



# ECE3520 Lab Session 4: First C Project

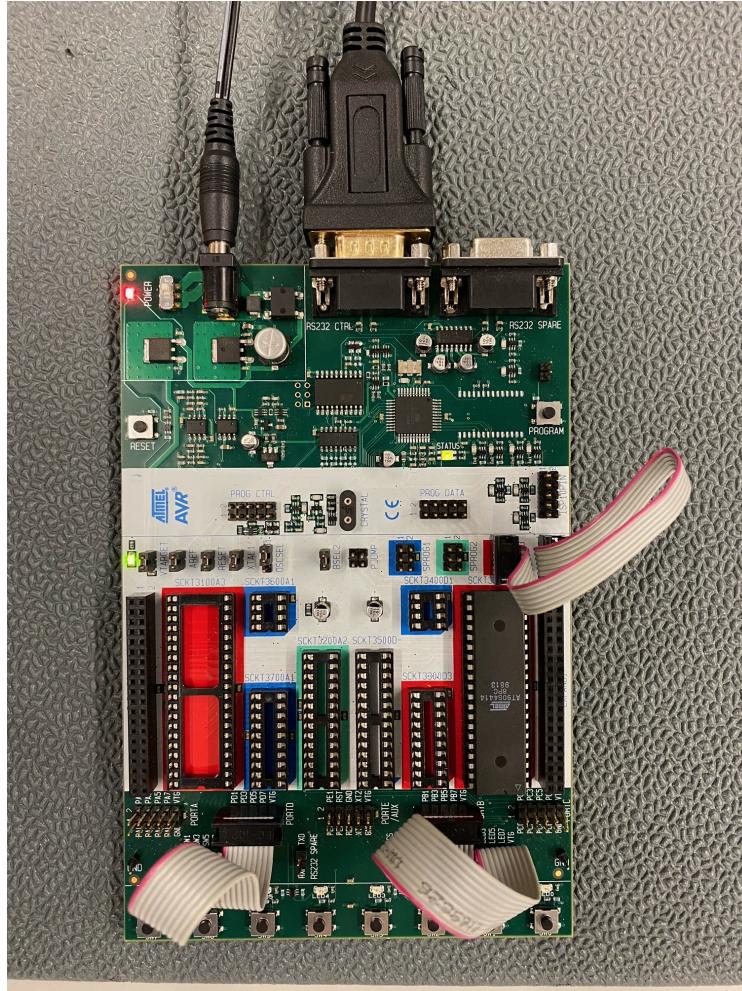
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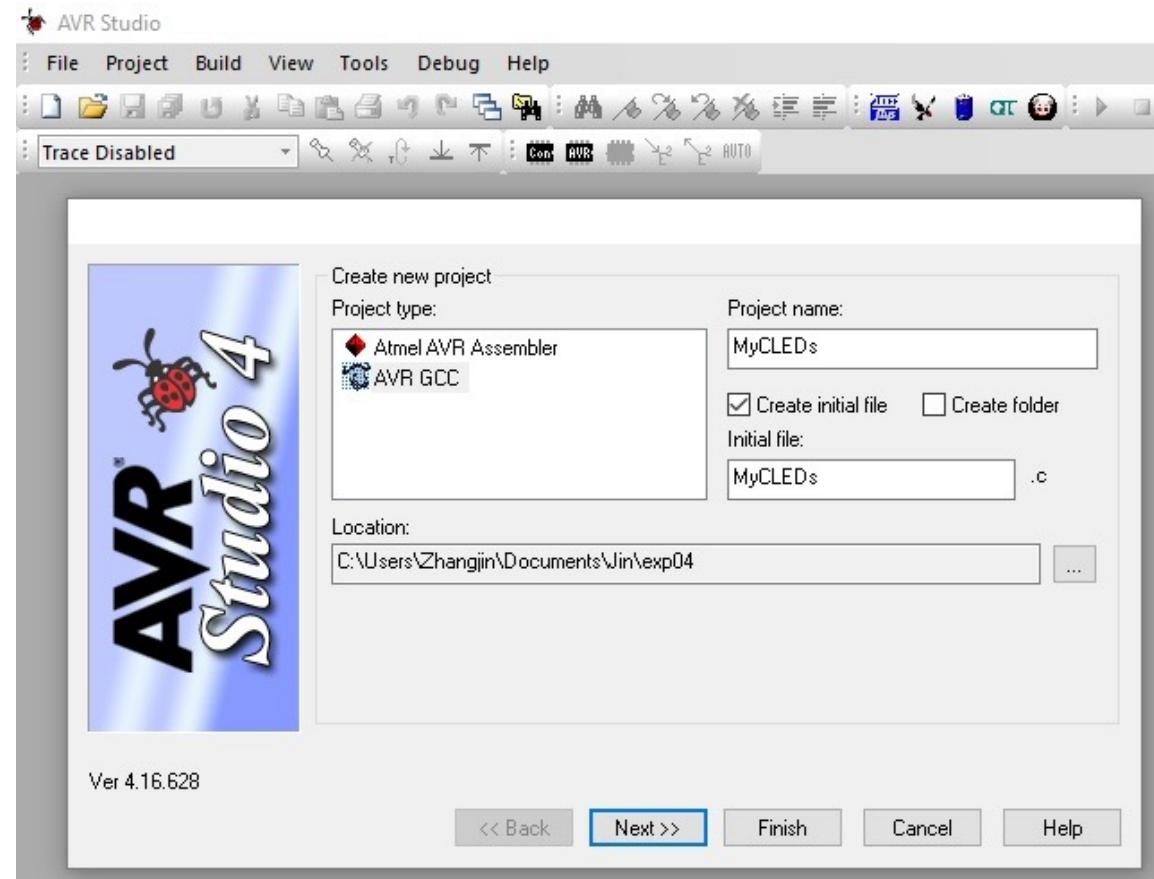
# Step-1: Configure Experiment

