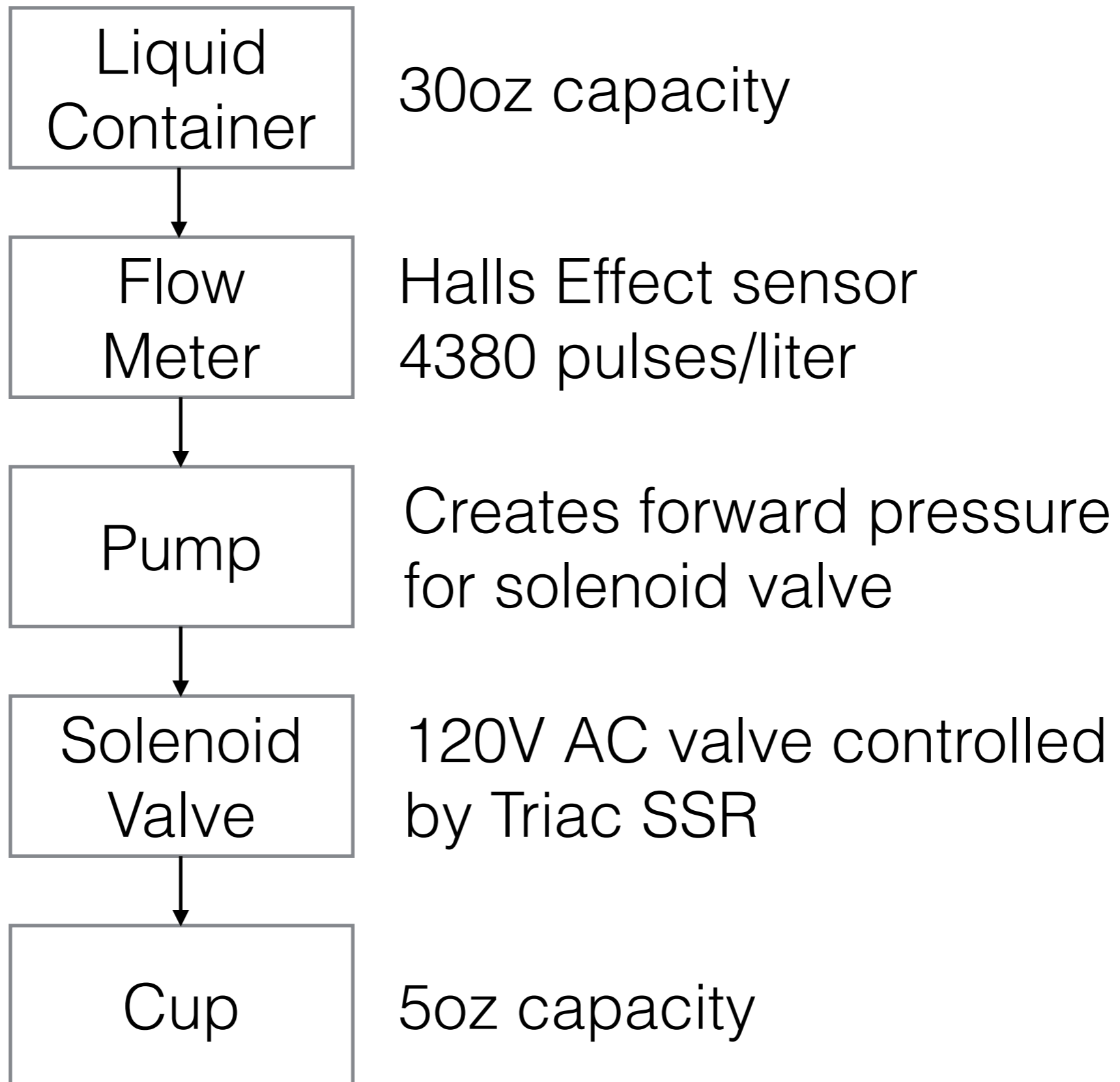


Automated Liquid Dispenser

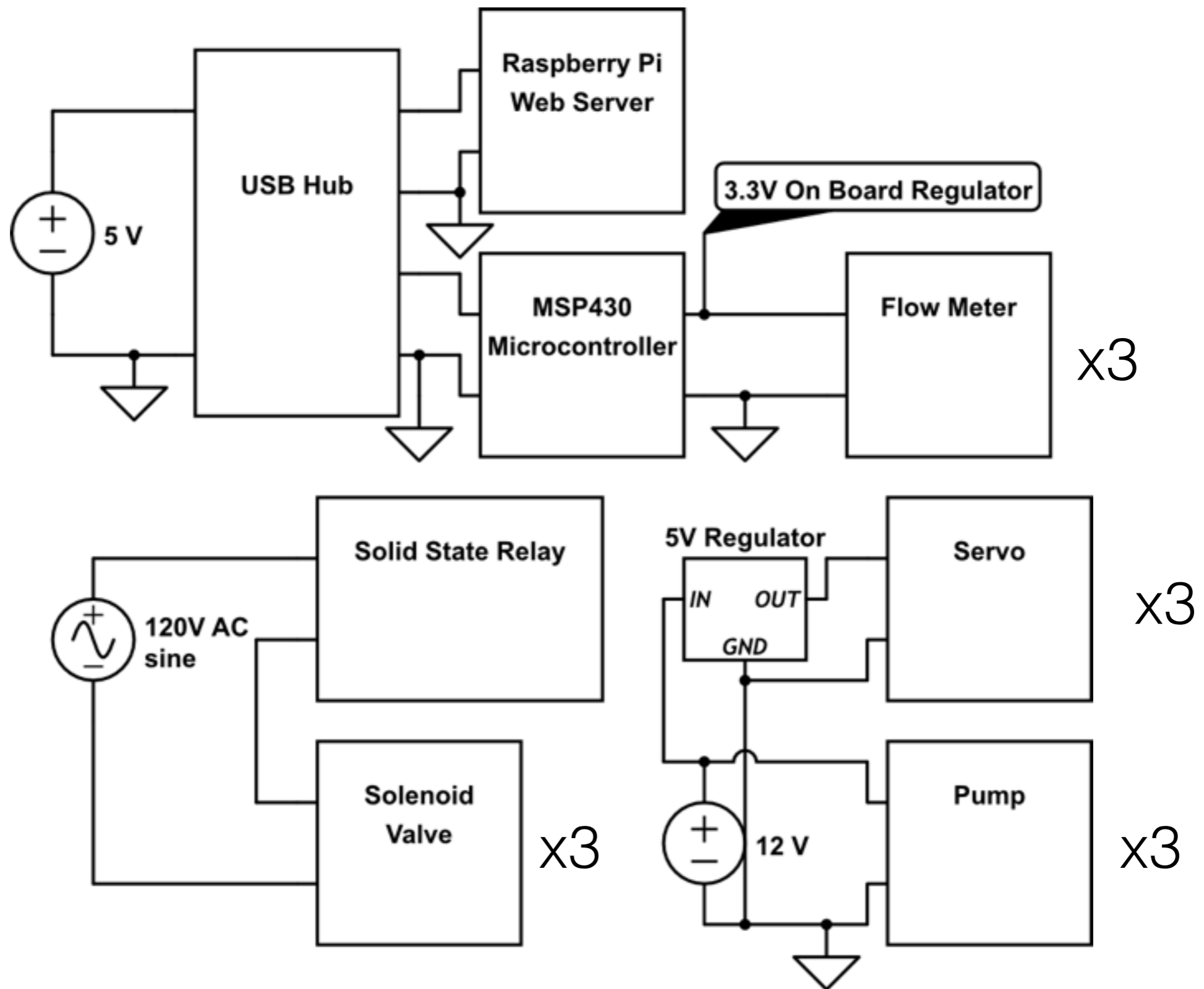
Lab II - Group 9

Carlos Alban, Rustin Harris, Sami Suteria

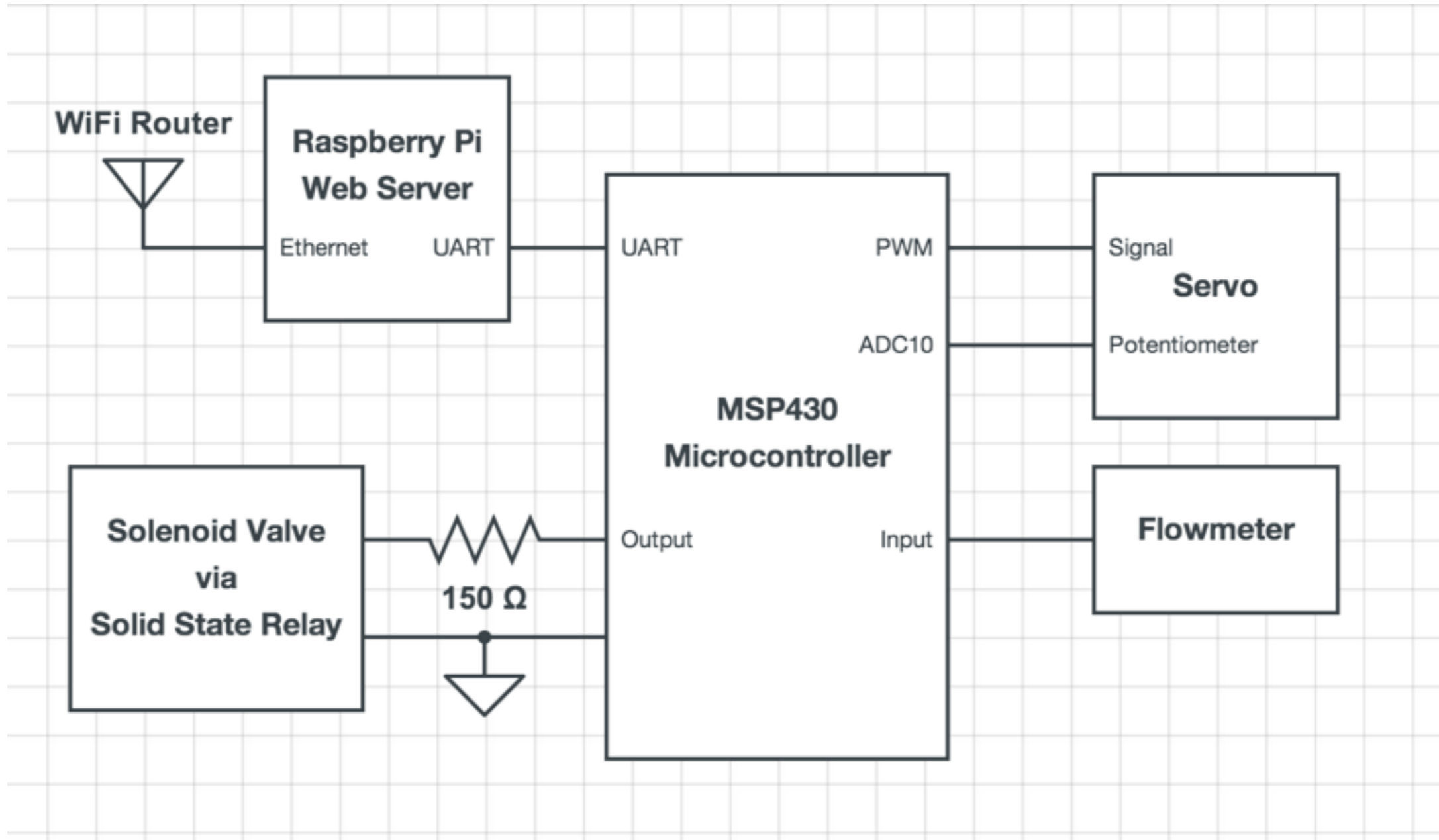
Liquid Flow



Power Flow Diagram



Signal Flow



Software

Raspberry Pi

- Apache server
- PHP for logic and UART
- HTML/CSS/JS for visual interface

MSP430 Launchpad

- Input Parsing
- Feedback Loops for Flow Meters and Servos
- Written as State Machines

How To Use

- Connect Phone/Tablet to WiFi Network
