

# ATTENDANCE AND ASSESSMENT SYSTEM USING RADIO FREQUENCY IDENTIFICATION

15BCE0082 Voleti Ravi, 15BCE0093 Samudra Pratim Borkakoti, 15BCE0076 Vignesh Vaidynathan

*We plan to create a replica of the proposed research paper attached. Student attendance Using RADIO FREQUENCY IDENTIFICATION System is automatic record of student attendance develop especially for university.*

*In this project, we plan to create a device using Arduino which uses an RFID reader and reads the data from the RADIO FREQUENCY IDENTIFICATION tag embedded to the ID card of the student and its gets stored in the database. So, every time the student gets his/her tag read by the RADIO FREQUENCY IDENTIFICATION reader in the bus, an SHORT MESSAGING SERVICE is sent to the parent to let them know the whereabouts of their children. Similar method is implemented for the attendance of classes in the entrance of the classroom. The teacher could be give some sort of remote control mechanism to turn on and off the attendance device so that the students don't tamper with it. The device will show the current status of the student of which class he/she is in and when has the student left the class. All of these data is stored in the cloud storage. Ubidots a cloud computing storage will be used for storing the data and analyzing it and retrieve it via the wifi module which will be connected to the Arduino board as well.*

**KEY WORDS**—Radio Frequency Identification Tags, Gsm, Radio Frequency Identification Sensor, Message Passing, Cloud Computing, Data Analysis, Ubidot

## I. INTRODUCTION

This project is to be developed by using **Radio Frequency Identification** system and student card to get student attendance. Generally, lecturer needs to use the paper to get the student attendance. There were a lot of problems when using the paper as student attendance such as proxy. This project can help lecturer to reduce the problem like that by design automatic attendance using RADIO FREQUENCY IDENTIFICATION and student card. Firstly, lecturer will need to fill forms in an interface like lecturer name, subject and subject code. This part is important because we will need the information in this part to use in the next interface. In the next interface, lecturer needs to choose port and speed to make connection with RADIO FREQUENCY IDENTIFICATION reader. After the reader is ready, process to get attendant will start. Students need to swap their card on the reader and the code from the

This review for the paper was submitted for review on 2<sup>nd</sup> March 2016 and was presented to the concerned faculty on 9<sup>th</sup> March 2016. Samudra Pratim Borkakoti is with the Vellore Institute of Technology, Vellore, CO 632014 India (e-mail: samudrapratim.borkakoti2015@vit.ac.in). V.Ravi, is with the Vellore Institute of Technology, Vellore, CO 632014 India (e-mail: voleti.ravi2015@vit.ac.in). V.Vignesh, is with the Vellore Institute of Technology, Vellore, CO 632014 India (e-mail: vignesh.vaidynathan2015@vit.ac.in).

card will use to compare with database. When the code matches with database, the student information like name and ID number will show on interface and that information will trigger into a list. This list will be used as a student attendance. In that list, all information like student name and ID number will be attached including the

lecturer name and subject. If the code does not match with database, it means that student was in the wrong class or not registered yet in that subject. When this happen, lecturer can register that student by using registering form and the

information of that student will be updated into database. This project will help lecturer taking the student attendance more easily and automatically. As the conclusion, RADIO FREQUENCY IDENTIFICATION technology can be used in student attendance application. The message is sent with the help of a GSM module shield which has a sim card module which is connected to a network and acts as the source to send the SHORT MESSAGING SERVICE to the parents.

## II. LITERATURE REVIEW

Today the current system is taking attendance manually by calling the roll numbers by instructor himself and marking the student's attendance. The most widely recognized methods for student attendance in the classroom is by implementing the students to manually sign the attendance sheet, which is typically passed around the classroom while the instructor is giving lecture. For example, lecturers with a vast class may find the bother of having the attendance sheet being passed around the class and the manual marking of attendance by students are difficult and in all likelihood occupy them from educating and getting complete attention from the students. Furthermore, as the attendance sheet is passed around the class, a few students may incidentally or deliberately sign another student's name. The first case prompts a student missing out their name, while the latter leads to a proxy attendance record. Another issue of having the attendance record in a printed version frame is that an instructor may lose the attendance sheet. As far as attendance analysis, the instructor likewise needs to perform manual calculation to acquire the students' attendance rate, which normally consume a considerable amount of time. Even the lecturers have to physically check if any mistake has been done. It becomes highly difficult to analyse this by a single instructor. There has also been introduced the local server based where the data is stored in a database within the local server which is located in a nearby location. This made the attendance and

analysis of students performances a bit easier. Then again, for any access of these data, the user must be in the systems which is physically connected to the server making it difficult for the lecturers if they wish to do the work at their home or anywhere at their comfort.

