

## **EE/CPRE/SE 491 - sdmay29**

### **Automating Inventory Management & Routing through Sensor Networks**

#### **Week 7 Report**

10/15/18 - 10/23/18

Client: Jimmy Paul

Faculty Advisor: Goce Trajcevski

#### **Team Members:**

David Bis - *Meeting Facilitator*

Hanna Moser - *Meeting Scribe*

Adam Hauge - *Report Manager*

Sam Guenette - *Public Relations*

Ben Gruman - *Resource Acquisition*

Noah Bix - *Documentation Manager*

#### **Past Week Accomplishments**

As per faculty advisor recommendation, this week was spent mainly with the focus of improving the overall design of the solution and technical progress was deemed less important at the moment. Plans for handling database information and hardware configuration has been largely considered and improved on as the revision of the project plan is coming soon.

- **Hardware Communication** - Noah
  - Started learning python language through code academy
    - Went through the following modules:
      - Syntax
      - Strings
      - Conditional Statements and Control Flow
      - Lists and Dictionaries
- **Refined Project Requirements** - David
  - Revised project requirements (both functional and non-functional) to reflect new learnings and understanding of project.
- **Barcode Data Conversion** - Adam
  - Created a script that allows barcode data to be extrapolated from barcode scanner and converted into JSON string
    - This makes it easier to do push data to database
- **Project Plan Version 2** - Adam, Noah, Sam, David, Hanna
  - Read feedback and suggestions and continued work on preparing Project Plan version 2
  - Project Plan v2 will be posted on team website by October 26
- **Weight Sensor Development** - Ben
  - Explored documentation for load cell
  - Established structure of connection between load cell and Raspberry Pi through amplifier and ADC

- **Continue to familiarize self with features of ReactJS** - Hanna
  - Completed a ReactJS tutorial regarding creating tables of items pulled from the database that update every so often
- **Database Refinement** - Sam
  - Refined database to handle monitoring data by both device and by product
  - Developed backend queries for corresponding results in the web-component back-end
  - Began Development of front-end ReactJS components to handle constant feed of data
- **Converted all screen sketches to digital copies** - Hanna
  - Finished moving all of the screen sketches that had been previously handwritten to digital copies
  - Reviewed feedback from other group members on sketches and made revisions

### Pending Issues

- **Barcode to Database** - Adam
  - Unsure how barcode data will be stored in database
    - Need to collaborate with David and Sam at a future meeting

### Plans for Upcoming Reporting Period

- **Hardware Communication** - Noah
  - Finish the Code Academy tutorial on Python
  - Try to get the barcode to communicate directly with a python script without a 3rd party
- **Continue refining back-end architecture** - David
  - Continue refactoring back-end architecture to satisfy the needs for the front-end requirements
- **Hardware Design Diagrams** - Adam, Ben, Noah
  - Diagrams will be created to display design plans for project hardware
    - Diagrams will be inserted into project plan
- **Weight Sensor Prototype** - Ben
  - Interface with load cell via Raspberry Pi I/O
  - Solder connections between load cell and amplifier and between amplifier and Raspberry Pi
- **Frontend Revision and Added Features** - Hanna
  - Alter current code for frontend to match new screen sketches
  - After updating current code, continue implementing new features
    - Finish data display page
    - If time allots, begin implementing filter page

## Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
David Bis	Project Requirement Refinement Project Plan Version 2	6	46
Hanna Moser	Screen Sketch Conversion ReactJS Research and Learning Project Plan Version 2	8	36
Adam Hauge	Barcode Data Conversion Project Plan Version 2	8	47
Sam Guenette	Database Refinement Project Plan Version 2	7	46
Ben Gruman	Weight Sensor Development	5	26
Noah Bix	Codecademy Python Project Plan Version 2	8	41

## Gitlab Activity Summary

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Action: opened, Sun Oct 21 2018

Author: Ben Gruman

Title: Acquire Sonar Module  
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Action: opened, Sun Oct 21 2018

Author: Ben Gruman  
Title: Choose Sonar Module  
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Action: pushed to branch deviceRegBackend, Sun Oct 21 2018

Author: guenette  
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Action: accepted merge request !5, Sun Oct 21 2018

Author: guenette  
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Action: pushed to branch master, Sun Oct 21 2018

Author: guenette  
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Action: opened merge request !5, Sun Oct 21 2018

Author: dsbis  
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Action: pushed to branch sql-api, Wed Oct 17 2018

Author: dsbis  
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Action: opened, Mon Oct 15 2018  
Author: dsbis  
Title: Get data from barcode scanner on Raspberry Pi, Type: Issue

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Action: closed, Mon Oct 15 2018  
Author: hjmoser  
Title: Finish ReactJS tutorial, Type: Issue

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Action: opened, Mon Oct 15 2018  
Author: hjmoser  
Title: Finish ReactJS tutorial, Type: Issue

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Action: open  
ed, Mon Oct 15 2018  
Author: dsbis  
Title: Database to Model Migration, Type: Issue

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Action: closed, Mon Oct 15 2018  
Author: dsbis  
Title: Database to Model Migration, Type: Issue

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Action: closed, Mon Oct 15 2018  
Author: dsbis  
Title: Database and Hardware Communication, Type: Issue

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Action: closed, Mon Oct 15 2018  
Author: dsbis  
Title: Research Mechanical Sensors, Type: Issue

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Action: closed, Mon Oct 15 2018  
Author: dsbis  
Title: Microcontroller DB Connection, Type: Issue

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Action: closed, Mon Oct 15 2018  
Author: dsbis  
Title: Server Configuration, Type: Issue

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Action: pushed to branch reactjs\_tutorial, Mon Oct 15 2018  
Author: dsbis

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Action: pushed new branch Barcode, Mon Oct 15 2018  
Author: ahaug

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Action: closed, Mon Oct 15 2018  
Author: dsbis

Title: Database to Backend Connection, Type: Issue

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Action: pushed new branch sql-api, Mon Oct 15 2018

Author: dsbis  
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