Team 14
The Sense-Able Gym

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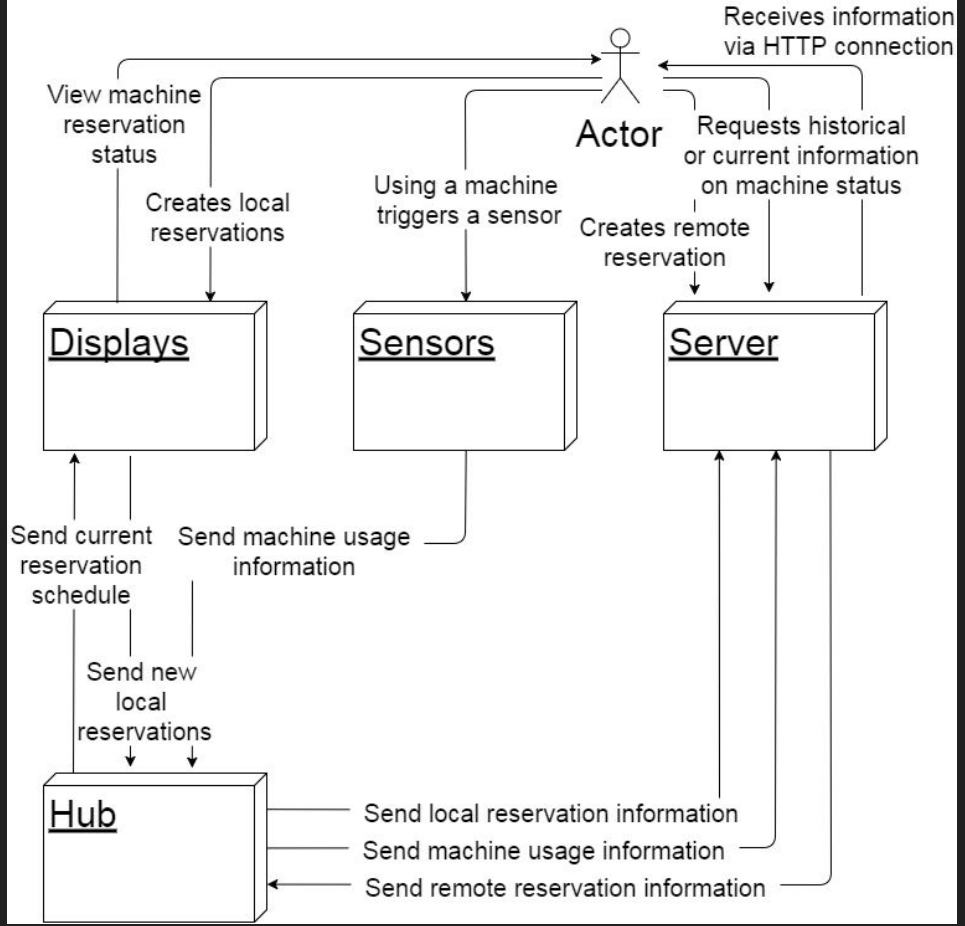
Team 14 Introduction

