

EE/CprE/SE 492 WEEKLY REPORT 3

2/22 - 3/1

Group number: 11

Project title: Smart Water Leak Shutoff Valve

Client &/Advisor: Cheng Huang

Team Members/Role: Matthew Brandt, Curt Kissel, Cody Juracek, Wolfgang Morton, Grace Wilkins

- Weekly Summary – For the software, the classes have been made for the water data entities. The api methods were tested for the water data as well as the device class. The front end made a user creation page and allowed a user to properly login. Started researching api calls for the arduino code. For hardware, code was the water valve was improved to allow for user commands through the serial monitor. As other parts come in, they have been tested and housing layout plans are being formalized.
- Past Week Accomplishments
 - Matthew – Created a new entity for data from the waterflow sensor. Tested relationship and methods between users and devices. Tested relationship and methods between waterflow data and devices.
 - Curt – Finished creation of the statistics page. Created a working line graph that updates when new data is passed in. Completed testing of the login page.
 - Cody – Assisted Grace with generating a functioning code for the solenoid.
 - Wolfgang – Looked into future requirements of the project in the overall scope of it. Begun planning for a secondary prototype if needed, and started compiling overall cost data for each type, plumbing and non-plumbing.
 - Grace – Updated the code so the water valve is controlled by the user through the arduino serial monitor.
- Pending issues
 - Establish communication between the arduino's wifi module and the web api for the app
 - Need to make queries to retrieve waterflow data based on daily, weekly, or monthly usage
 - The current power supply does not produce enough current needed for the circuit to operate on.
- Individual Contributions

Name	Contributions	Hours this Week	Cumulative Hours
Matthew	Created new entities, tested existing entities	7	26
Curt	Front end Development	5	29
Cody	Tested hardware. Researched in networking and WiFi.	6	24

Wolfgang	Tested water control valve and adjusted other circuit elements.	6	24
Grace	Tested water flow sensor. Code wifi module.	6	26

- Plans for upcoming week
 - Matthew – Start working on developing code for the arduino to send data to the web api. Work with Curt to test functionality of mobile app. Look into making queries to retrieve waterflow data over certain periods of time
 - Curt – Creating a device manager so that users can connect to different smart valves. Preparation for receiving data signals every second.
 - Cody – Have the device function completely off of the power supply. Have the device output data to the software backend. Either get a power supply that produces enough current, or implement several parallel capacitors that generate a larger current.
 - Wolfgang – Finish drafting the cost of projects and determining if the second prototype is needed. Continue assembling the main prototype.
 - Grace – Have the base wifi module code written and set up to interact with a web page. Ideally set the module up to upload the data from the water flow sensor to the web page.