ATTUINO

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ABSTRACT

The project is based on attendance system, using the card swiping feature. This is achieved using ARDUINO, an open-source hardware and easy-to-use software. The students basically have to swipe their ID cards into the device, to secure their attendance. This project basically aims at reducing time and effort for the teachers, and also making it convenient for students as well. It uses PHP scripting language for creating the server required for sending the attendance data.

Keyword: *- ARDUINO, PHP, attendance system,*

1. INTRODUCITON

Arduino is an open source computer hardware and software company, project, and user community that designs and manufactures single-board microcontrollers and microcontroller kits for building digital devices and interactive objects that can sense and control objects in the physical world. It's intended for artists, designers, hobbyists, and anyone interested in creating interactive objects or environments. It has 20 digital input/output pins (of which 6 can be used as PWM outputs and 6 can be used as analog inputs). This system eliminates the traditional role call system and heavily minimizes the chances of human errors.
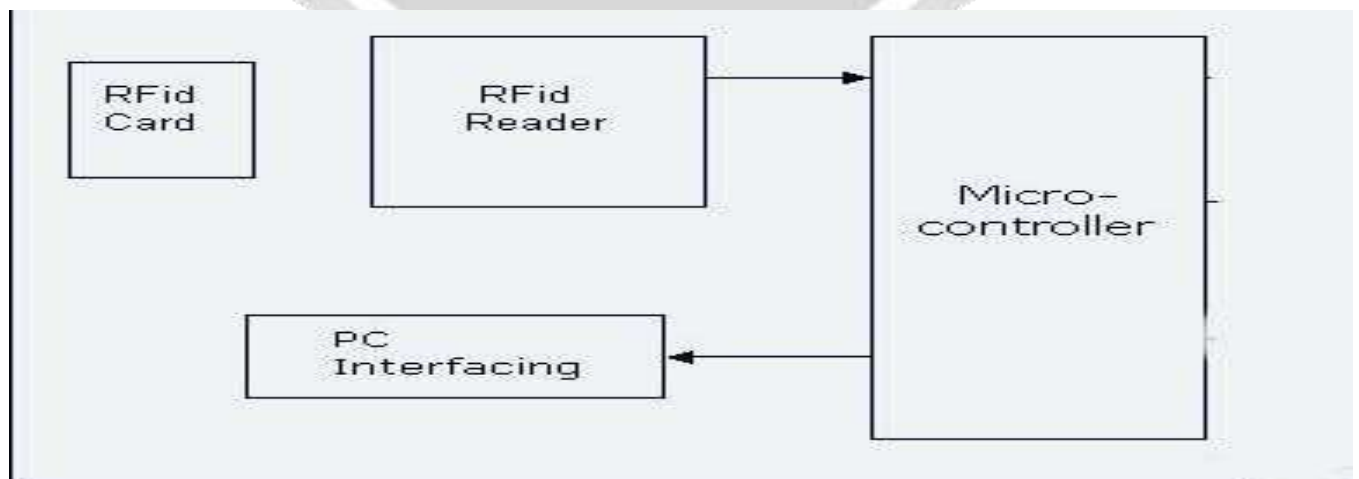
Fig -1: System Architecture

2. EXISTING AND PROPOSED SYSTEM

2.1 Existing System and its disadvantages

There's no such existing system and hence the faculty staffs are forced to use the traditional role call method. This method is slower to execute, especially with a larger number of students. It requires a lot of effort, via speech.

2.2 Proposed System

It eliminates the traditional role call system along with its disadvantages. The ARDUINO has an amicable interface to let users swipe their cards thereby reducing the chances of students to miss out on their attendance massively.There's no chance of miscommunication. The attendance is updated as soon as the card is swiped.

3. ARDUINO

Arduino is an open source computer hardware and software company, project, and user community that designs and manufactures single-board microcontrollers and microcontroller kits for building digital devices and interactive objects that can sense and control objects in the physical world. It's intended for artists, designers, hobbyists, and anyone interested in creating interactive objects or environments. It has 20 digital input/output pins (of which 6 can be used as PWM outputs and 6 can be used as analog inputs). This system eliminates the traditional role call system and heavily minimizes the chances of human errors.

4. RFID

RFID belongs to a group of technologies referred to as Automatic Identification and Data Capture (AIDC). AIDC methods automatically identify objects, collect data about them, and enter those data directly into computer systems with little or no human intervention.

RFID methods utilize radio waves to accomplish this. At a simple level, RFID systems consist of three components: an RFID tag or smart label, an RFID reader, and an antenna. RFID tags contain an integrated circuit and an antenna, which are used to transmit data to the RFID reader (also called an interrogator). The reader then converts the radio waves to a more usable form of data.

5. CONCLUSIONS

Thus, we can conclude that by the use of ARDUINO and servers, the problem of human errors, and slow attendance is solved, thanks to the proposed system. The existing system was, although efficient, and did the job, wasn't very accurate. This entire problem is overcome thanks to the proposed system's concept of ARDUINO and RFID.

6. ACKNOWLEDGEMENT

7. REFERENCES

[1].Norakmar Arbain, LAS: Web based Laboratory Attendance Management System by integrating RFID-ARDUINO technology.