- Configure STK500 as experiment 1
- Open AVR Studio as experiment 2
- Turn on the power of STK500



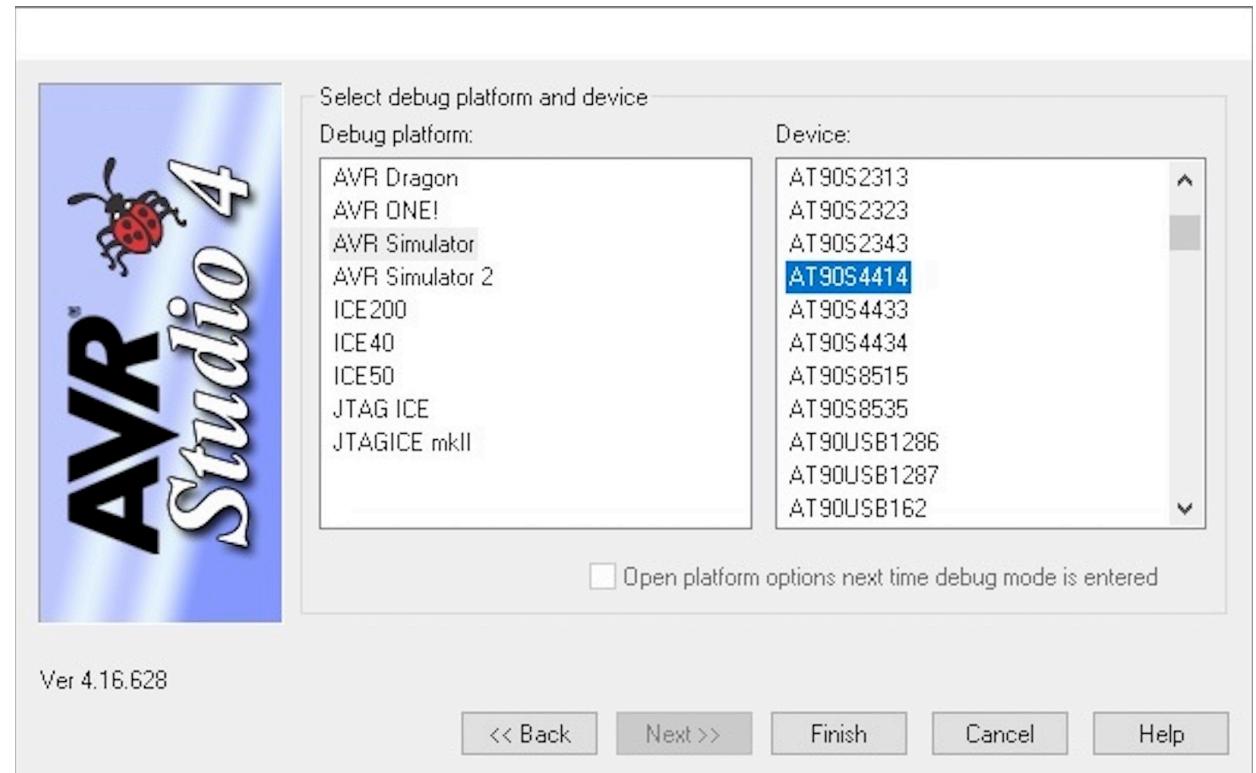
## Step-2: Create C Project

- Open New Project dialog box (Project->New Project)
