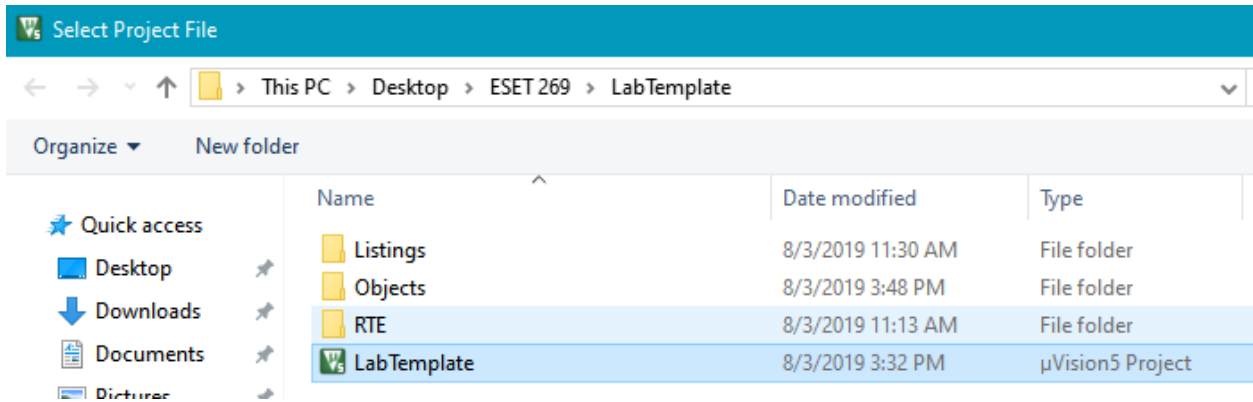


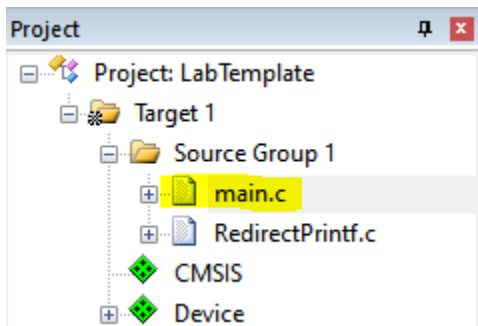
ESET 269 – Lab 1 Printf and Scanf

Steps 1 - 6 are if you are using the Keil with the Launchpad and Terra Term. If using another IDE, you can proceed directly to Code 1

1. Open the project “LabTemplate” in Keil by selecting “Project” -> “Open Project”. The project already has the MSP432 Launchpad set up in Keil, and provides a base template for the lab.

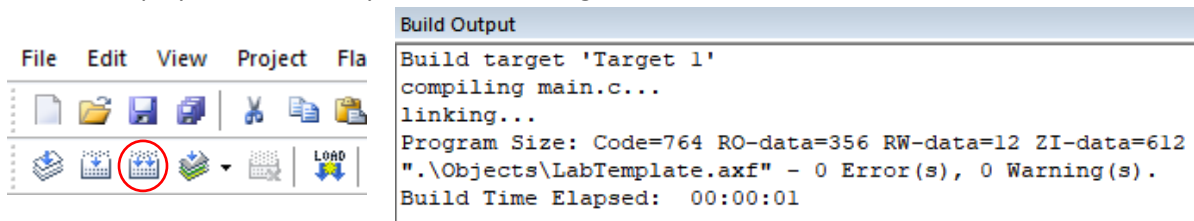


2. Open the main.c program from the Project window by double clicking on the file. The project tree may have to be expanded by clicking on the “+” icon under “Target1” and “Source Group 1”.

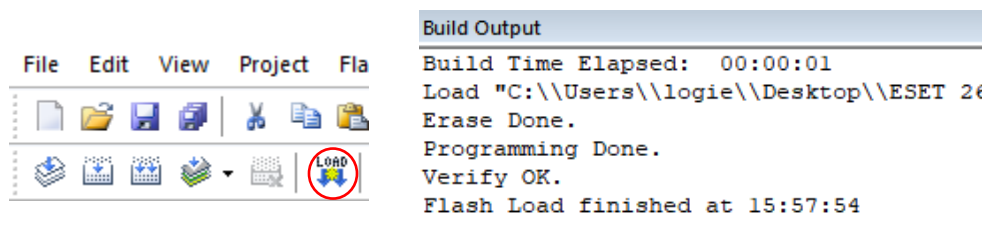


3. In the main function, write the following code:

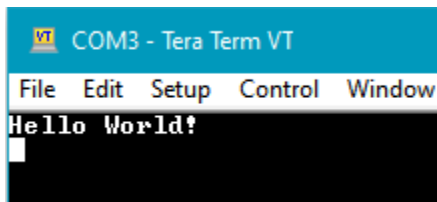
```
printf("Hello World!\n\r");
```
4. Press the “Build” or “Rebuild” button (or press F7) to build (compile) the project. The build output window will display if there are any errors or warnings.



5. After building the project, press the download button to load the code onto the Launchpad. The build output window will show when loading is done.



6. Open up a serial terminal window on the PC using Tera Term, and set the baud rate to 115200. Press the reset button on the MPS432 Launchpad. **Code will not execute until the reset button is pressed.** You should see Hello World on the terminal window. This verifies the microcontroller is communicating to the PC correctly.

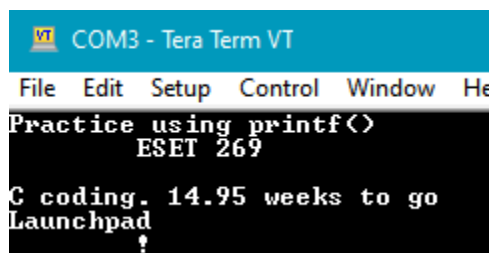


Code 1 (3 pts): Practice using printf with conversion characters and escape sequences by displaying the following text. Indents and new lines must be printed using escape sequences. *The below must use conversion characters and not hard coded.* Have TA verify code & output. Example terminal output is given below.

- 269 as an integer
- 14.95 as a float
- Launchpad as a string
- ! as a character

```
Practice using printf()  
    ESET 269
```

```
C coding. 14.95 weeks to go  
Launchpad  
!
```



Code 2 (5 pts): Write a program to prompt a user for their first initial of their name, last initial of their name, favorite number, and a decimal number. Print what the user entered as a single line to the terminal window. Have TA verify output. Example terminal output is given below.

```
VT COM6 - Tera Term VT
File Edit Setup Control Window Help
What is initial of first name?
L
What is initial of last name?
P
What is your favorite number?
7
Write a decimal number as x.xxx
7.890
First initial L, Last initial P, fav. # 7, decimal # 7.890
```

Code 3 (5 pts): Write a C program to ask a user for their first name, last name, and age. After the user enters the information, have the program display it to the screen. Then have the program change first name variable to John, last name variable to Doe, and age variable to 99. Display this to the screen two lines below the first printing. Have TA verify output. Example terminal output is given below.

```
VT COM6 - Tera Term VT
File Edit Setup Control Window Help
Enter first name:Ricky
Enter last name:Bobby
Enter age:42
First name:Ricky Last name:Bobby Age:42

First name:John Last name:Doe Age:99
```