Daniel DeHoog Paul Griffioen Ryan Siekman TJ DeVries

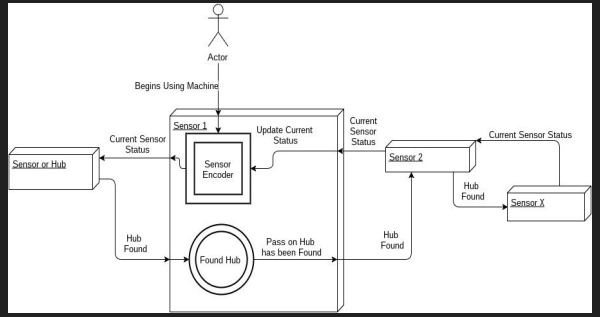
Problem

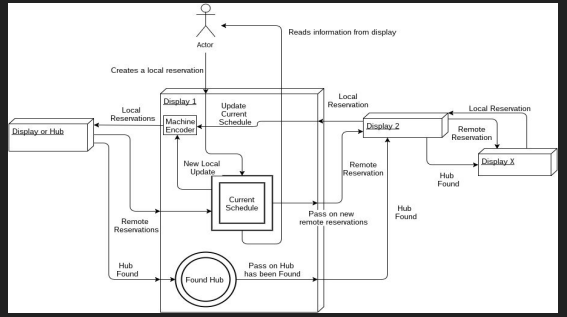
Figure 1: A Crowded Gym

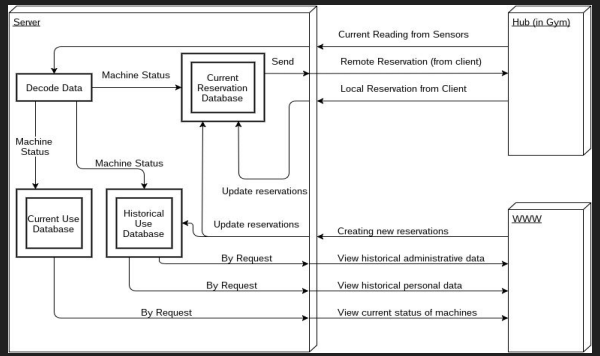
Analysis & Design

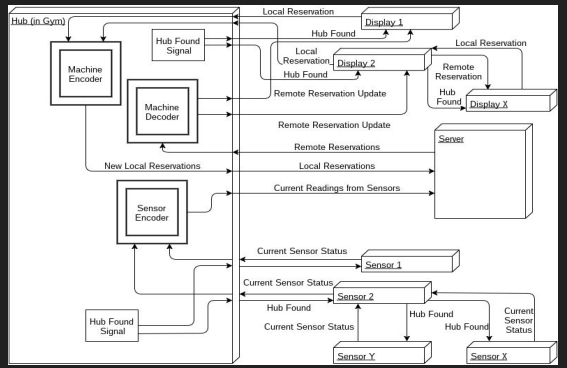


Detailed Analysis & Design





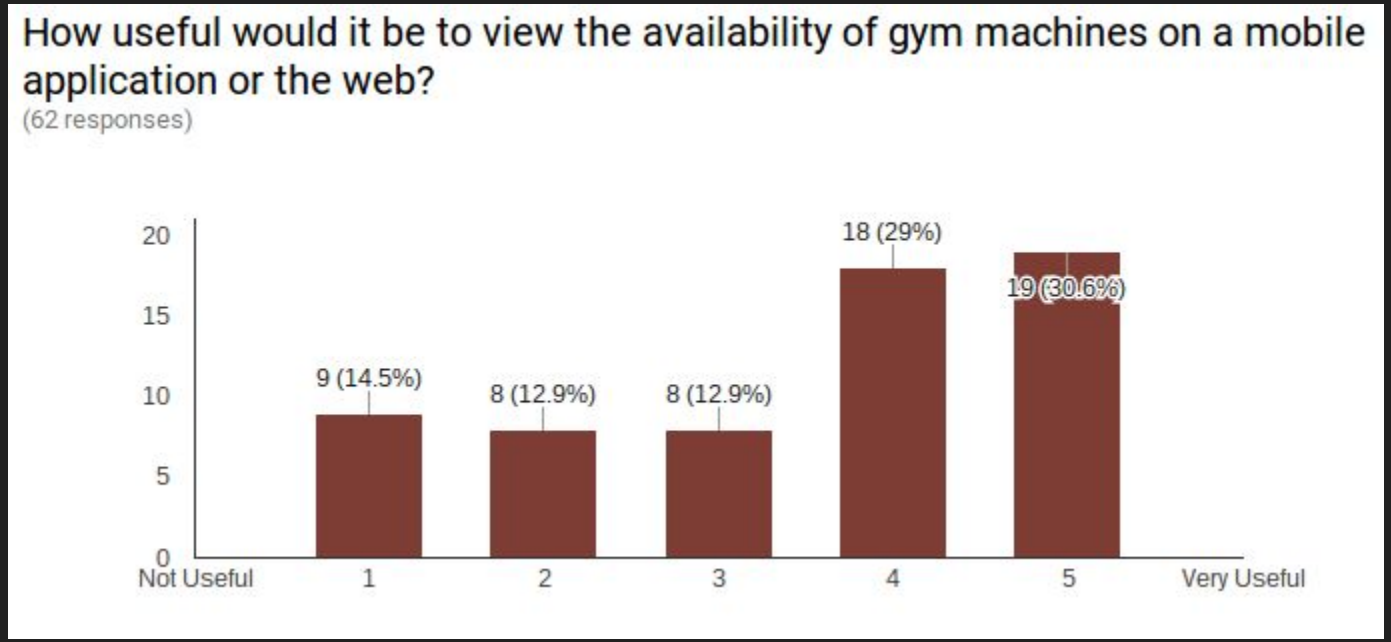




Evidence of Feasibility

- Recent Survey
- Begun development of basic UI features
- Ordered and received a large portion of the hardware required for prototype

Survey Results



Basic UI Progress

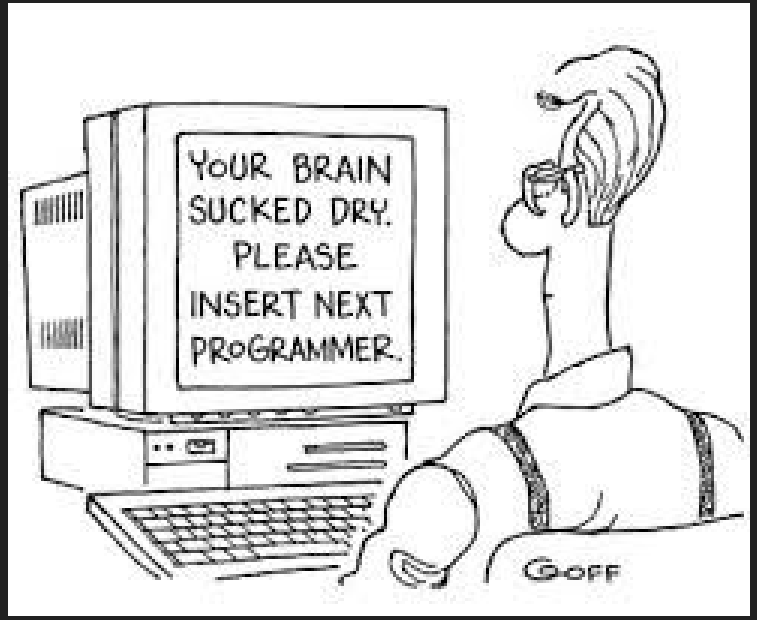
```
0 (trusty)tj_chromebook@localhost ~/Git/py_sensor_display/py_sensor_display (master *%)$ ./example_test.py
------------------------
--      1               --
--     12               --
--            2         --
--                      --
--                      --
--                      --
--                      --
--                      --
--                      --
--                      --
--                      --
--                      --
--                      --
--                      --
--                      --
--              17      --
------------------------
```

Sensors

Figure 2: TI Sensor Tag

Obstacle: Debug Bridge

Obstacle: Lots of Code



Future Work

- Develop user-friendly UI
- Develop communication systems between different parts
- Develop a control system to analyze the sensor data to determine occupancy
- Determine if we will receive the debug bridge we ordered on time
    - If not, consider one large display at the entrance of the gym, rather than individual displays

Any Questions?

References

- Figure 1: https://fitnesswayne.files.wordpress.com
- Figure 2: http://www.ti.com/ww/en/wireless_connectivity/sensortag2015/images/sensortag-img-bluetooth.png