



Application Note: Create New Application For The CC2430DB

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1.3	Changed document name. Updated title page.	05/21/2007

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1. Purpose

This application note describes, step by step, how to clone a Z-Stack™ sample project, to serve as a template for the development of a new application.

2. Assumptions

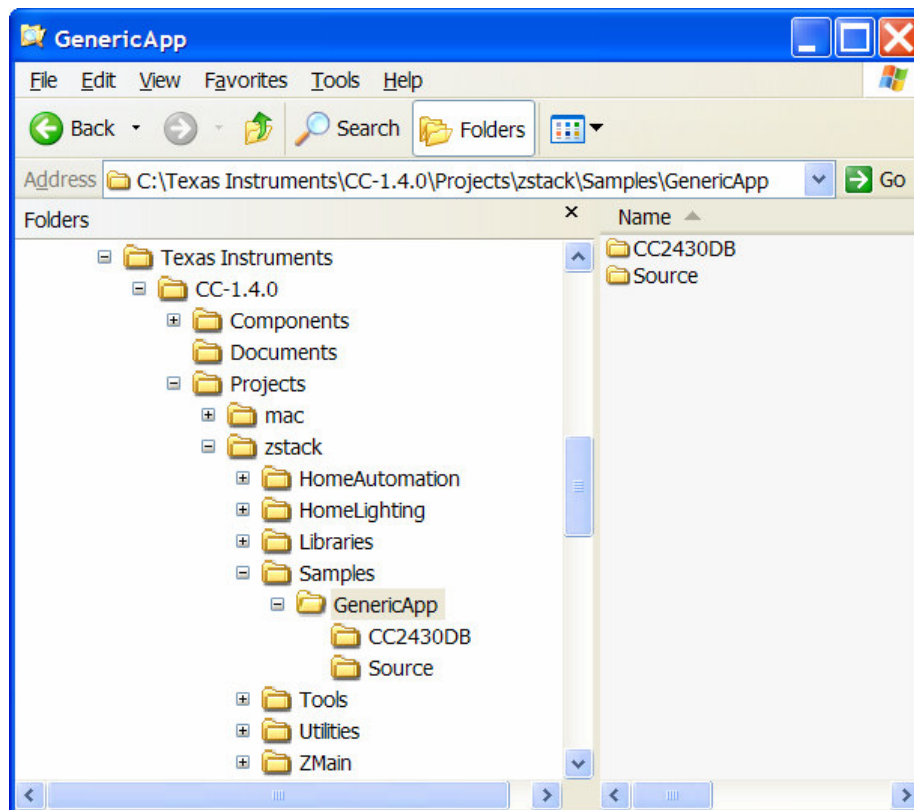
- You already have an application either by :
 - using GenericApp or SerialApp, the .c and .h files have been used as templates, and modified to make your new application files..
- For this example, we will use the following:
 - New application files will be Widget.c, Widget.h, and OSAL_Widget

