

How to Create and Build an SDCC Project in Eclipse

How to create an SDCC Project

Make sure that you have selected proper workspace. (on Z: drive for CU computers)

Steps: To create new project

1. Open File->New->Project for creating new project
2. Select C->Managed Make C Project in the wizard window.
Note: When using SDCC, use a C project, and not a C++ project. If you choose C++, you won't get the SDCC options in Eclipse.
Note: In a standard make C project, you have to provide your own makefile.
In a managed make C project, Eclipse generates its own makefile.
3. Click Next, and type your project name.
Make sure that your workspace and project location is proper. Uncheck the "Use default location" button to change the path.
4. Click Next, and Select Project type as MCS51 Family (SDCC)
5. Click Finish.

Steps: To add source folder and source file

1. Click File -> New -> Source Folder.
2. Type suitable name for source folder (e.g. 'src') and click finish.

Steps: To create/add new C source file to project.

1. Click File -> New -> Source File.
2. Name source file with extension .C and click finish.

Now you can add the source code into the source file by double clicking on the source file and using the Eclipse editor.

How to build the project for an ECEN 4613/5613 system which is running Paulmon:

Steps:

1. Right click on Project name in C/C++ Projects window, and select Properties. Alternatively, select Project > Properties from the menu at the top of the screen.
2. Select the C/C++ Build option
3. Click on Tool Settings tab on the right side window
4. Select Memory options under SDCC compiler: and choose Large (--model-large) option.
5. Now click on SDCC Linker and type "sdcc --code-loc 0x6000 --xram-loc 0x8000 --model-large" in the command field.
Note: You can change the code location and external ram location here by changing the value in the above command. (Students will have to experiment a little with how to get the correct tool settings. More info will be included in future revisions of this document)
6. Click on Apply
7. Now select project -> Build All to build the project. If the 'Build Automatically' option is active (look under the Project menu), then every time you change a file and click the 'save' button, Eclipse will automatically build your code. The output from the build process can be seen on the Console tab, at the bottom of the screen.

You can see the hex file in the Release folder of the project. The standard SDCC hex file extension is .ihx. If you like, you can change this to .hex on the Build Settings tab of the Properties page. However, note that Paulmon2 does not care about the file name extension, as long as a valid hex file is provided.