- In a browser go to 192.168.0.100
- Select Recipe
- *Wait*
- Enjoy Mixed Drink

Project Description

Design and construct a microprocessor controlled robot that will retrieve a container, dispense prescribed amounts of three different liquids into the container and deliver the product to the user. All movement of the robot shall be encoded and measured.

Web Interface

Automated Liquid Mixer

Select a drink:

"White Walker"

Ingredients:

1 Shot of Bottle 1
2 Shots of Bottle 2
1/2 Shot of Bottle 3

Make This

"The Imp"

Ingredients:

0 Shots of Bottle 1
1/2 Shot of Bottle 2
0 Shots of Bottle 3

Make This

"Oathkeeper"

Ingredients:

1/2 Shot of Bottle 1
1 Shot of Bottle 2
1.5 Shot of Bottles 3

Make This

"Milk of the Poppy"

Ingredients:

2 Shots of Bottle 1
1 Shot of Bottle 2
0 Shot of Bottle 3

Make This

"Hodor"

Ingredients:

1 Shot of Bottle 1
1.5 Shot of Bottle 2
1.5 Shot of Bottle 3

Make This

"The Hound"

Ingredients:

2 Shots of Bottles 1
2 Shots of Bottles 2
2 Shots of Bottles 3

Make This

Note: each shot is approximately 15mL.