3. Make a New Project

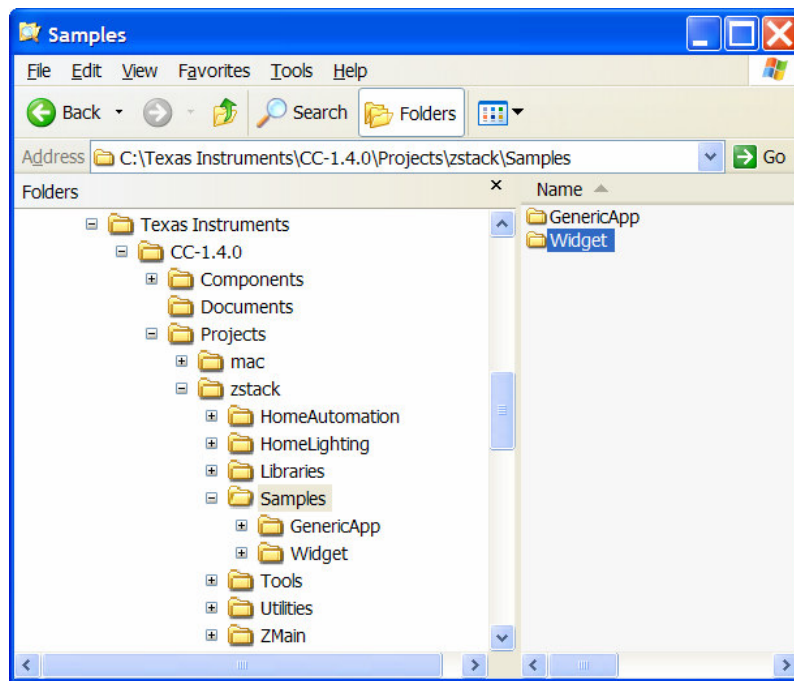
3.1 Copy and Rename Files/Folders

Determine what type of application you want to model. If your application is going to use the serial port to send and receive serial data, (not Z-Tool) you should start with the SerialApp project in ...\\Projects\\zstack\\Utilities. If your application doesn't have anything to do with the serial port (except Z-Tool), start with the GenericApp project in ...\\Projects\\zstack\\Samples.

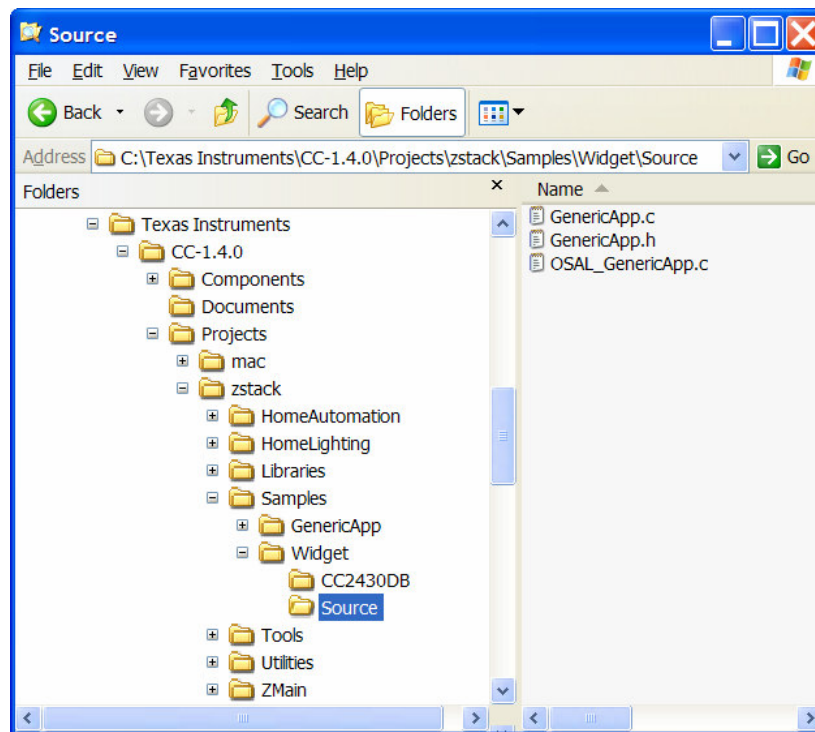
- For this example, we will copy and modify the ...\\Projects\\zstack\\Samples\\GenericApp project:



