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**APPLICATION OF RFID TECHNIQUE IN  
STUDENTS ATTENDANCE SYSTEM**

By  
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**PENGAKUAN DAN PENGESAHAN LAPORAN PITA I DAN II**

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: APPLICATION OF RFID TECHNIQUE IN STUDENTS ATTENDANCE SYSTEM

oleh: SITI 'AISHAH MOHAMAD....., no. matrik: UK 12536.....

telah diperiksa dan semua pembedaan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Fizik sebagai memenuhi sebahagian daripada keperluan memperoleh Ijazah SMSA (FIZIK ELEKTRONIK DAN INSTRUMENTASI) Fakulti Sains dan Teknologi, UMT.

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## DECLARATION

I hereby declare that this thesis entitled “**Application of RFID Technique in Students Attendance System**” is the result of my own research except as cited in the references.

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## ABSTRACT

Automatic identification (Auto-ID) refers to the methods of automatically identifying objects, collecting data about them, and entering that data directly into computer systems without human involvement. Radio Frequency Identification (RFID) is one of the Auto-ID groups and is the latest phase in the decades-old trend of the miniaturization of computers. RFID has a similar concept to bar coding but it represents an improvement over bar codes in terms of wireless communication, information density, and two-way communication ability. Due to these advantages, RFID is chosen as a technique to be applied in taking student attendance during lab session. RFID Development Kit is used for the application and programmed using C language. The reader detects the tag, which embedded into student card, date and time of arrival is stored into the MySQL database. Student attendance module is created to enable the lecturer to track the student attendance where Microsoft Visual Basic is used for the interfacing process in RFID Attendance Module. Hence, through this project, there is a potential for RFID attendance system to be used in future in order to replace the conventional method in taking student attendance due to its Auto-ID efficiency.

## **ABSTRAK**

Identifikasi Automatik merujuk kepada kaedah mengidentifikasi objek secara automatik, mengumpul data dan memasukkan data tersebut terus ke dalam sistem komputer tanpa penglibatan manusia. Radio Frekuensi Identifikasi (RFID) adalah salah satu daripada jenis-jenis identifikasi automatik dan merupakan fasa terkini di dalam keberkesanan komputer. RFID mempunyai konsep yang sama seperti kod bar, tetapi ia memperlihatkan perubahan daripada kod bar dari segi perhubungan tanpa wayar, ketumpatan informasi dan keupayaan komunikasi dua hala. Merujuk kepada kelebihan di atas, teknik RFID dipilih untuk diaplikasikan di dalam mengambil kehadiran pelajar semasa sesi makmal. Peralatan perisian RFID digunakan sebagai aplikasi dengan C sebagai bahasa pengaturcaraan. Pengesan (reader) akan mengesan label (tag) yang diletakkan di dalam kad pelajar, dan data mengandungi nombor unik label serta masa dan tarikh pelajar tiba ke makmal akan disimpan di dalam pangkalan data MySQL. Modul bagi kehadiran pelajar akan disediakan dengan menggunakan Microsoft Visual Basic sebagai paparan. Ini bagi membolehkan pensyarah melihat serta menyelia kehadiran para pelajar. Maka, melalui projek ini, aplikasi sistem kehadiran RFID adalah berpotensi untuk digunakan pada masa hadapan bagi menggantikan kaedah sedia ada untuk mencatat kehadiran para pelajar.