

# *HAJIRI*: A Novel based IoT System for Faculty to Monitor Student's Attendance Record.

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**Abstract.** If we talk about the current scenario of our education system than we found that we have lot of technologies to use but still we are following the traditional system. We if we talk about the attendance system in universities and schools, lecturers did that work manually. Lecturers took the attendance and update it manually in the database. If we talk about the technology than we found that there are lot of tools to use and reduce the burden of lectures. In this paper we tend to square measure accentuation on developing this project that may facilitate the lecturers to require group action simply, firmly and is a smaller amount error prone. For this, we tend to square measure implementing package “Mobile Phone Based Attendance System (MPBAS);” supported automaton Technology. we tend to square measure galvanized to figure on MPBAS from the prevailing system E-Beat. MPBAS can facilitate lecturers to require the group action of scholar’s mistreatment Smart-phone. Lecturers can login to the phone application, get connected to the server and take group action mistreatment Smartphone. When taking the group action within the mobile, lecturers can send it over to the server mistreatment GPRS and group action list are going to be updated mechanically. Thus, the methodology can ease the employment of the lecturers by providing them the platform whereby they will be able to take, manage, update and see the group action of the scholars expeditiously. Additionally the scholars can stay updated concerning their current standing and

so will improve the performance by increasing their additive group action in time. Here we are planning to use the Cloud as storage for better performance. Using IOT and Cloud we can access it from anywhere and anytime which will provide us the better proficiency and flexibility.

**Keywords:** Android Operating System Software Development Kit(SDK), Automated Attendance System, Management Information System(MIS), JAVA Servlet, Android Studio.

## I. INTRODUCTION

In the current scenario of various educational institutions to manage and maintaining student information is very tough task for any one. The whole academic record of the student information consist of monitoring their performance and progress changes periodically which is very huge workload on lecturers to handle and keep on updating the progress report of each and every student in against of their respective scheduled classes.

The traditional way of taking attendance through the lecturers is a manually in a register book in which they are used to do a manual calculation to maintain monthly attendance database of the students. Such system takes so much time to generate record and many times its creates an error also as it follow manual traditional system. Apart from these error problems some time many more problems are generated like lost of attendance register book or

manually fake data inserted through unknown recourses which are really not authorized for that work. In order to reduce all these problems and concern overcome through this problem , a smart mobile based application is generated to increase its efficiency as well as its security by sending all information about the students to the authorized web based admin panel server as it linked in the proposed mobile application. It is a beneficial step in every way for our future E-schools.

It consist of five modules such as admin controlling, teachers authentication, student authentication, displaying digital register, submitting final report to the given admin web based server. This android based application used by the teacher to login and through its subject id and class id display the digital register for the particular class students and finally submit it to the admin. Therefore ,it is crucial to reinforce the use of the mobile based attendance application to register system in order to improve the traditional process of recording and reporting the students in the higher educational organizations .

## II. MANAGEMENT INFORMATION SYSTEM (MIS)

Management information system (MIS) refers to the processing of information through computers and other intelligent devices to manage and support managerial decisions within an organization. The concept include systems termed transaction processing system, decision support system, expert system, or executive information system. The term is often used in the academic study of businesses and has connections with other areas, such as information systems, information technology, informatics, e-commerce and computer science; as a result, the term is used interchangeably with some of these fresh cut area. Management information systems as an academic discipline studies people, technology, organizations, and the relationships among them. This definition relates to "MIS" as a course of study in business schools. Many business schools (or colleges of business administration within universities) have an MIS department, alongside departments of accounting,

finance, management, marketing, and many award degrees (at undergraduate, master, and doctoral levels) in Management Information Systems.

MIS professionals help organizations to maximize the benefit from investments in personnel, equipment, and business process.