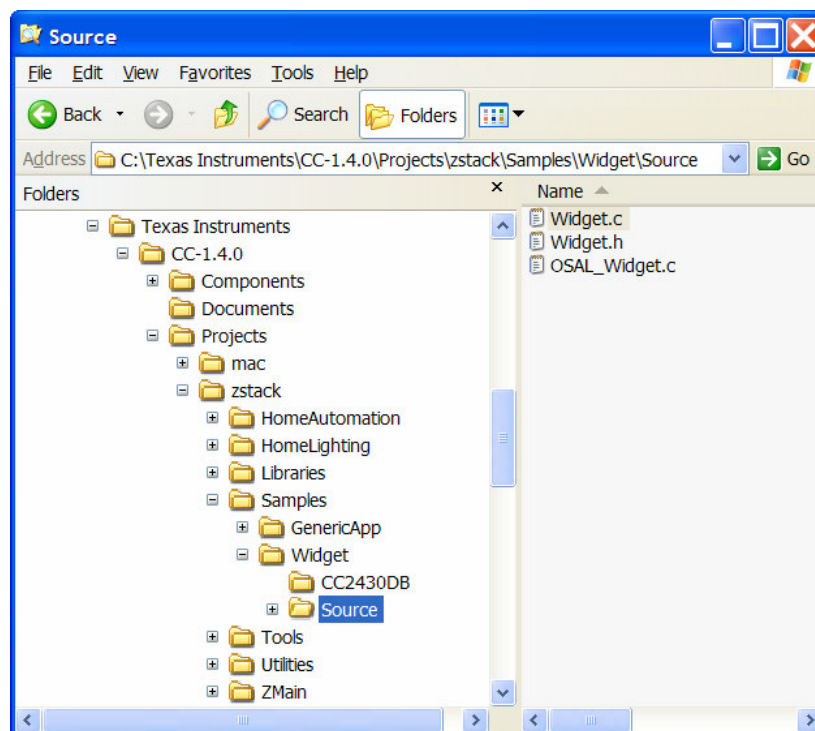
- Copy the **GenericApp** folder and rename it **Widget**:



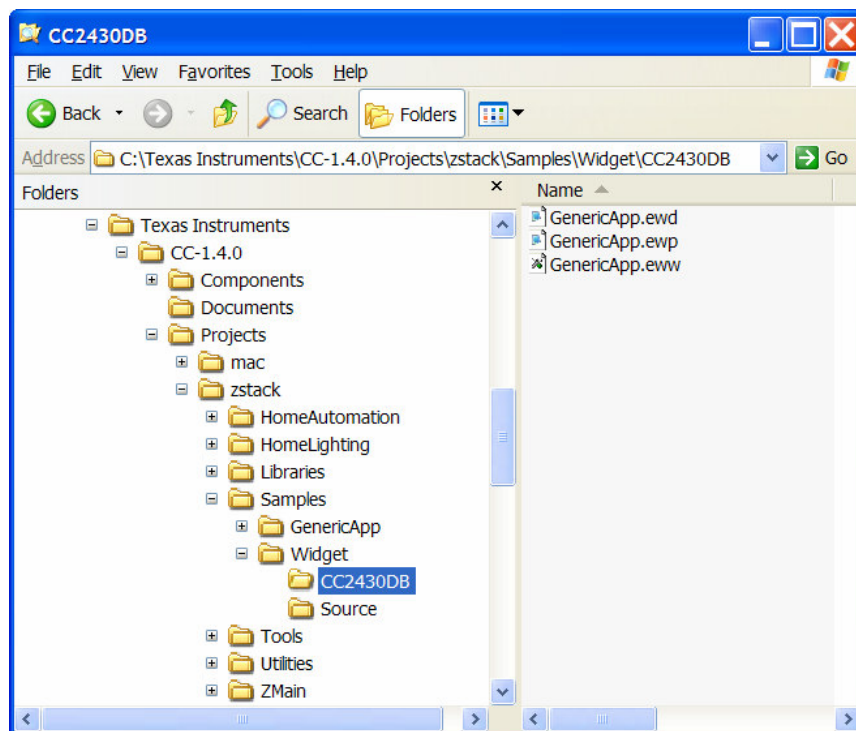
- Open the **Source** folder within the new **Widget** folder:



