

Infant Monitoring and Security System for Hospital Wards

A Thesis Presented to the Faculty of Computer Engineering
College of Engineering, Architecture and Technology
De La Salle University – Dasmariñas
Dasmariñas City, Cavite

In Partial Fulfillment of the Requirements for the Degree of
Bachelor of Science in Computer Engineering

by

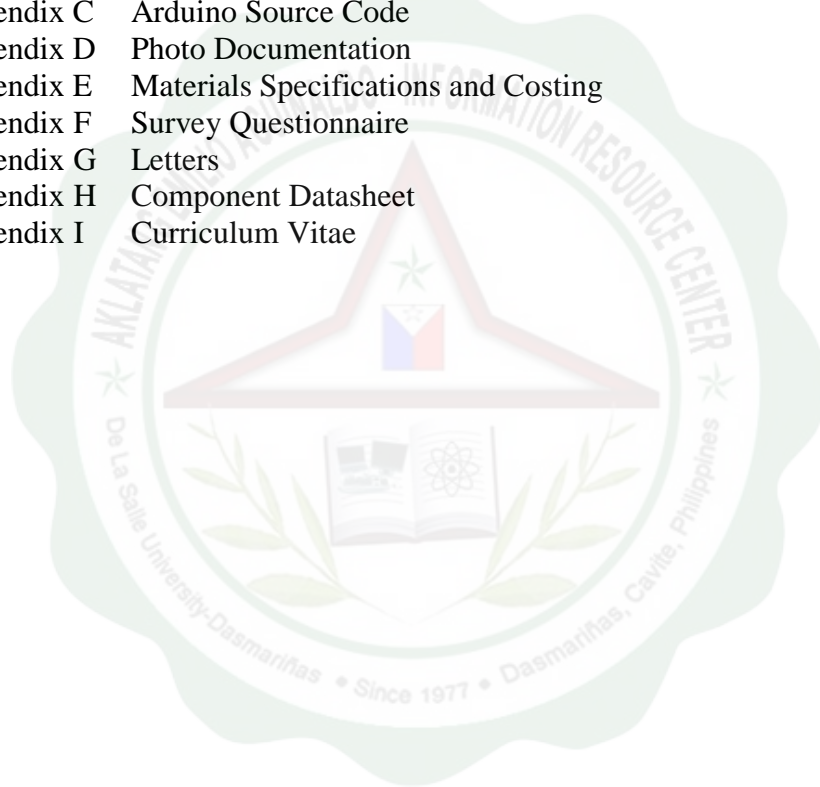
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March 2014

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ABSTRACT

In the Philippines, there are numerous reported cases of infant abductions that occurred in hospitals. Hospital security departments and staff are especially challenged to provide safe environments for employees, patients and visitors. Given the encountered problems currently faced by the healthcare department, the research focused on developing a monitoring system for newborn babies at hospitals. The study intends to develop an Infant Monitoring and Security System for Hospital Wards. Specifically, the study aims to provide a way for the parents to view the status of their newborn babies remotely using smartphones installed with the Android application to be developed for the system, to provide a monitoring system at the nursing station as well as at the security department of the hospital and to alert immediately the parents and the hospital staff when one of the Radio Frequency Identification readers installed has been triggered. The methodological procedures include conducting oral interviews to the hospital staff to understand the procedures after child birth, surveying the maternity ward to determine the appropriate location installation of the system's hardware, determining and purchasing of the components of the system and assembling the hardware parts of the Infant Monitoring System and consulting about the software programming to develop the software for the server and its clients and finally conducting surveys and tests to measure the functionality of the whole system. Based from the data gathered from the trials that has been conducted, it is concluded that the thesis is a reliable and functional Infant Monitoring System that can detect RFID tags easily without a notable delay. The main server of the system as well as the Android application is also well synchronized signifying that the alerts would be received simultaneously by the hospital staff and the infants' immediate relatives. The detection range of the RFID reader has also been concluded at 2 meters.