EE/CprE/SE 492 WEEKLY REPORT 1

1/25 – 2/8

Group number: 11

Project title: Smart Water Leak Shutoff Valve

Client &/Advisor: Cheng

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

- Weekly Summary – This week, we met to discuss any progress that was made over winter break and to form a plan for the coming week. We met as a team to start testing some of the hardware components as well as to distribute parts to the members that needed them. We demoed the software to show the progress on the app to the group. We scheduled a meeting with our advisor for next week.
- Past Week Accomplishments
  - Matthew – Worked on setting up the virtual machine to have all the necessary software to run the web application. Created users and gave permissions to control the MySQL database. Started researching into how to get the wifi module for the Arduino to connect to a web api.
  - Cody – Researched a vibration sensor to see if it would be feasible for us to use as a non-plumbing option for our project. Created a list of parts that we will need to purchase to test a non-plumbing option for the shutoff valve.
  - Curt – Worked on developing a login page for the application. Started designing other screens that will be needed for the application, such as to add a device to an account
  - Wolfgang – Set up a circuit to connect the Arduino, wifi module, and flow sensor so that we could test the flow sensor and see how data is being detected.
  - Grace – Created a program that the Arduino will use to detect waterflow through the waterflow sensor every 500ms. It prints out the data to the user.
- Pending issues
  - Need to figure out how to uniquely identify each wifi module so that a user can connect a device to their account
  - Need to order more parts to adequately test a non-plumbing option for the shutoff valve
- Individual Contributions

Name	Contributions	Hours this Week	Cumulative Hours
Matthew	Set up virtual machine, backend development	7	7
Curt	Front end development	6	6
Cody	Researched hardware parts	6	6

| Grace | Coded Arduino to detect waterflow | 8 | 8 |
| Wolfgang | Wired circuit for testing | 8 | 8 |

- Plans for upcoming week
  - Matthew – Work on creating classes for the backend so that users can add devices to their accounts. Work with Curt to get functionality on the app
  - Curt – Work on creating a screen that will allow users to add devices to their account. Work with Matthew to get functionality on the app
  - Grace – Refine the program for the Arduino to more accurately detect waterflow and to accurately measure the amount of water flowing through the waterflow sensor
  - Cody – Work with Wolfgang to test the waterflow sensor. Get a power supply so that the device can run independently.
  - Wolfgang – Work with Cody to test the waterflow sensor. Work with Grace to get adequate readings of the waterflow for the Arduino to transmit to the web api.