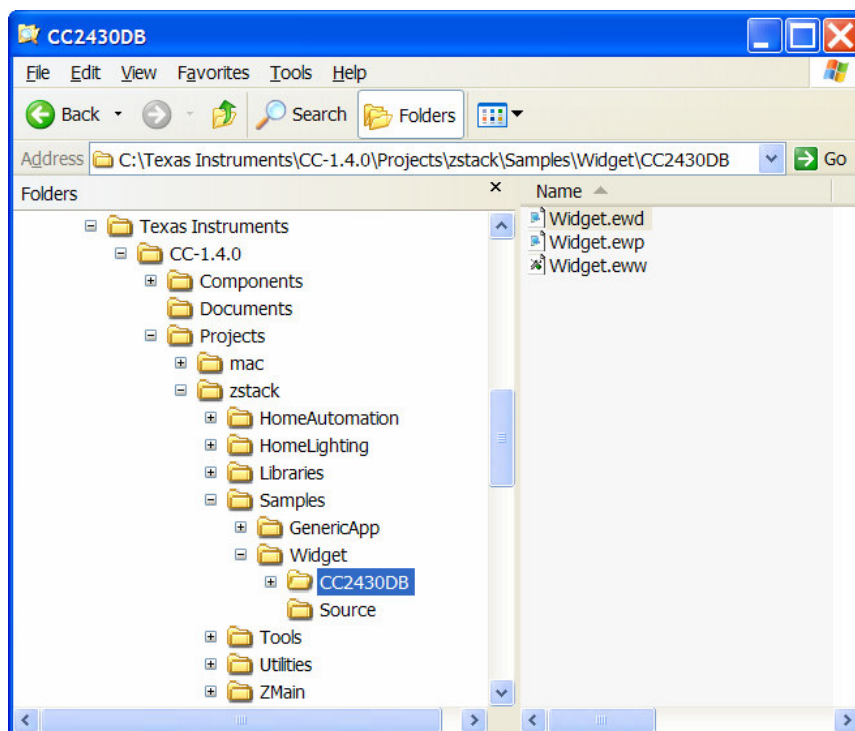
- Rename each of the files by replacing *GenericApp* with *Widget*:



- Open the **CC2430DB** folder within the new **Widget** folder:

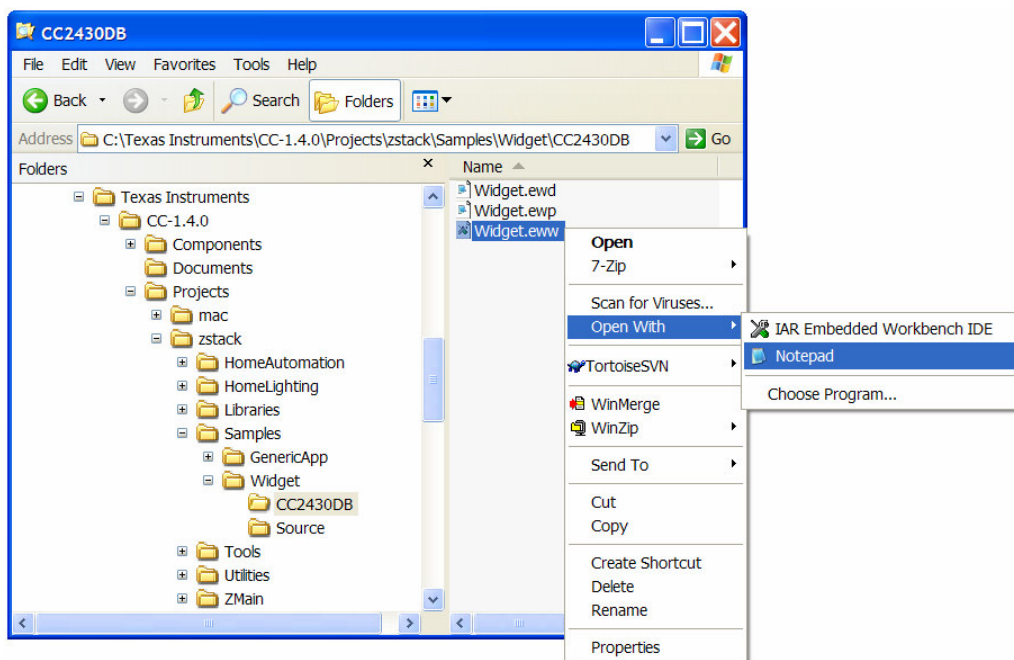


- Rename each of the project files by replacing *GenericApp* with *Widget*:

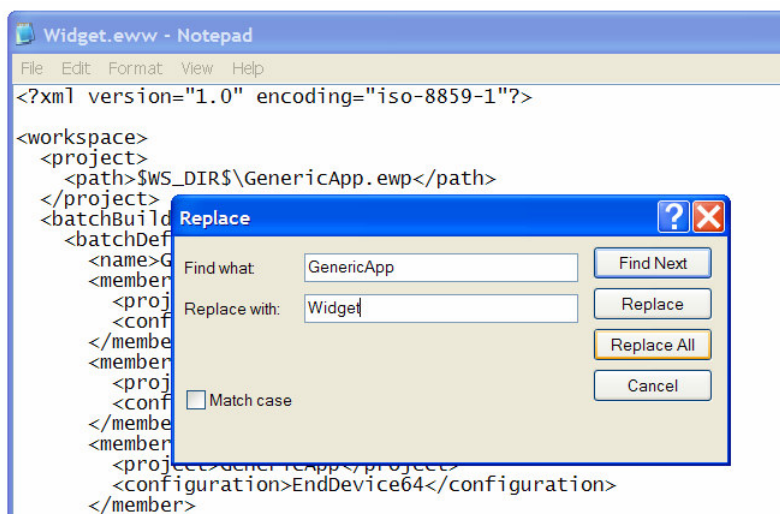


3.2 Edit Project Files

In the ...\\Widget\\CC2430DB folder, right click on *Widget.eww*, then select *Open With*, and then click on *Notepad* to open the IAR Embedded Workbench workspace file for editing:

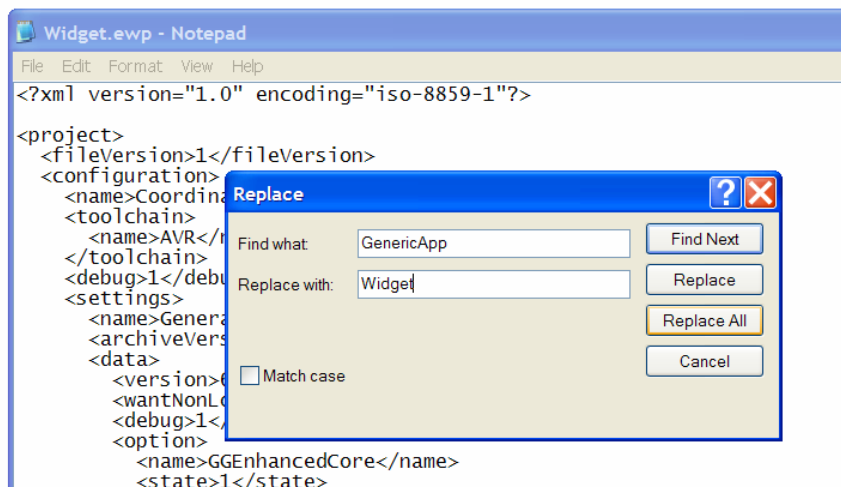


- Select **Edit**→**Replace...** , then **Replace All** instances of GenericApp with Widget.
- Select **Cancel**, then **File**→**Save**, and finally **File**→**Exit**



In the ...\\Widget\\CC2430DB folder, right click on *Widget.ewp*, then select *Open With*, and then click on *Notepad* to open the IAR Embedded Workbench project file for editing:

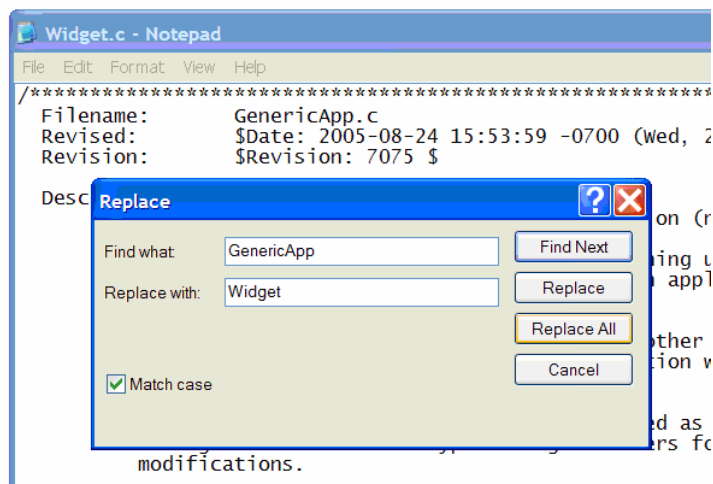
- Select **Edit**→**Replace...** , then **Replace All** instances of GenericApp with Widget.
- Select **Cancel**, then **File**→**Save**, and finally **File**→**Exit**