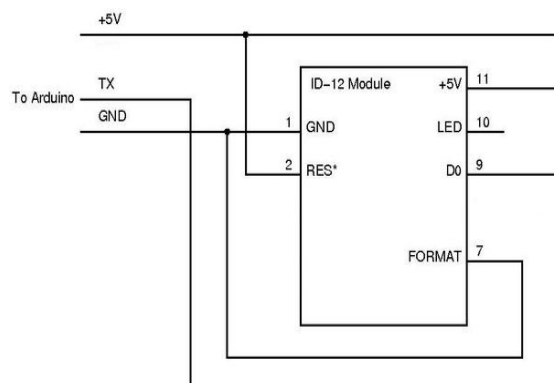
### III. REASEARCH METHODOLOGY

What can this proposed system be able to do?

This application has been intended to guarantee a computer security for the students going school. The raising setback and diverse mishap emerge a through to guarantee an abnormal state security. This system cover's each perspective in which the student is secured :

- Student in and out action is to be followed with time stamp and this information is kept up in school database.

Fig. 1. circuit diagram for connecton of pins for reading the RFID tag



- Student month to month participation report is keep up at school and is educated to particular parent by means of android application.

### IV. SYSTEM ARCHITECTURE

Each student is equipped with RADIO FREQUENCY IDENTIFICATION tag into his ID card or school bag which will be scanned at whatever point an student enters and leaves the class. Student's entrance and leave sections are kept up into the school administrator database alongside its time stamp. RADIO FREQUENCY IDENTIFICATION tag is used at the same time to keep up the attendance of a student by identifying the RADIO FREQUENCY IDENTIFICATION tag with a reader kept up at the classroom's entrance. Each student's parents are allowed to access the current class attendance alongside survey the month to month attendance report by means of an android application. They will be given separate log in credentials.

### V. OUR PROPOSED METHODOLOGY

As expressed over, a RADIO FREQUENCY IDENTIFICATION label comprises of an incorporated circuit and a reception device. The tag is additionally made out of a protective material that holds the pieces together and shields them from different natural conditions. The protective material

relies on upon the application. For instance, representative ID identifications containing RADIO FREQUENCY IDENTIFICATION labels are ordinarily produced using tough plastic, and the tag is implanted between the layers of plastic. RADIO FREQUENCY IDENTIFICATION labels arrive in an array of shapes and sizes and are either passive or active. passive labels are the most generally utilized, as they are littler and more affordable to execute. passive labels must be "fueled up" by the RADIO FREQUENCY IDENTIFICATION peruser before they can transmit information. Not at all like passive labels, active RADIO FREQUENCY IDENTIFICATION labels have an on-load up power supply (e.g., a battery), accordingly empowering them to transmit information at all circumstances.

smart labels contrast from RADIO FREQUENCY IDENTIFICATION labels in that they consolidate both RADIO FREQUENCY IDENTIFICATION and standardized tag advancements. They're made of a cement mark installed with a RADIO FREQUENCY IDENTIFICATION label decorate, and they may likewise include a standardized identification and additionally other printed data. smart labels can be encoded and imprinted on-request utilizing desktop name printers, while programming RADIO FREQUENCY IDENTIFICATION labels is additional tedious and requires more advanced equipment.

RADIO FREQUENCY IDENTIFICATION frameworks can be arranged by the sort of tag and peruser. A Uninvolved Peruser Dynamic Label (PRAT) framework has an inactive peruser which just gets radio signs from dynamic labels (battery worked, transmit as it were). The gathering scope of a PRAT framework peruser can be balanced from 1–2,000 feet (0–600 m), permitting adaptability in applications, for example, resource security and supervision.

A Dynamic Peruser Aloof Tag (ARPT) framework has a dynamic peruser, which transmits cross examiner signals and furthermore gets validation answers from latent labels.

A Dynamic Peruser Dynamic Tag (ARAT) framework utilizes dynamic labels awoken with a cross examiner motion from the dynamic peruser. A variety of this framework could likewise utilize a Battery-Helped Detached (BAP) label which acts like an aloof tag yet has a little battery to control the label's arrival detailing signal.

Repaired perusers are set to make a particular cross examination zone which can be firmly controlled. This permits an exceedingly characterized perusing region for when labels go all through the cross examination zone. Versatile perusers might be hand-held or mounted on trucks or vehicles.

### VI. ADVANTAGES

#### I. Advantages for Students :

1. SHORT MESSAGING SERVICE for attending or bunking class.
2. Automatic attendance on reaching school.



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