- Create a new AVR C project
- Select “AVR GCC”
- Name project as MyCLEDs



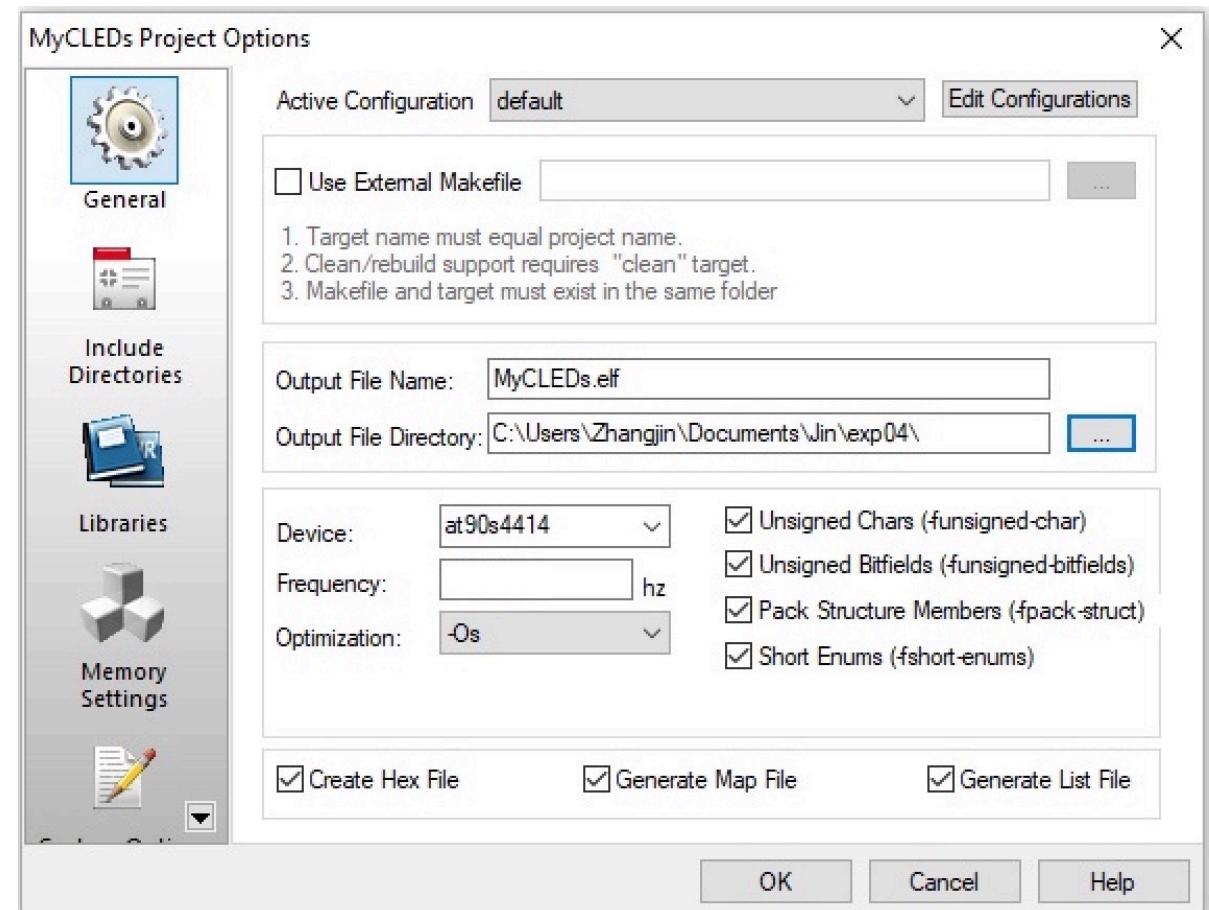
## Step-3: Select Platform and Device

- Click Next and select “AVR Simulator”
- Select “AT90S4414” in Device box
- Click Finish