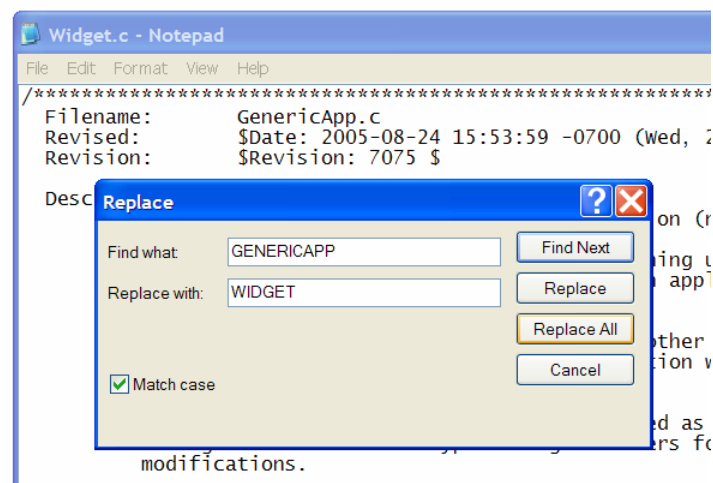
3.3 Edit Source Files

In the ...\\Widget\\Source folder, right click on *Widget.c*, select *Open With*, and click on *Notepad* to open:

- Select **Edit**→**Replace...**, Match case, then **Replace All** instances of GenericApp with Widget.



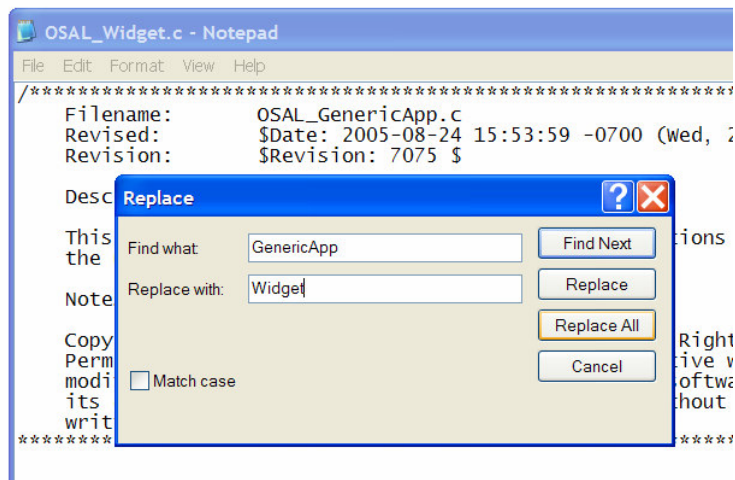
- Select **Edit**→**Replace...**, Match case, then **Replace All** instances of GENERICAPP with WIDGET.
- Select **Cancel**, then **File**→**Save**, and finally **File**→**Exit**



In the ...\\Widget\\Source folder, right click on *Widget.h*, select *Open With*, and click on *Notepad* to open. Repeat each of the steps shown above, then save and close the file.

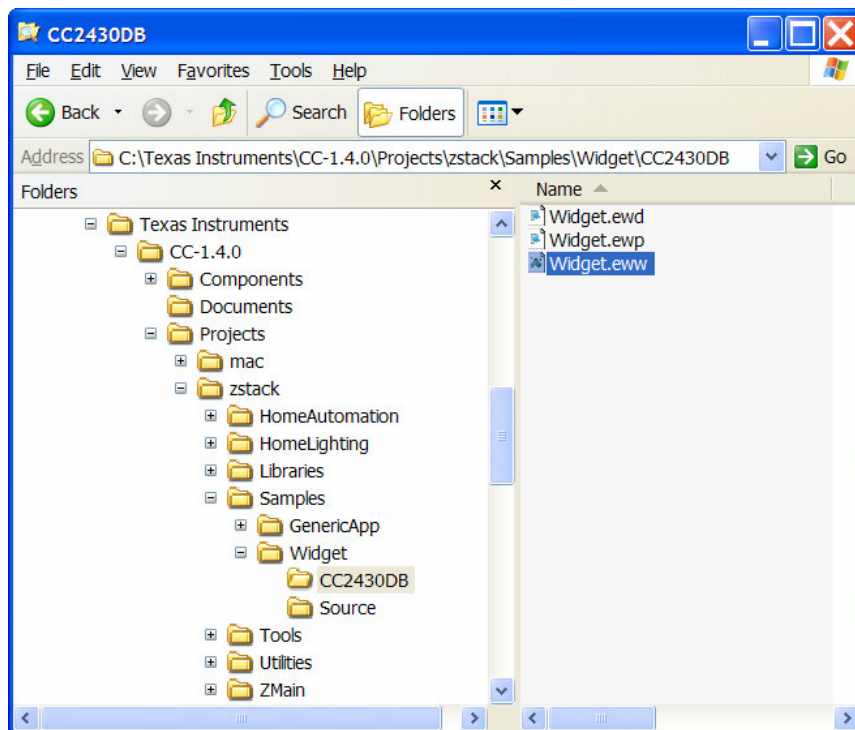
In the ...\\Widget\\Source folder, right click on *OSAL_Widget.c*, select *Open With*, and click on *Notepad* to open:

