RCOS - Libre
Initial Proposal for Occupancy Tracking Hardware

Materials:

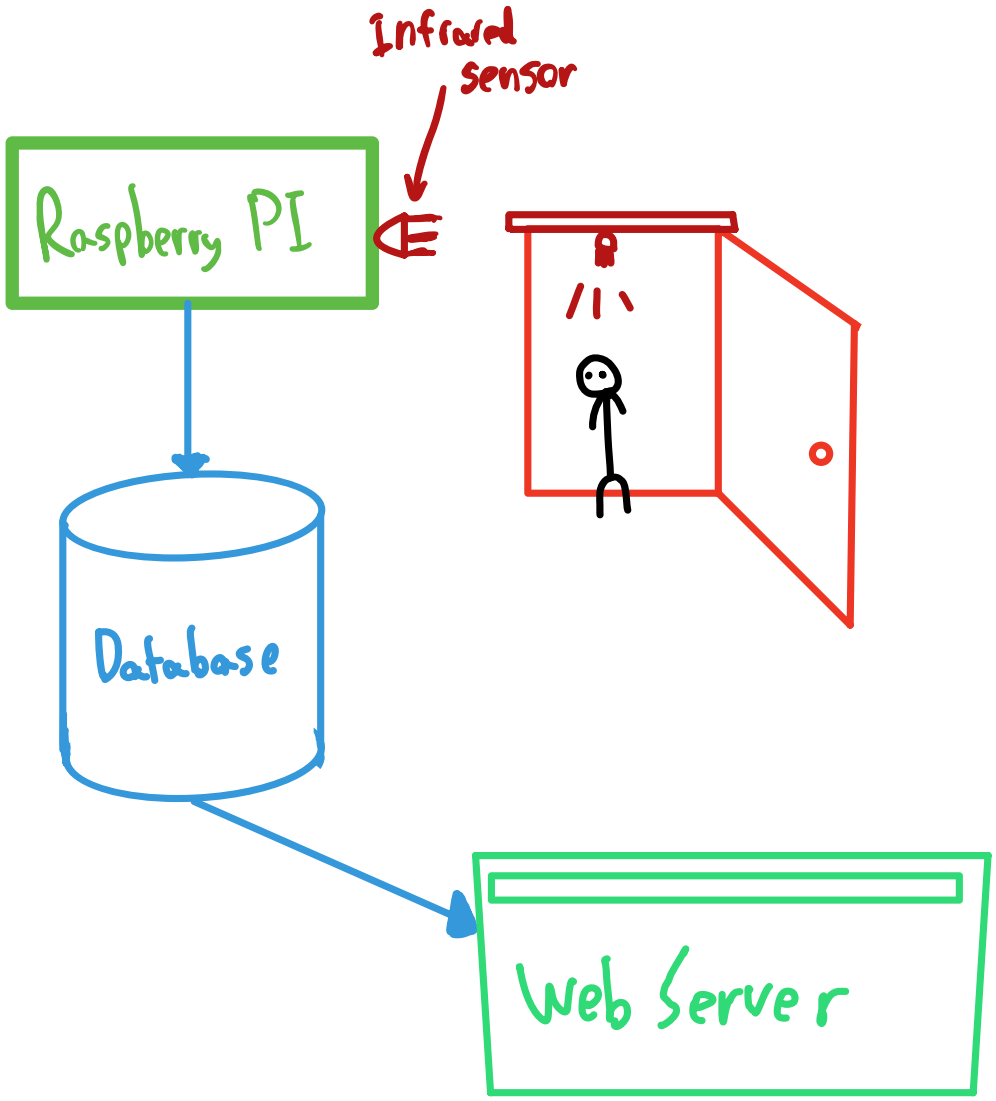
- Raspberry Pi Zero
- Passive Infrared Sensor
- MongoDB Server

Explanation: The Raspberry Pi Zero was chosen due to its low cost and my familiarity with Raspberry Pi Development. Passive Infrared Sensors being chosen due to its low cost and high sensitivity, while being relegated to individual rooms. The Infrared Sensors will be positioned above each doorway in the Library and read data directly to the Raspberry Pi, which will in turn send the data to the web server. Furthermore, I drew inspiration from industry standard security systems which favor Passive Infrared Sensors(PIR Sensors) over Active Infrared Sensors(AIR Sensors). PIR Sensors do not emit any radiation, only reading input from the natural radiation any person emits. On a technical level, this means that PIR Sensors send signals when an abnormal heat signature enters the room.

References:

Main Reference: https://toriscreublog.files.wordpress.com/2018/03/room-occupancy-detection-2018-final.pdf

https://www.getkisi.com/guides/infrared-sensors


Infrared sensor
Raspberry PI
Database
Web Server