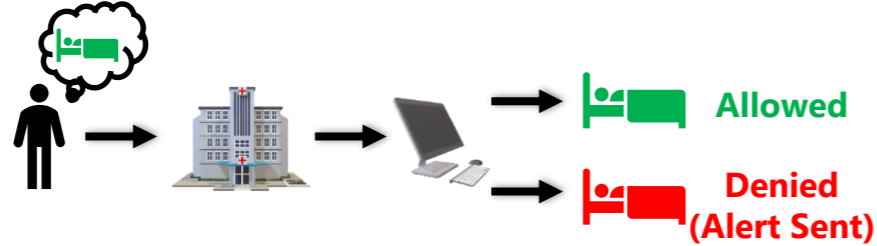


**Problem Statement**

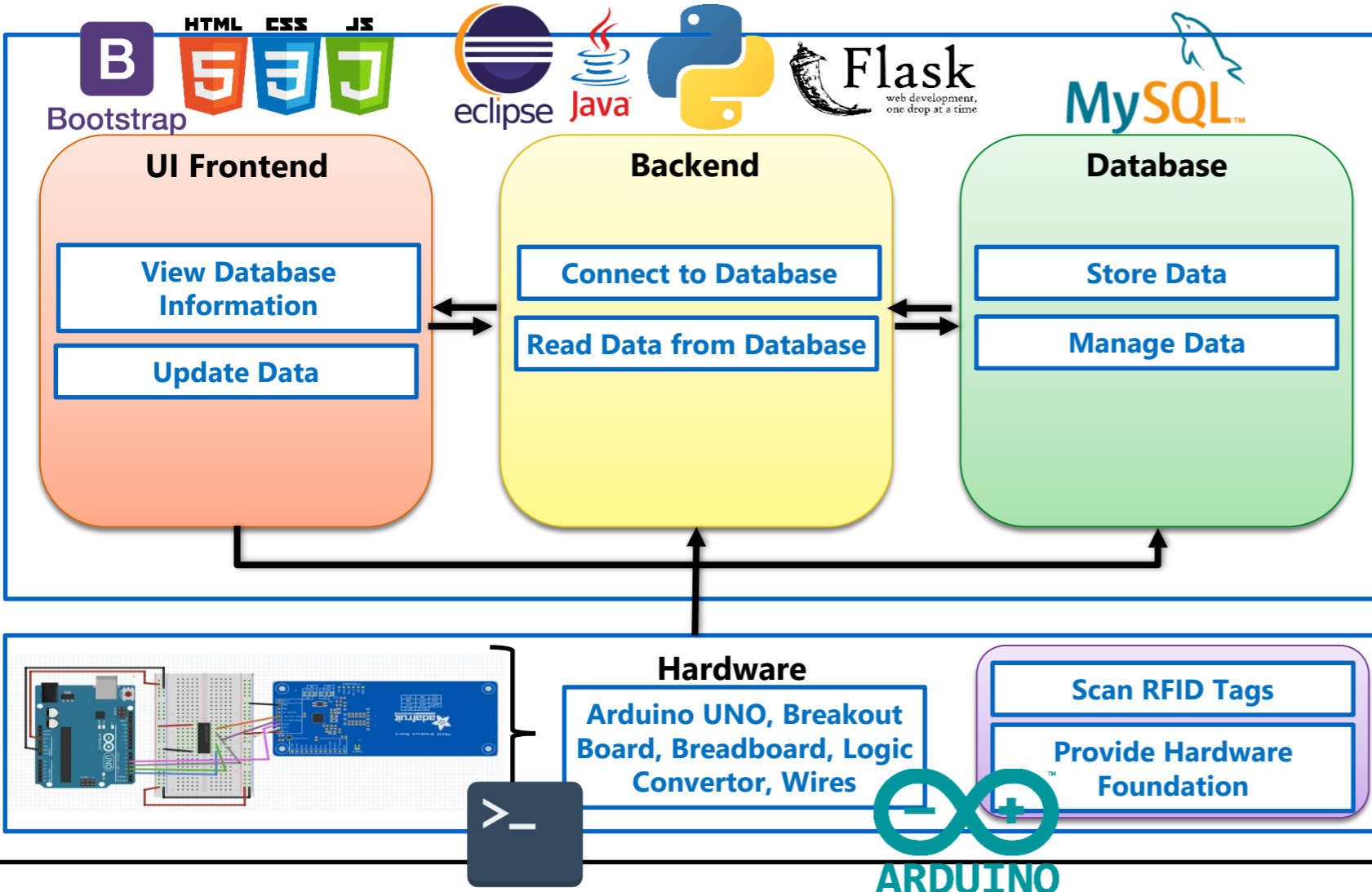
Currently, visitors to a hospital are not confined to the ward of the patient they are visiting; thus, posing a threat to immobile patients confined to rooms within the Maternity Ward or Intensive Care Unit (ICU).



**Problem Solution**

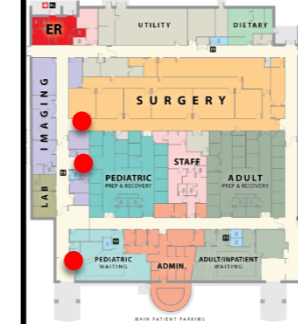
To use Radio Frequency Identification (RFID) technology in a wearable form to monitor visitor activity within the hospital by limiting accessible areas.

**Methodology**

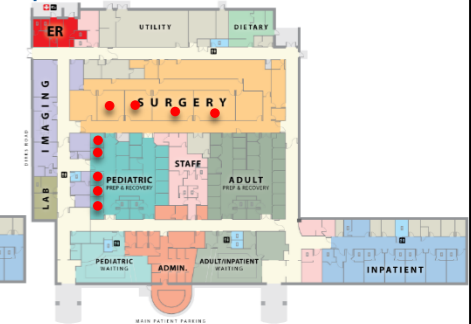


**Application**

A. Begin with each ward entrance having RFID Reader to prevent visitors from moving from ward to ward



B. Next, install RFID Reader at entrance of each patient door to prevent visitors from visiting unauthorized patients



**Future Plans/ Scalability**

- Applicable to all wards in the hospital or other businesses
- Obtain industrial scale equipment to allow individuals to walk through a doorway without having to physically scan the tag
- Automatic refresh when a tag gets scanned
- Integrate Wi-Fi shield/Bluetooth to remotely send data



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**References**

[1] <https://learn.adafruit.com/adafruit-pn532-rfid-nfc/breakout-wiring>  
 [2] <https://learn.adafruit.com/adafruit-pn532-rfid-nfc/arduino-library>  
 [3] <https://www.rose-hulman.edu/class/csse/resources/Eclipse/eclipse-python-configuration.htm>