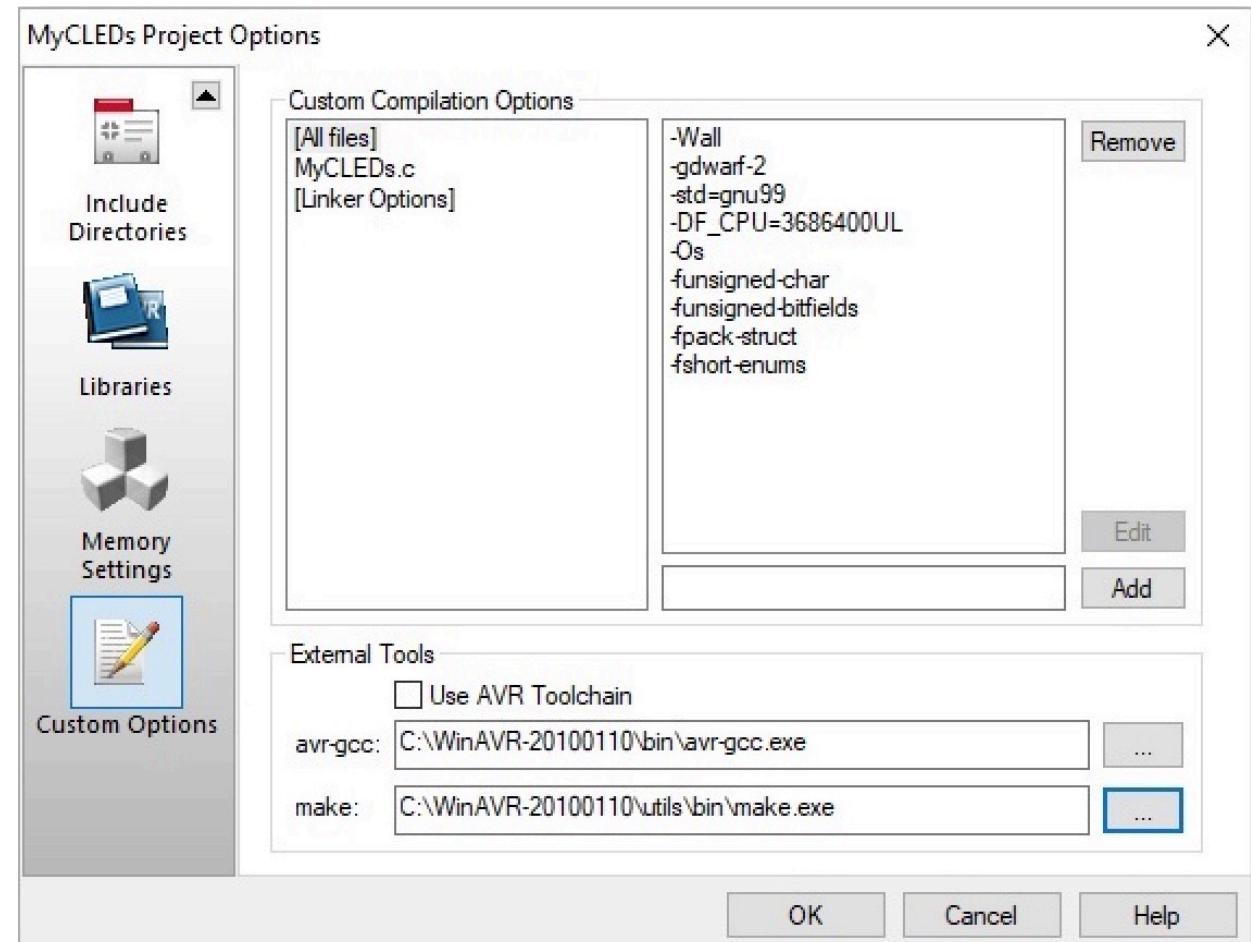
## Step-4: Configure Project

- Open the Project Options dialog  
(Project-> Configuration Options)



