



RFID STUDENT CARD ATTENDANCE PRIMARY
SCHOOL VIA MESSAGE DURING
PANDEMIC

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JABATAN KEJURUTERAAN ELEKTRIKAL

SESI 1 2021/2022

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This report submitted to the Electrical Engineering Department in fulfillment of the requirement for a Diploma in Electrical Engineering

JABATAN KEJURUTERAAN ELEKTRIK

SESI 1 2021/2022

CONFIRMATION OF THE PROJECT

The project report titled "Design a Fingers Exergame to Improve Fine Motor Skill for Autistic Children Using Arduino" has been submitted, reviewed and verified as a fulfills the conditions and requirements of the Project Writing as stipulated

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“I acknowledge this work is my own work except the excerpts I have already explained to our source”

1. Signature :



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DECLARATION OF ORIGINALITY AND OWNERSHIP

**TITLE : RFID STUDENT CARD ATTENDANCE
PRIMARY SCHOOL VIA MESSAGE DURING
PANDEMIC**

SESSION: SESI 1 2021/2022

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2. I acknowledge that 'The Project above' and the intellectual property therein is the result of our original creation /creations without taking or impersonating any intellectual property from the other parties.
3. I agree to release the 'Project' intellectual property to 'The Polytechnics' to meet the requirements for awarding the **Diploma in Electrical Engineering** to me.

Made and in truth that is recognized by;

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NAPISHAM BIN ABD RAZAK** (Click
here to enter text.)

As a project supervisor, on the date:

)
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RAZAK**

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Praise be to Allah SWT for the owners of nature, be grateful for the Divine Presence for His Taqik and His guidance, has given my permission to complete the Final Year Project Report, my final year project report book is a tribute to all parties involved in helping and providing guidance useful when I complete my Final Year Project, during semester 4 until the 5th semester in 2021/2022.

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ABSTRACT

Student attendance has been considered one of the crucial elements or issues that reflect the academic achievements and performance of any school. [1]The old method of taking a presence by calling a name or signing on paper is very time-consuming, insecure, and very inefficient. Using RFID card technology can take student attendance at school faster, efficiently, and more organized. Moreover, with the addition of body temperature sensors, it is the best way to use them during this pandemic.

Keywords: school, student, attendance, pandemic, RFID card.

ABSTRAK

Kehadiran pelajar telah dianggap sebagai salah satu elemen atau isu penting yang mencerminkan pencapaian akademik dan prestasi mana-mana sekolah. [1] Kaedah lama mengambil kehadiran dengan memanggil nama atau menandatangani di atas kertas sangat memakan masa, tidak selamat, dan sangat tidak cekap. Menggunakan teknologi kad RFID boleh membawa kehadiran pelajar ke sekolah dengan lebih cepat, cekap, dan lebih teratur. Lebih-lebih lagi, dengan penambahan sensor suhu badan, ini adalah cara terbaik untuk menggunakannya semasa wabak ini.

Kata kunci: sekolah, pelajar, kehadiran, pandemik, kad RFID.

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LIST OF ABBREVIATIONS

LCD – Liquid Crystal Display

CHAPTER 1

1 INTRODUCTION

1.1 Introduction

Student attendance is very important to the students because if they do not attend, they will miss their studies and will struggle to answer the examination later.

Besides that, the method of taking pupils in primary school is also very worrying as it uses the old method of calling and noting one after another the name of the pupil. This old way is not only a waste of time, but it can also lead to mistakes. For example, when a pupil goes to the toilet when attendance is taken, it is likely that his name will be marked as absent. These mistakes often occur, and it costs not only the students but also the teachers and parents. Because when the student's attendance is not good, the class teacher will write to his parents, and this will create confusion and misunderstanding between the teacher and the parents.

In addition, with today's COVID-19 virus, temperature intake is crucial for you to go anywhere or to business premises. This is because one of the symptoms of COVID-19 is that body temperature exceeds normal levels.

With today's developing technology, the use of RFID cards is ideal for renewing this old system. RFID is a technology that uses radio waves to transfer data so that it can read and recognize an object. RFID keys can also be programmed with thousands of keys.

So, to ensure that the system of pupil attendance in primary schools is more orderly and according to the current circulation, RFID card technology is ideal. In other words, innovation has helped solve this problem.

1.2 Background Research

The original idea for this project came about when it was seen that there were many problems when the school community took attendance of the students. Student attendance is very important as it is one of the aspects that will measure the level of education of a student. Some of the projects are based on RFID cards that will take past pupils' attendance into the school database. However, the database can only be known to the school. Further, to improve the project based on the presence of students using RFID cards, I have designed a system where when the students touch the RFID card, an SMS will be sent to their parents. I have also added a temperature check system to ensure the success and improvement of this system.

1.3 Problem Statement

In school, teachers take the old-method way of calling one after another the name of the student and then recording it in a book or file of the student's presence. This method slows down the time and it also wastes paper every month.

However, there are many researchers who have tried to solve it in different ways, for example, by taking the presence using fingerprints. But in the current situation, the use of fingerprints is highly recommended as it involves contact and will further increase the risk of the COVID-19 virus plaguing the world today.

In addition, with the current pandemic in the world, it is important to know your body temperature as one of the symptoms of COVID-19 is prolonged fever where body temperature rises above 37.5°C.

So, the proposed system will use modern technology and support for schools, teachers, and parents to address most of the problems with existing attendance systems. ([2] Furthermore, it can also reduce the symptoms of COVID-19 among schoolchildren. With RFID and IoT system technology, he can solve this problem.

1.4 Research Objectives

The main objective of this project is to make it easier for school children to take attendance and reduce the rate of Covid-19 infection that is plaguing the world today. After finding out about this problem, I have found a solution to overcome the problem and help users do their activities throughout the day.

More specifically the principal objective of this research are:

1. Upgrading the modern student attendance system.
2. Can reduce the risk of Covid-19.
3. Make easy for teachers, students and parents.
4. To improve the current system with Arduino and sensors.

1.5 Scope of Research

The project is to develop a student attendance system using RFID cards that can be used for the internet (IoT) and can be used in schools. The target of this project is primary school students. A new, more detailed system that is connected to the network and is suitable for use during an outbreak has been launched. The device will be tested by the subject, and the result will be recorded for analysis.

1.6 Project Significance

The importance of this project is to assist the school community and parents with their children's arrival and the students' schoolwork. It could also reduce the rate of pupils skipping school and could make it easier for teachers to take attendance with a reformed system.

In addition, it can save paper costs and time for teachers who need to print and re-list pupils' arrivals into the system.

Furthermore, parents can find out that their child has attended school safely when their child scans the RFID card and an SMS will be sent to their parents.

Finally, the addition of temperature sensors, is in line with the current pandemic situation.

1.7 Chapter Summary

In this first chapter, I've described the background of the original idea for the beginning of this project. Then, I identified the problems that are happening nowadays. In addition, I have demonstrated the objectives of this project, and I also remember the significance of the study's objectives. Finally, I came up with a project.