**“Student Security Access and**

**Logging System using RFID for**

**Our Lady of Perpetual Succor College”**

A thesis proposal presented to the faculty of the

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# ABSTRACT

This research study was conducted and developed by using the Radio Frequency Identification (RFID) technology. Initially RFID tags were developed to eventually replace barcodes in supply chains. Their advantages are that they can be read wirelessly and it contains more information than barcodes, and are more durable. The paper describes the current technology and RFID is part of the expanding world of technology.

This study can serve as a helping hand on monitoring the attendance of the students who were entering the school premises. The application of RFID to student attendance monitoring as illustrated in this study is capable of eliminating time wasted during hand-operated collection of attendance and an opportunity for the educational administrators to capture face-to-face classroom statistics for the issuance of relevant attendance scores and for further managerial decisions.

# CHAPTER 1

# INTRODUCTION

**Area of Investigation**

RFID (radio frequency identification) is a form of wireless communication that incorporates the use of electromagnetic or electrostatic coupling in the radio frequency portion of the electromagnetic spectrum to uniquely identify an object, animal or person.

The use of RFID system in school premises is to improve student’s security. The system ensures that students are under surveillance right from the time they enter the school gates, until the time they have safely left the premises.

It is necessary for the students to bring their IDs whenever they enter or leave school premises and it also helps for better management of the School. The students will be responsible enough to maintain proper conduct.

**Reasons for Choice of Project**

RFID attendance management system has been effectively used in IT and Transportation industries since last few years. Most schools are still following the manual attendance management system, and thus facing problems in managing accurate attendance.

There are chances that after giving attendance, the student may go out of the school premises, which is difficult to detect, and this kind of incident weakens the school safety system.

Same thing can happen with the teachers and employees of the school, without any reliable tracking system, chances are that they can come and go anytime.

RFID is widely used in real world application. It is used by many companies on Logistic and supply chain visibility, in chaotic manufacturing, shipping, and distribution environments, real-time data on the status of individual items provides insights that turn into actionable measures.

This technology can also be used in Race Timing. Timing marathons and races are one of the most popular uses of RFID, but often race participants never realize they’re being timed using RFID technology, and that’s a testament to RFID’s ability to provide a seamless consumer experience.

In a Library System, RFID improves the efficiency of circulation operations. Barcodes require line of sight but RFID tags can be read from multiple angles which means the checkout and check-in process is significantly faster.

**Importance of the Study**

Nowadays, there are universities around our country and each of this University consists of student up to ten thousand. To handle a large amount of student may be a Problem specially to get the attendance.

There are some of the main benefits of using Radio Frequency Identification (RFID) in schools. The most essential use of this device is to ensure the safety and security of students. Students can be track by their parents or guardians by visiting the given website. In this website parents/guardians can be mindful and aware on their child’s attendance.

The RFID based attendance system has also enabled the school administration to ensure only accredited people access the school premises. This goes a long way in enhancing the general security within the school.

Our Lady of Perpetual Succor College was using barcodes on their students’ Identification Card for the past few years and technology was growing rapidly so it will be easier not only for the school but also for their students and staff to use RFID than the traditional Barcodes. RFID offers a number of advantages over barcodes. RFID was tremendously faster than barcodes scanning and it allows for accurate inventory in adverse condition.

**Target Users / Beneficiaries**

The target Users of this project System are the College Students of Our Lady of Perpetual Succor College, Marikina City.

# CHAPTER 2

# MATERIALS and METHODS

**Type of Research**

Applied research is a methodology used to solve a specific, practical problem of an individual or group. The study and research are used in order to find solutions that used to solve every day’s problems for example, cure illness and develop innovative technologies.

This research methodology is conducted for the purpose of applying, testing and evaluating its usefulness in solving problems. It come up with data to support theory, guide theory revision, or propose the development of new theory. The main focus of the researchers is to generate knowledge which of immediate practical use.

**Hardware and Software**

The principal objective of the systems to be designed is to establish a complete RFID system that will monitor the attendance of each students. A short-range reader will be used and it will be placed inside the campus. A CPU will be used in order to connect the reader inside the campus. The CPU will be placed in the entrance of the campus for a much better student monitoring system. After the placement, the system will undergo operational testing to test the functionality of the system.