

MURAI JAYA LOG TRACER USING RFID SYSTEM

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MURAI JAYA LOG TRACER USING RFID SYSTEM

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This report is submitted in partial fulfilment of the requirement for the Bachelor of  
Computer Science (Computer Networking)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY  
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## DECLARATION

I hereby declare that this project report entitled

MURAI JAYA LOG TRACER USING RFID SYSTEM

Is written by me and is my own effort and that no part has been plagiarized  
without citations.

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## Dedication

A million of appreciation to my beloved parents, Mr Che Mohd Rawi Bin Che Musa and Mrs Habibah Binti Haji Samad because they have give me all their support upon completion of this final year project.

I would also want to thank you to my supervisor, Mrs Marliza Binti Ramly who gives me a lot of idea and give me her full support.

Not to forget, all my housemate and classmate who are very generous helping me during completion of this project. And last but not least, to all people who are involve directly or indirectly in finishing my project until success.

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## ABSTRACT

Murai Jaya Log Tracer Using RFID system is being developed together with RFID application. This project are about to ease the students as well as the officer to swap in and out their movement at the hostel. This system will be implement at post-guard computer. The student only needs to swipe their card once their want to go in or out. After that, the student has to wait for awhile so that the officer in charge can verify the student data. After the verification, the data will save in the database for further references.

## ABSTRAK

Murai Jaya Log Tracer Using RFID dibangunkan bersama dengan aplikasi RFID. Projek ini dibangunkan untuk memudahkan pelajar dan juga pegawai keselamatan untuk merekodkan data keluar masuk asrama mereka. Sistem ini akan dipasang di computer di pondok pengawal. Pelajar harus menyentuh kad pelajar mereka di alat 'reader' setiap kali mereka masuk atau keluar. Selepas itu, mereka perlu menunggu sebentar untuk memberi masa kepada pegawai bertugas mengesahkan data pelajar tersebut. Selepas pengesahan tersebut, data pelajar tersebut akan disimpan di dalam pengkalan data.



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**LIST OF ABBREVIATION**

PSM	Projek Sarjana Muda
RFID	Radio Frequency Identification
SDLC	Software Development Life Cycle
MJ	Murai Jaya
MJLTS	Murai Jaya Log Tracer using RFID System



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## **Chapter 1**

### **Introduction**

#### **1.0 Project Introduction**

This chapter is the early reviews about the whole project, which will be explain the project that being develop. The project is about “Murai Jaya Log Tracer Using RFID” (MJLTS). Sub-chapter of this chapter will discuss about project background, problem statements, objective of this project, scope, project significance, expected output and conclusion.

## 1.1 Project Background

Radio Frequency Identification (RFID) is a method of remotely storing and retrieving data using devices called RFID tags. An RFID tag is a small object, such as a student card. RFID tags contain antennae to enable them to receive and respond to radio-frequency queries from an RFID transceiver.

There are two types of RFID tags which are passive and active tags. For passive tag, it is not require power supply. The tag gets its power from electrical current induced in the antenna by the incoming radio-frequency scan. Due to power and cost concerns, the response of a passive RFID tag is necessarily brief, typically just an ID number. Passive tags have practical read ranges that vary from about 10 mm up to about 5 metres.

On the other hand, active RFID tags must have a power source. It also may have longer ranges and larger memories than passive tags as well as the ability to store additional information sent by the transceiver. Right now, the smallest active tags are about the size of a coin. Many active tags have practical ranges of tens of metres, and a battery life of up to several years.

This project is about using RFID to capture student logs. This project will give advantages to the staff and also the student itself. Every time students go in and out, they don't have to do it manually anymore. They just have to touch their student cards at the transceiver, and their record are keep in database and also they to wait a little for confirmations from the staff about their identification.

MJLTS is a project that is being developed to integrate current system to a system that is up to date. This system is using RFID. It will detect student information and stored it in the database. Current system is still using manual style that is records student logs using books. These systems have many disadvantages.

## **1.2 Problem Statement**

Nowadays, Murai Jaya hostel is still using manual style to records student logs. This makes the system less efficient. There are many weaknesses about current system.

- Student can cheat about their records. They can cheat about the time they go in or out
- It's wasting a lot of time because student need to queue to fill in the books.
- If the records damage, there is no backup.

### 1.3 Objectives

There are a few objectives regarding completion of this project. It has been summarized as follows:

- To integrate RFID technologies at Murai Jaya Hostel post guard.
- To upgrade the current system from manual book to RFID.
- To save more time and be more efficient.

### 1.4 Scope

The scope of this project is to implement RFID at the computer at the post guard of Murai Jaya Hostel. The system will be created using vb.net. This system is implemented to help the staff organize the records. It also saves the staff time to watch students fill in their records. The staff just needs to monitor the system as the student touches their matrix card.

### 1.5 Project Significance

These projects are systems that are integrated with RFID. It helps students and the staff a lot. The student does not need to do the records manually while the staff do not need to watch every time a student fills in the record. This system benefits the staff when they want to check old data. They just have to click on the date and the data will come out.

## **1.6 Expected Output**

The expected output is that the system will run smoothly. It also must working according to what have expected. The system should benefits the students and also the staff.

## **1.7 Conclusion**

As a conclusion, this chapter have describes briefly about the whole idea of the project. What are the tools that will be using, where to implement it and who will be using it. As for the next chapter, it will discuss about Literature review and project methodology that will be use in this project.



## **Chapter II**

### **LITERATURE REVIEW AND PROJECT METHODOLOGY**

#### **2.1 Introduction**

The aim of this project is to upgrade the current system up-to-date. This Project will be develop so that everyone gets benefits from it. The most relevant methodology that will use during completion of this project will be identifies. A few researches have been done to gain more understanding and idea to implement in this project.

RFID is an automatic identification that carries information around using radio wave. This technology is a tool to helps supply chain automation. It makes reading a data for verification and tracking location of the device easier and accurate. It also saves time, energy and manpower.

## 2.2 Literature Review

### 2.2.1 Domain

Radio frequency identification (RFID) is a generic term that is used to describe a system that transmits the identity (in the form of a unique serial number) of an object or person wirelessly, using radio waves. It's grouped under the broad category of automatic identification technologies.

RFID is a method of remotely storing and retrieving data using devices called RFID tags. An RFID tag is a small object, such as a student card. RFID tags contain antennae to enable them to receive and respond to radio-frequency queries from an RFID transceiver.

RFID is in use all around us. If you have ever chipped your pet with an ID tag, used SmartTag through a toll booth, or paid for LRT using Touch 'n' GO, you've used RFID. In addition, RFID is increasingly used with biometric technologies for securities.

Unlike ubiquitous UPC bar-code technology, RFID technology does not require contact or line of sight for communication. RFID data can be read through the human body, clothing and non-metallic materials.