## Step-5: Configure GCC Compiler

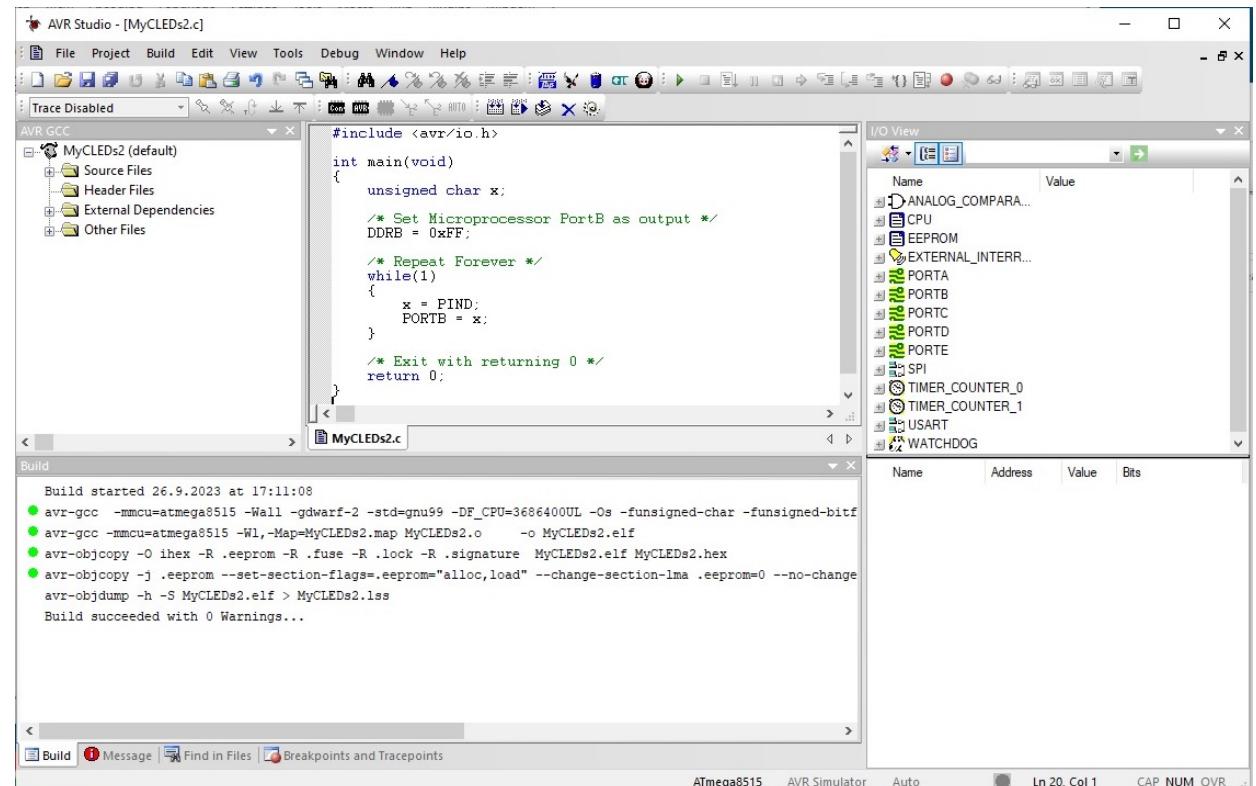
- Switch to the Tab “Custom Options”
- Specify “External Tools” as avr-gcc and make. The external compiler is located in the directory of  
“C:\WinAVR-20100110\bin\avr-gcc.exe”  
“C:\WinAVR-20100110\utils\bin\make.exe”



