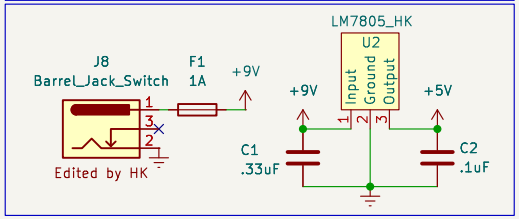
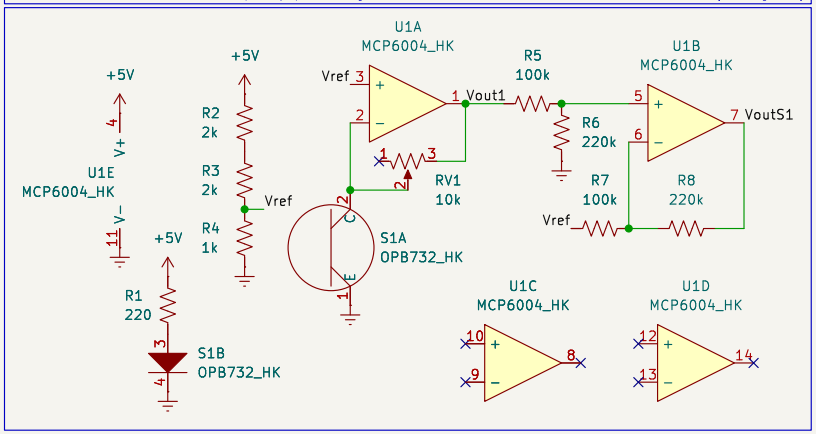
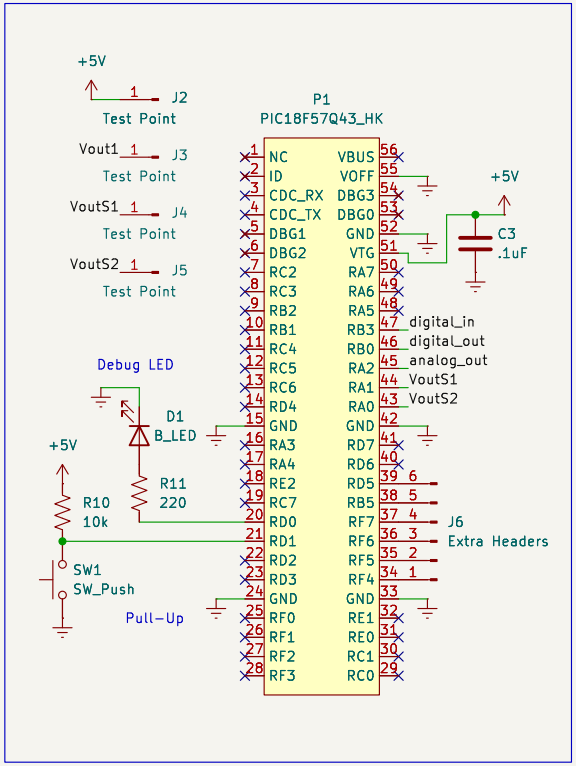
9V to 5V Regulator:
Barrel jack will be used for testing, but final product will receive +9V from connector pin 1

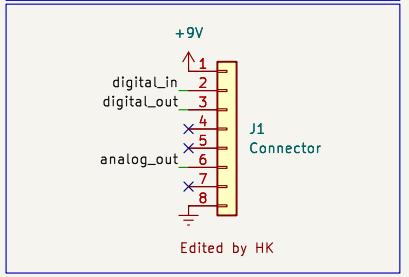


IR Reflective Sensor (S1):
LED and IR sensor, quad omp-amp used for signal clarity, outputs analog distance signal(VoutS1) to PIC, ADC value used to calculate capacity percentage of water tank, DAC value transmitted to hub (analog_out)

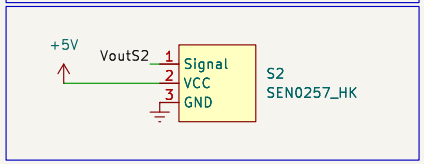




Subsystem Connector:
Will receive digital_in and +9V from hub, transmit analog_out and digital_out to hub, shared ground



Pressure Sensor (S2):
Outputs analog pressure signal (VoutS2) to PIC, ADC value used to check if pressure optimal/suboptimal, digital value transmitted to hub (digital_out)



All resistors are rated 1/4 W

All capacitors are rated 50V

Team 211: Hafsa Kaysan

Sheet: /
File: EGR304_IndividualSubsystem.kicad_sch

Title: Subsystem Schematic Design

Size: A4	Date: 2025-10-20	**Rev:**
KiCad E.D.A. 9.0.5		Id: 1/1