## III. EXISTING SYSTEM

We have studied and visited the different websites and the literatures. As per the literature review, the various organizations and individuals have tried to overcome the problems in the traditional attendance system. Some of them are listed below:

Beat:E - Beat is an electronic beat constable's night patrolling attendance system to avoid manual recording of time & attendance and to save the time by sign-in / sign-off at different beat points while patrolling. XIPHIAS has developed the Electronic Beat. It has features such as Compact, Light-weight, Pocket size, tamper proof. But it has a limitations regarding system specification. It is operable in fixed temp range i.e. 0 to 70° C. Very small memory storage as small as 64kb.it uses the Infra Red Serial port for data communication which is outdated.

Mobile Phone Based Attendance System in J2ME This project is based on J2ME technology. Professor enters the attendance to the mobile using keypad. It is a manual process. After saving the absentees or presenters in to the mobile, teacher can edit the attendance list in the mobile. And this attendance details can send to a computer using GPRS. It was developed considering the requirements of that time and has a very little future scope. The system has a limited bounds. It lags behind a lot as when compared to modern day technology such as Windows, Android, iphone .it also a platform dependent and version specific. It does not support the GPS technology to reduce the fake attendance.

## IV. PROPOSED IoT BASED STUDENTS

## ATTENDANCE SYSTEM

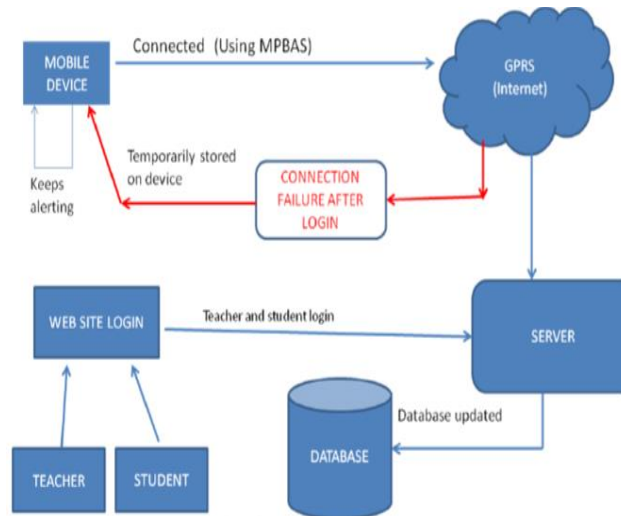


Fig. flow diagram of MPBAS

**Fig 1: IoT Based Students Attendance System**

This project is developed by using Android Studio and Mysql wamp server. It is divided into two phases. In the very first phase, feasibility study is conducted, requirement analysis is carried out to understand the need for the system and the necessary modules, such as admin module, registration and login module, teacher module and student module.

In the admin module to control its all over activates like updating ,creation, deletion or any other database changes in the whole project by the admin and its also contains a teachers registration phase only through which they can generate a user id and password to login in the mobile based application which will be connected through the database. on the other hand the mobile based application will be totally used by the teacher to get logged in and by choosing their authorized register class id and the subject id they are able to display the digital register book on their smart mobiles onwards and submit it finally by cross checking it to the main authorized provided admin server. In the Student Module, Student only see the monthly and subject wise attendance in a graphical format using their respected subject Id.

## V. CONCLUSION

In future this work can be expanded to store the internal marks, semester marks, college events and college placement activities of the students to get minimized all stuffs at one place in a systematic way to import and export the data through the admin and authorized persons whenever it will be needed in future by the educational organization.

In future our system plans on including a SMS notification feature whereby every student will be periodically notified regarding his/her attendance record for a specific duration. Moreover, the mobile application can also be ported to popular Symbian OS based phones using the Qt framework. The scope of the system can be expanded & it can be used as a base for creating similar applications for tracking attendance in offices or any workplace. It can be also integrated in healthcare sector to keep track of nurse to patient visits by streamlining the time entry, time approval and management processes.

This proposed methodology will help the lecturers to reduce their workload by reducing the time and calculations required to update the attendance manually. Students and their parents will also view the attendance and curriculum details using the website.

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