Attendance Mate(A-Mate)

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Abstract— Attendance means the action which is taken in order to define whether a particular is present or absent in that particular lecture or on any particular date. Attendance can be taken in various ways using biometric , etc. The very most used way of taking attendance is the Manual Attendance System which is being followed almost in every school or university which is either taken by the class teacher or the class monitor(CR). But due to some loopholes of manual attendance system we are going to use QR code scanning method for marking attendance, in order to have precise attendance record .

Key words — Android, ASP.net, SQL server,[Web API, QR Code Scanner..

1. INTRODUCTION

Attendance Mate(A-Mate) is the system which is used for taking attendance using QR Code Scanner technique. In this attendance management system , we use an Android App. for the HOD (Head of the Department) and the faculty for giving required permissions for the all students, in which Java programming language is been used. Faculty can also view plus edit attendance of the student. It is storing the data using SQL Server database which is an web server which will be connected to the DB. After scanning it the attendance will directly be stored in the database. The students who are absent will receive a SMS or Email on their phone saying that the student was absent. The Android app will be connected to the Web App using middleware i.e. web API. And there will also be a website where the student can view the attendance, but edit permissions will be given to the HOD and the faculty too. So, this is how the system is working.

2. Purpose of our project

Attendance Management system is developed for taking attendance . Since file Attendance system has drawbacks like student can give proxy attendance which is not legal, since people use manual system for taking the attendance there is a high chance of data loss and data is not accurate as well and it is very time consuming. Taking attendance using QR Code mechanism will help you to take accurate attendance means data integrity will be also maintained. Time will be saved, there is no chance of data loss since data will be stored on the server i.e. the database, security will be maintained as well as the privacy of the data. And since the system is user friendly taking attendance becomes really easy.

3. Value proposition and practical concept

As each era is passing , technology is upgrading day by day. In this technological world , the need of security as well as integrity of data is also increasing. This objective cannot be achieved by File System and also in this busy world each and every minute matters, so in order to save time as well as maintain the accuracy of data , this system will be of great use. We can also use Biometric but the main drawback is that it is the hardware and we can't assure the lie span of a hardware if its care is not being taken. So, Attendance management using QR Code is the best option here accordingly, because once the system is setup no special care should be taken and the system is user friendly. Moreover, since in biometric attendance system hardware comes into picture the cost of the system plus the hardware will increase but in QR Code system the hardware is not needed and hence the cost is less.

A. Personal Use

Attendance management system is very useful all the schools and universities for taking attendance in an efficient manner. It is beneficial for all the colleges for taking attendance without loss of data and security.

B. Market Proposal

This project can be implemented in school and colleges established in an android device and computer system API which can be used for taking attendance.

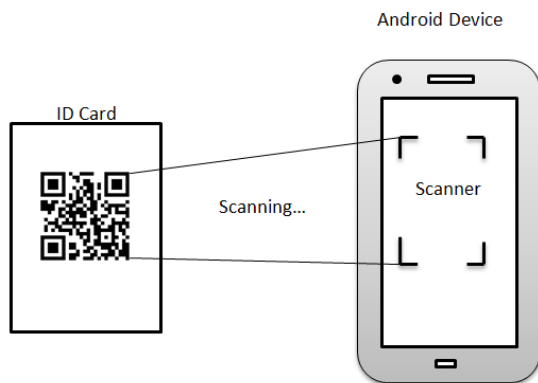## 4. QR Code mechanism use through android device

Fig 1: QR Scanning through Android Device
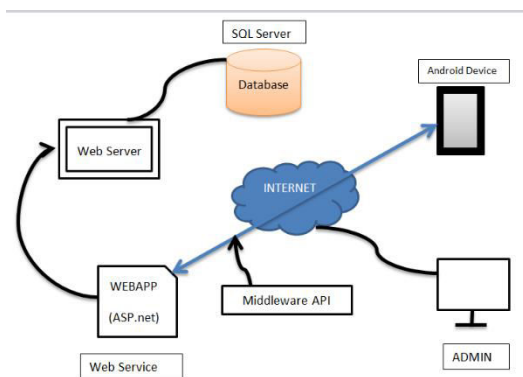
5. Circuit Diagram