- Select **Edit**→**Replace...**, then **Replace All** instances of GenericApp with Widget.
- Select **Cancel**, then **File**→**Save**, and finally **File**→**Exit**

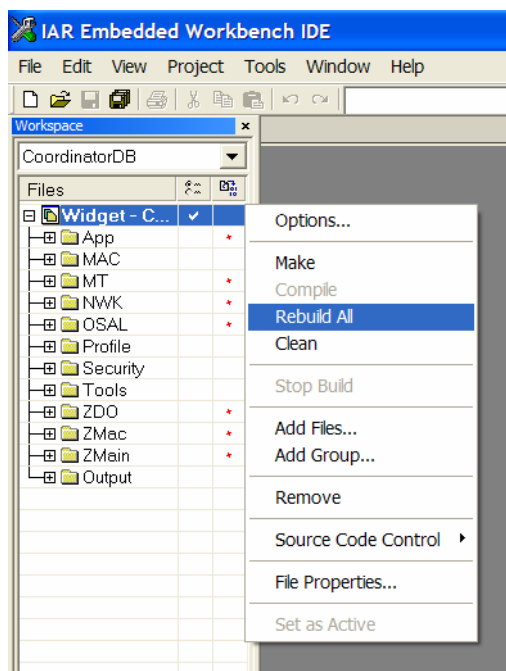


3.4 Test Modified Project and Source Files

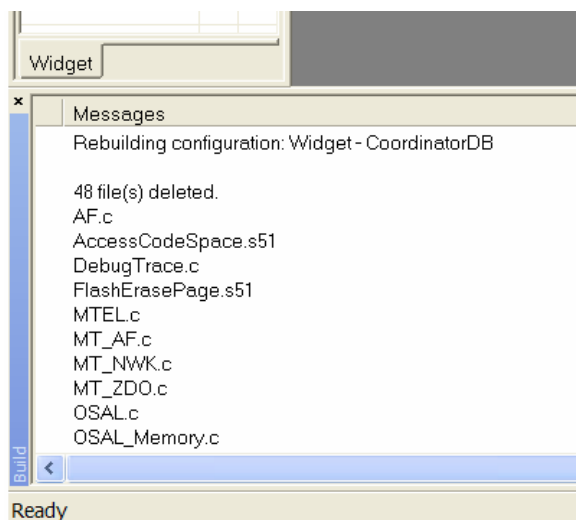
After completing modifications to the project and source files, test the changes by building the project. In the ...\\Widget\\CC2430DB folder, double-click on *Widget.eww* to start the IAR Embedded Workbench:



To build the project, right click on the *Widget-C...* item in the Files box, and click on **Rebuild All**:



Compiler and Linker status is shown in the *Messages* box, normally at the bottom of the IDE display:



At this point, the **Widget** project is ready to serve as a template for building an actual project. Normally, changes would be made to the *Widget.c* and *Widget.h* files to create the user's customized application. Other source files that are distributed with Z-Stack may be changed as needed, keeping in mind that those changes will need to be merged into future updates of the Z-Stack package.