# Step-6: Build Program

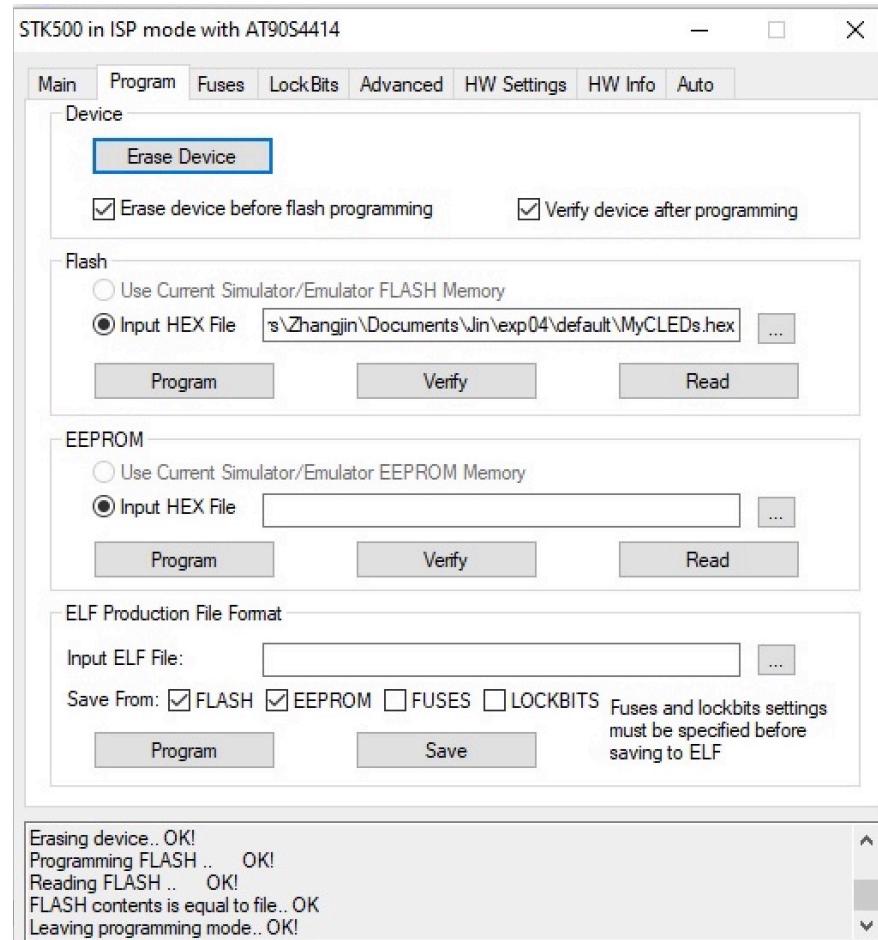
- Maximize the editor window
  - Type in the first C program

Read the switch settings from Port D and save into a variable, then write the variable value to the Port B.
  - Save and build the program (Build->Build)
  - Make sure no errors or warnings