Fig 2: Connectivity (Circuit Diagram)

6. Features of our project

1. First feature is that daily attendance record SMS will be sent to the student or his/her parents .

2. Defaulter list will be displayed as well of each semester.

3. Faculty can modify the attendance easily.

4. In-build QR Code Scanner in the Application.

5. Student can view attendance easily

7. Literature Survey

Literature survey is a method of reviewing a particular subject for examining and analyzing it, in order to develop study it thoroughly. This literature survey is based on attendance management system. Most commonly used technique is File system which is used

all over. Most of the organizations use RFID technology for takin attendance, RFID technology is easy since its only needs to be connected to data, so this technology is useful for taking precise attendance. Biometrics is also one most commonly used provision for taking attendance. We can use Thumb or fingerprint scanner for taking attendance or even face and iris recognition techniques are available. Not only available but also being used at a very high level. This technique is also beneficial in order to take accurate data. All these latest technologies are really very expensive. QR Code Scanning is a technique can also be used for taking attendance precisely without data loss and security is also maintained. It is also less costly compared to other technologies like RFID, biometrics ,etc.
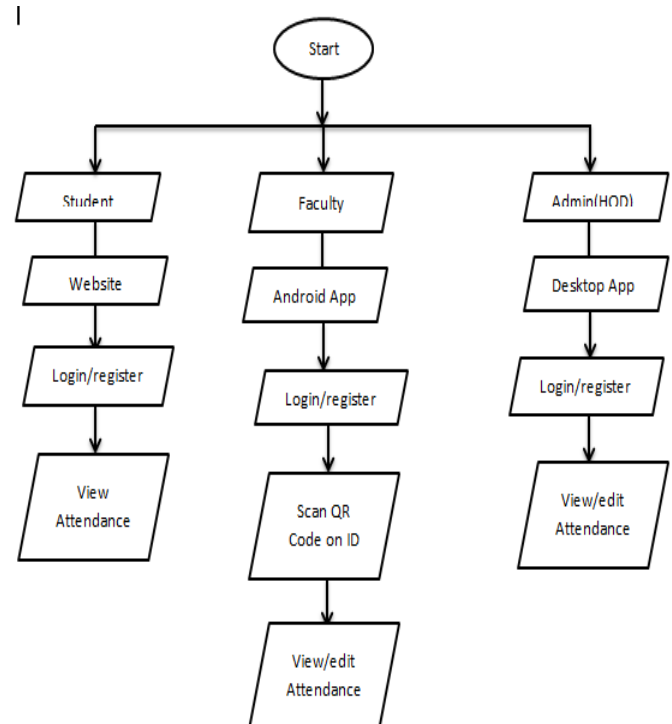
8. Flow of the process

Fig 2: Flowchart of Attendance Management.

9. Technologies used in this project

➢ Software Requirements:
   1. Android Studio 3.5.3 version

   2. SQL Server 2012

3. API

4. Visual Studio 2010

➢ Hardware Requirements:
1. Computer System , intel core i3, 8GB RAM

2. Android Device

3. USB Cable

10. MODULES

1. Student:

 - view attendance

2. Faculty:

-View attendance

-Edit attendance

-Scan QR Code for taking attendance

3. Admin':

-View Attendance

-Edit Attendance

-Give permissions to users.

11. APPLICATIONS

1. Schools

2. Colleges

3. Small Organizations

4. Big Organizations.

5. Universities.

12. Advantages of our project

- Secure
- Data Integrity is provided
- No Data Loss
- Precise Attendance
- Attendance can be taken easily
- No Bunk!
- No Proxy!

13. Future scope and conclusion

In Attendance Management System, teachers call out all the student roll numbers in order to mark present or absent or take signature of student to mark attendance. So, our objective is to develop an attendance management system which is easy to use and which has low cost of setup, etc. by running the system on android device because android device is a device which is available everywhere. And to prevent data loss, providing accuracy of data and also prevent waste of time.

14. REFERENCES

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