

CpE 4010 Lab 0

- Objective: To have the student review basic C programming commands and routines in preparation for all future laboratory exercises.
- Some procedures require you to collect data for your report. Enter all required data in the appropriate field within the accompanying Datasheet. Also, be sure to enter your name at the top of the Datasheet.

• Once you have completed all of the following procedures and filled in your Datasheet, upload your complete Datasheet to the “Lab 0” folder under “Assignments”

1. Using System workbench, from CpE3000, create a blank C project named CPE4010_lab0.
 - Make sure you choose the correct target by choosing the Nucleo board you have used in CpE3000.
2. Create a main.c file in the source folder.
3. In the main body of your program, define an integer named x and initialize it with a value of 0.
4. Write an infinite while loop which will increment the value of x by 1 for each iteration of the while loop.
5. **Compile the project and take a screenshot of the code and console showing a successful build. Attach the screenshot to your datasheet.**
6. Modify your code such that the while loop will terminate when the variable x reaches a value of 100.
7. **Compile the project and take a screenshot of the code and console showing a successful build. Attach the screenshot to your datasheet.**
8. Add a delay function, that will be called to create a time delay in the program by executing a for loop with no additional commands. **This is not a built-in function.**

- The delay function will receive an integer value when called.
- The integer value received will be multiplied by a thousand to determine how many iterations the for loop will have.

9. Using the delay function that you created, modify the operation in the while loop such that there will be a custom delay between x being incremented.
10. **Compile the project and take a screenshot of the code and console showing a successful build. Attach the screenshot to your datasheet.**