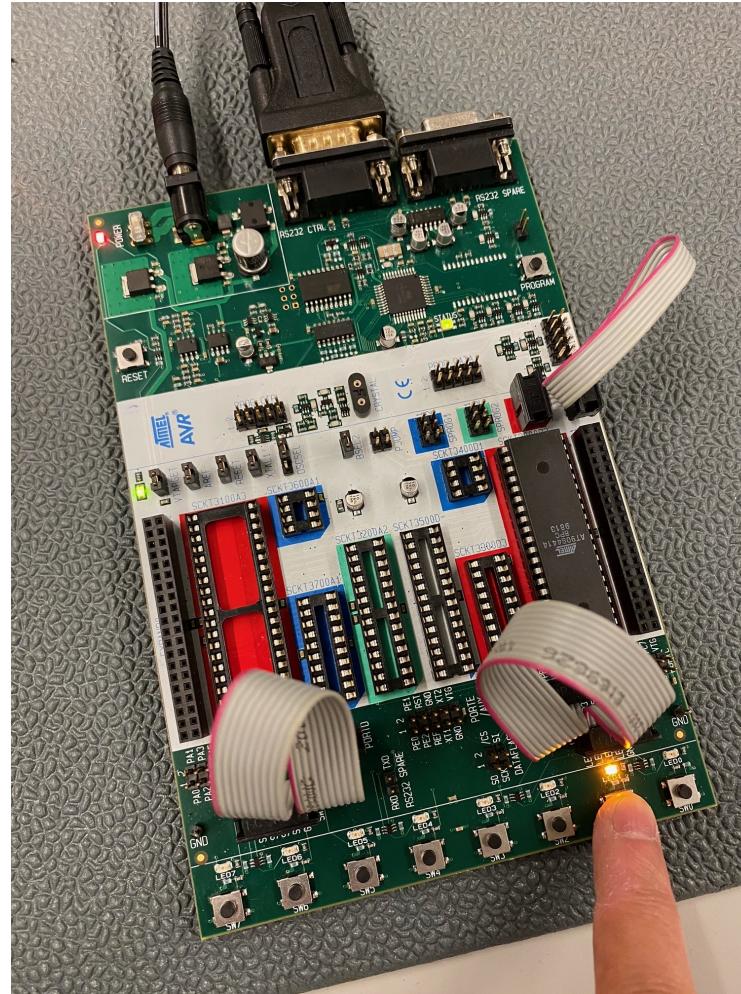
## Step-7: Download Hex Program

- Click AVR button on toolbar as did in Experiment 2
- Open STK500 Programmer
- Open Program tab, and select MyCLEDs.hex file (in your source directory) for input Hex file
- Erase device before flash programming
- Press ‘Program’ button in Flash section

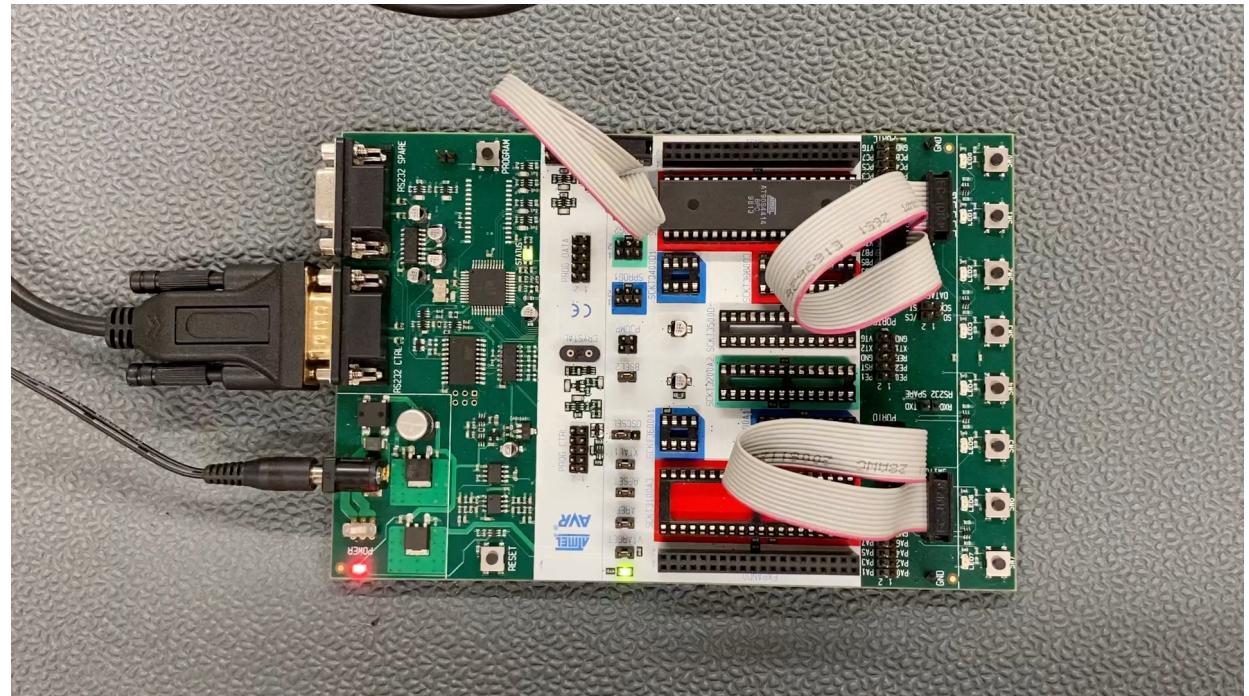


# Step-8: Test and Observe

- Press switches on STK500 board
- Observe patterns of LED lights



# Step-9: Demo



- Please reference this video after finishing your steps.