EXAMPLE NAME: TIMER_EXAMPLE_XMC45

OVERVIEW: This example demonstrates use of the TIMER APP to vary the timer intervals for toggling of LED.

DESCRIPTION:

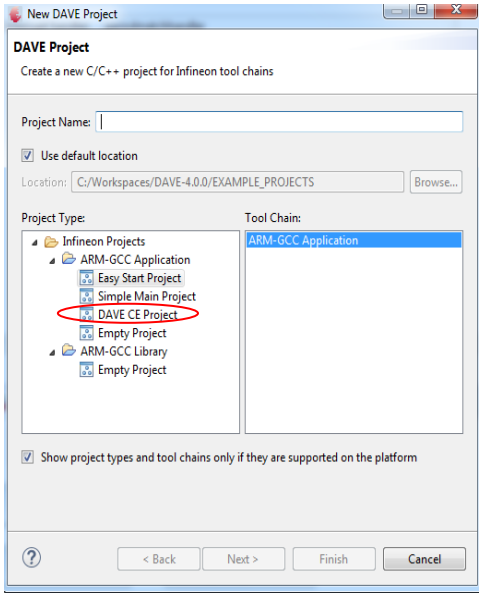
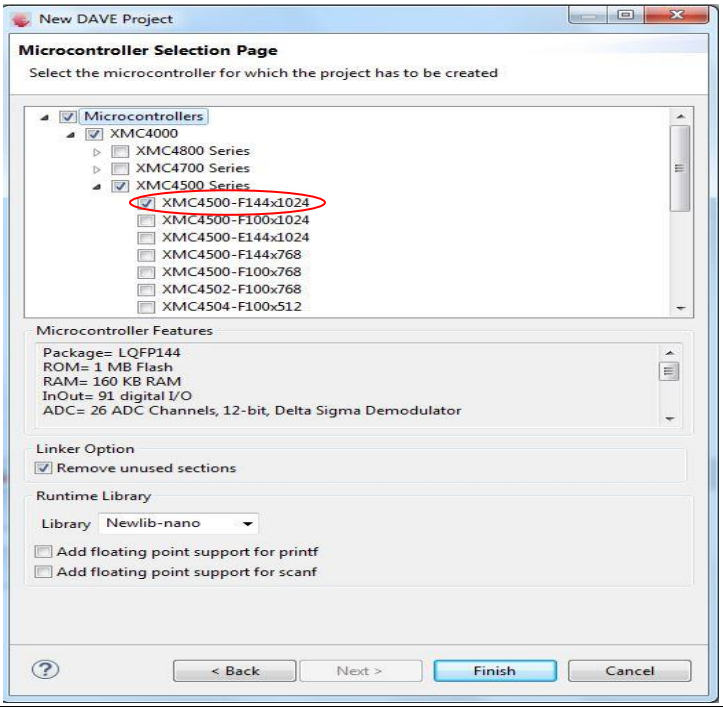
- TIMER APP is used to vary the time tick interval.
- INTERRUPT APP is used to interrupt for the timer event.
- DIGITAL_IO APP is used for LED display.

REQUIRMENTS:

Boards Required: XMC4500 CPU Board (Order Nr: KIT_XMC45_EE1_002)

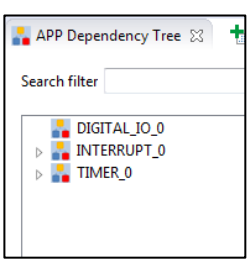
HOW TO CREATE THE PROJECT:

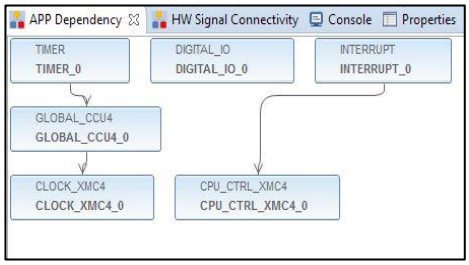
1. Open the DAVE CE and use  "Add IDE New Project Wizard" on the toolbar to add a new DAVE Project.

Enter Project Name Select "Project Type ➔ DAVE CE Project"	Select Microcontroller ➔XMC4500 Series ➔ XMC4500-F144X1024
	

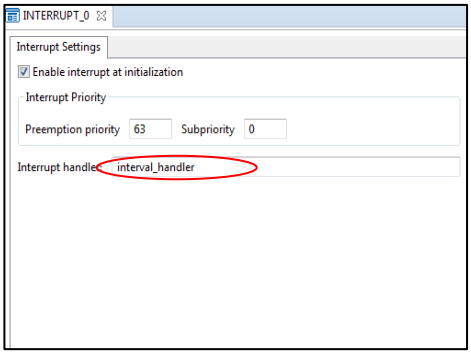
2. Use the "Add New APP" in the toolbar to add APPs listed. Configure the APP instances with the following configurations.

