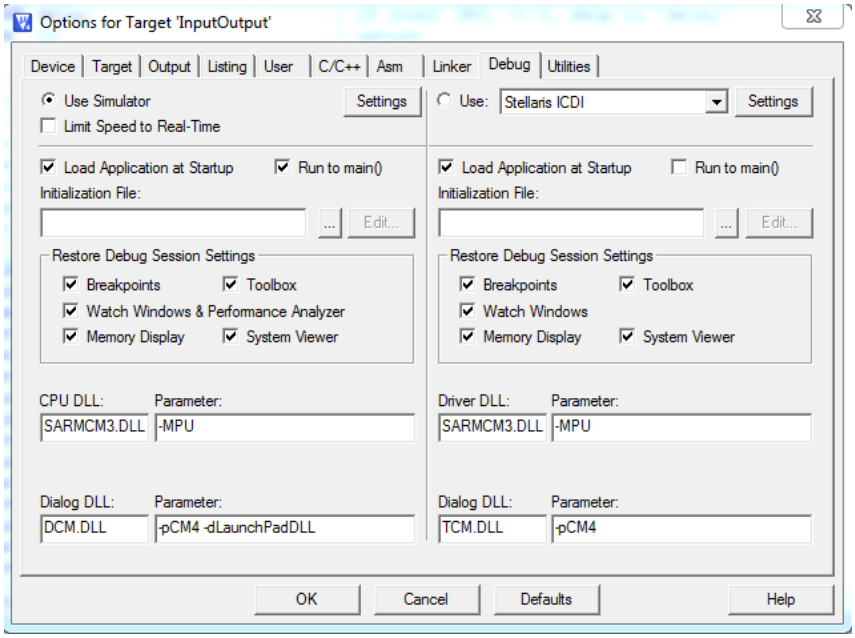
EECE 544: Embedded System Design

Lab 0, Introduction to Assembly

1. **Pre-Lab**
   - 1.1 Install and run Keil uVision4 (please install version 4 not the latest version) on your personal computer, use the provided software on the BlackboardLearn
   - 1.2 Download, unzip, open, compile and run **Lab0.zip** into your computer.
2. **Objective**

   The objective of this lab is to familiarize the students with the Integrated Development Environment (IDE) used in this class (ARM Keil uVision) through compiling, debugging, simulating and downloading a given project.
3. **Procedure**
   - **3.1** Create a folder in your hard drive to hold all your EECE544 projects, e.g. c:\EECE544Projects
   - **3.2** Place the InputOutput_4F120asm folder under the EECE544 projects folder you created (the folder will be under the Lab0_EECE544 folder)
   - **3.3** Double click on the file InputOutput.uvproj to open the project
   - **3.4** Execute Project->Options for target InputOutput and select the Debug tab.
   - **3.5** Make sure all parameters look the same as the figure below.



   - 3.6 Close the window and double click on the file main.s
   - 3.7 Read the file carefully and draw a flow chart for the program
   - 3.8 After you understand the program, now you are ready to simulate it. Simulate by executing Debug->Start Debug Session
   - 3.9 To be able to manipulate inputs and outputs in the simulator, execute Peripherals->TExaS Port F

3.10 Execute Debug->Run

3.11 Click on SW1 and SW2 and observe the LED

3.12 Exit the Simulator by executing Debug->Start/Stop Debug Session

3.13 Connect your Tiva board to an USB port in your compute and execute Flash->Download

3.14 Reset your board and test your program.

4. Demonstration

Your TA will ask you to demonstrate your program; you should be able to explain what the program is doing and answer any questions about any line in the code

5. Deliverables

1. Lab 0 grading sheet “will be available in the lab”
2. Flowchart of the system.
3. No lab report is required for this lab.