

SMART SCHOOL SYSTEM (3S)

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ABSTRACT

This thesis presents the development of 'Smart School System (3S)' to record the exam results and fees payment of students who are studying in a private school. The project is an extended project from the smart attendance system to supervise the movement of school students leaving and entering the school using 'Contact-less Smart Card'. The project is focused on system where teachers have access to the system to input the examination marks of the class students that he or she is handling. The fees payment is recorded by an administrator when the parents/students pay their school fees early of the month. This system is then loaded in to the school website where parents or guardian can view their children marks or status of the fees payment. Hence the parents can monitor their children performance anytime they want and any immediate measures can be taken if the performance of their children is not up to the expected standard. In addition, parents also can view any information about the school (eg: school background, activities and current information) which will update weekly by the administrator).

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CHAPTER 1

INTRODUCTION

1.0 Introduction

RFID stands for **Radio-Frequency IDentification**. The acronym refers to small electronic devices that consist of a small chip and an antenna. With RFID, the electromagnetic or electrostatic coupling in the RF portion of the electromagnetic spectrum is used to transmit signals. An RFID technology is means of identifying a unique object or a person using a radio frequency transmission. RFiD tags can be programmed to receive, store and transmit information such as serial number, place of assembly or personal information such as healthcare records.

Today, many applications are now using contact-less smart card technology for identification purposes. Radio Frequency IDentification (RFID) which an automatic identification method, relying on storing and remotely retrieving data using devices called RFID tags or transponders.

An RFID tag is an object that can be attached to or incorporated into a product, animal, or person for the purpose of identification using radio waves. Chip-based RFID tags contain silicon chips and antennas. Passive tags require no internal power source, whereas active tags require a power source. These applications range from time and attendance, physical access control (facilities and parking areas), logical access control (networks, databases and PCs) and Cashless vending and food services [7].

The term Contact-less smart card refers to identification cards (for example, some credit cards) that do not need to make contact with the reader to be read, or swiped in a special slot. This capability is implemented using a tiny Radio Frequency Identification (RFID) tag in the card; the intent is to provide the user with greater convenience by speeding checkout or authentication processes [8].