Views: APP Dependency Tree and APP Dependency

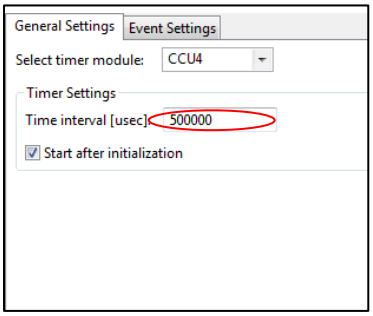


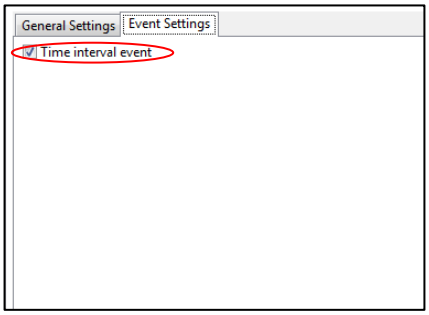


INTERRUPT_0:

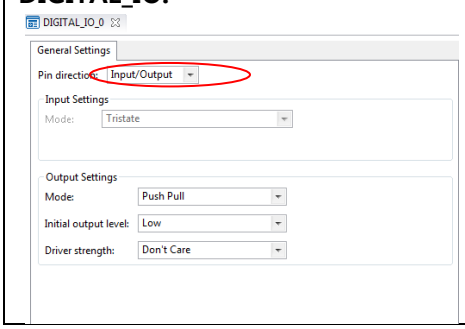


TIMER_0:

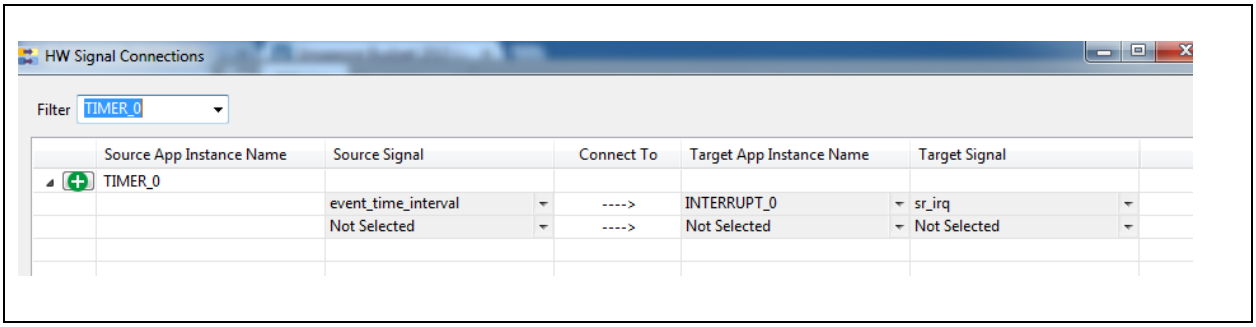




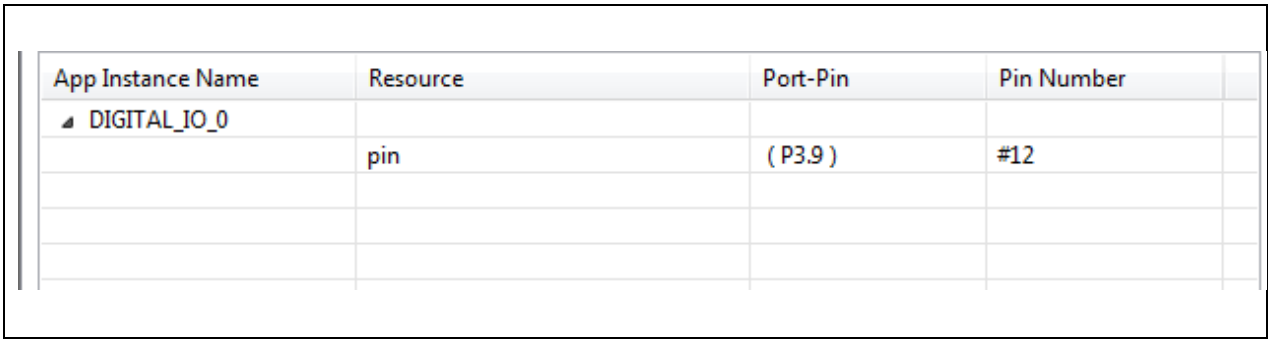
DIGITAL_IO:



3. Use the "Hardware Signal Connections" found at the bottom right of the APP UI window, to configure the signal connections.



4. Use the "Manual Pin Allocator" found in the toolbar, configure the output pin for the LED.



5. Generate the code for configurations made and change main.c accordingly.
6. Build and download to the microcontroller.

HOW TO TEST:

Download and run the demo in the uC.

OBSERVATIONS:

- LED toggles at 0.5 seconds interval and then switches to toggle at 0.1 second interval.
- Each sequence lasts for 5 seconds.
- **Hints:** When changing the timing using APIs, please note that time intervals are scaled by a factor of 100.
    - To change time interval to 1ms, the value to enter is 1000*100 = 100000
    - `Code: TIMER_SetTimeInterval(&TIMER_0, 100000);`

HINTS WHEN MIGRATING EXAMPLE TO OTHER DEVICES IN THE SAME XMC FAMILY:

No additional information is required