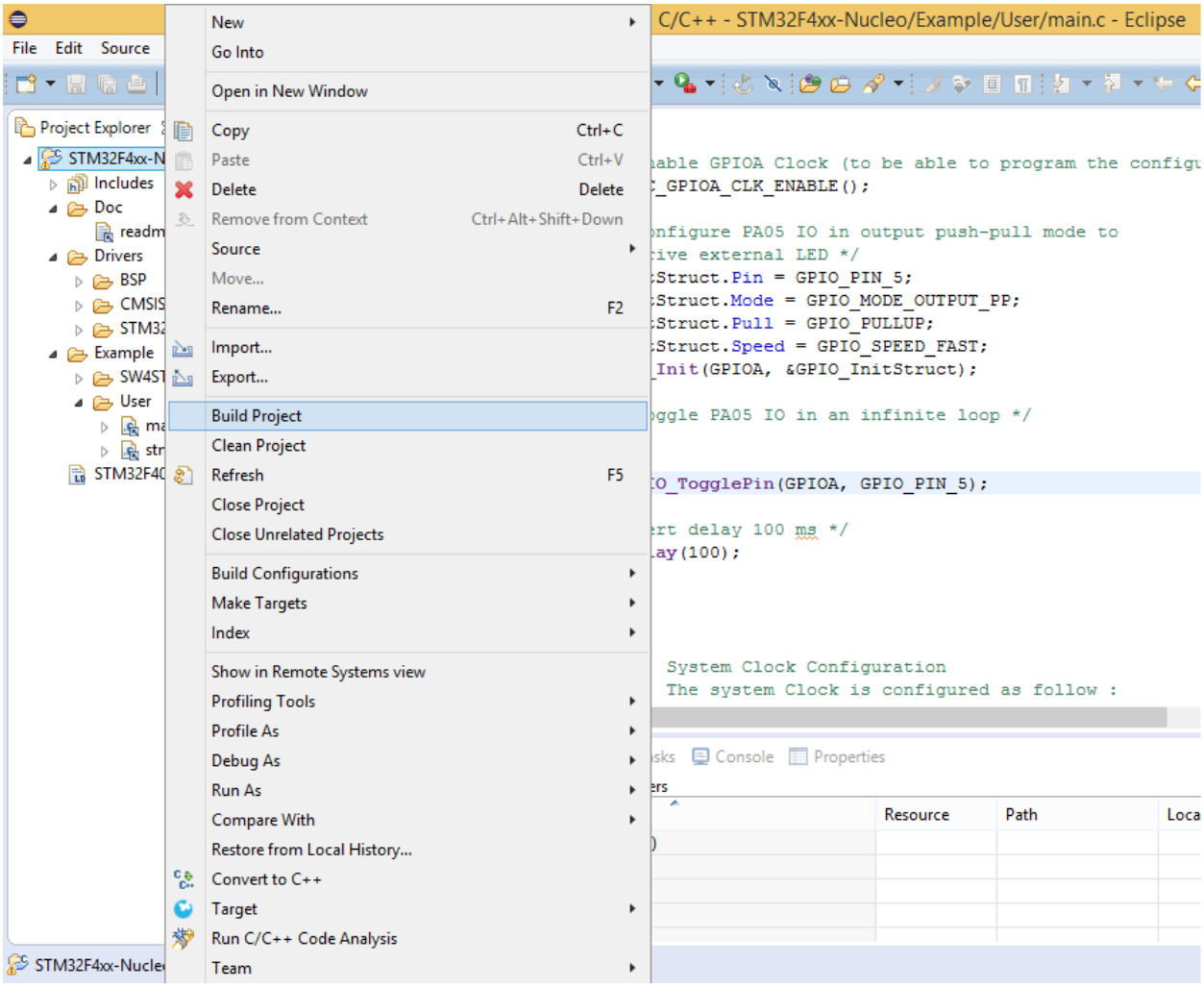

Figure 3-1 Building command