Lab t2:
Power (off-board sources to the verified PCB supply rails)
- Solder 6 consecutive header pins to FTDI.
  - PWRTest1: Use a multimeter to verify that JP1 pin 1 is 5V. Use the ground on the FTDI pins for multimeter ground.
- JP1 Wires-Solder at least 2 headers into the JP1's 1 and C position
- Voltage Regulator- Solder the regulator with heatsink facing the board and solder C6(0.1uF) and C7(10uF)
  - PWRTest2: First redo PWRTest1 above, if you pass that test then place a jumper between JP1's position 1 header and position C header. Then use the multimeter leaving the GND connected from PWRTest1 and move the positive lead to connect to the out arm of the regulator which is the arm closest to capacitor C7 you should see 3.3V.
- Solder C7 to stabilize output voltage from voltage regulator
- Solder green power indicator LED(LED4) & 1.5K resistor (R1)
  - PWRTest3: Plug in FTDI Cable and verify that the light comes on
MCU
- BE CAREFUL AND DON'T BRIDGE THE LEGS TOGETHER (suggest to use a lot of flux and not add any solder between the leg and the pad there is enough solder to make a connection)
- Then you need to solder R0(10KOhm), C0(10uF), C1(0.1uF), C2(0.1uF), C3(0.1uF), C4(0.1uF), C5(0.1uF).
  - MCUTest1: First redo all PWRTests. Once you get the expected results, you should then place your red lead (from your multimeter) onto pin 10 on the MCU and you should also see 3.3V there.
- Solder reset switch
  - MCUTest2: First program

MCU output LEDs
- LED1 - Red
- LED2- Yellow
- LED3- Green
- R2,R3,R4 1.5K

MCU serial connection to PC (FTDI ⇔ MCU)
- Done in Power Build instructions, since FTDI is source of power

MCU programming (ICSP)
- Solder headers into the ICSP holes and JP4
  - Test
MCU inputs (SW1, SW2, SW3, RPG1, and POT)
- SW1 & SW2- Trim legs on switches prior to soldering so that they do not contact each other on the board. The pads are slightly too small for the components. Solder switches onto their respective places on the board.
- SW3- Solder to be performed in 3 seconds within 350 +/- 5 degrees