



Development of student based attendance and function monitoring system

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Abstract - Student's participation following is a crucial issue all together to screen understudies' execution in the classroom and also in their examinations. It turns into a key concern on the grounds that the college specialist keeps up a decide that one understudy can just go to in the exam if his/her participation is higher or equivalent to a few rates (60%,70% or 80% and so on.) generally not. The conventional participation framework needs understudy's to physically sign the participation sheet each time for the participation of each class. This is superfluously time consuming to notice and stamp understudy's name on the participation sheet. This application also used in department function, like intra, inter, symposium. Is unnecessarily consuming time to update this status for event to staff. By using this application it will be easy. Event task will be assigned to the students by staff, it may update and delete by the staff. Once the student update the status in this application, notification will be send concern staff. The printed version of participation sheet may get lost. Utilizing smartphone like innovation the course educator will have the capacity to take participation and department function effectively by our outlined portable application and spare participation and function in telephone and additionally in server can check details and furthermore can print as printed version. Utilizing the put away data, this framework can stamp participation rate computations, event details, send messages, and send SMS to the gatekeeper to keep them refreshed.

understudy participation in the classroom is finished by committing the understudies to physically check the participation sheet that Circumvents the classroom while a course educator is conveying the discourse[1]. For instance, a course educator with a broad class may see the trouble of having the participation sheet being passed around the class and the physical checking of participation by understudies are abusive and presumably involve them from educating and getting complete thought from the understudies.

The primary focal point of this paper is to present the use of Cell phone in participation framework. These days Smartphone is exceptionally regular to every one of the educators so they can undoubtedly take participation and process the participation where it needs[2]. The fundamental advantages of this framework is that the educator can get figured date, can print printed copy with points of interest participation data, can spare information in telephone database and also spare information to remote server database which guarantees that the data will never lose, can utilize the information where it need.

Watchwords -Mobile Application, Web Server, Student's attendance and department function, Smartphone, SQLite Database, and MySQL Database.

I.INTRODUCTION

Understudy participation organization is a basic substance of the organization of school/college understudies .The customary situation of following

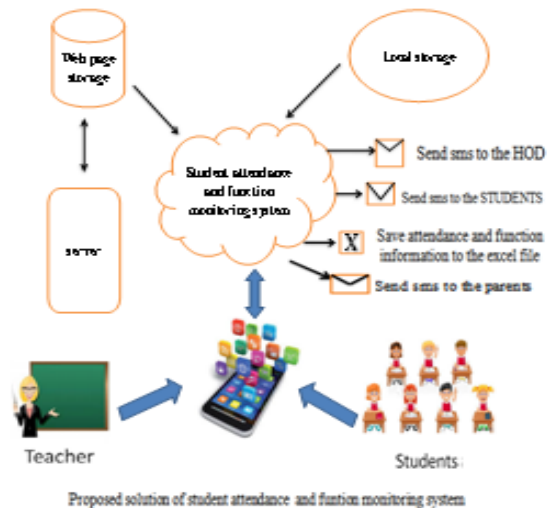


Fig.1. Proposed solution of student attendance and function monitoring system.

Fig.1 demonstrates the proposed arrangement of understudy participation framework. Monitoring the department function like intra, inter, symposium using android application. Association fosters student activities to develop organizing abilities and enrich their skill set. Association was started for the development of students and to interchange, disseminate their innovative ideas and good practices. This national level technical symposium, intra, inter function will encourage the students to expose their talents and share their knowledge.

II. EXISTING SYSTEM

In past decade of years, attendance system has been monitored by using manual calculation. It has some drawbacks such as waste of time, mismatches and human error. So that we are going to proposed this technique by using android application.

III. PROPOSED SYSTEM

The proposed system is positive impact to the students and the administration staff. It will give benefits to the students where the attendance record process and functions will be faster than before. This new attendance and function monitoring system also reduce the work load of administration staff. The attendance and function analysis in software makes the work easier [4]. And it Consumes time and eliminating the use of paper work.

IV. LITERATURE REVIEW

Keeping in mind the end goal to improve participation following structure, researchers worn down the change from the substitute perspective. Zhang et al. Is with the evaluation that participation organization is neglected by current informational association organization system, focusing just on record organization, preparing plan, course organization, thus on hence they set up participation organization structure using VisualStudio[3].NET and Oracle. Mohamed et al. laid out a one of a kind finger impression device that is used as some portion of one of a kind finger impression participation structure.

The 2017 IEEE Region 10 Humanitarian Technology Conference (R10-HTC) 21 - 23 Dec 2017, Dhaka, Bangladesh 230 understudies check their pith by putting their finger on the devices sensor. Be that as it may, this structure has an absence of attainability since unique finger impression scanner can't generally recognize at the first run through. The NFC-based applications rework distinctive human regular activities by simply touching a thing settled or facilitated with NFC tag. For instance, Smart Touch is one of the early NFC wanders that spotlights on NFC advancement which was made by VTT Technical Research Center Finland; applications in various zones were delivered under this wander, for instance, versatile remuneration and ticketing, clever distribution, participation system for schools, home use, family get the chance to control and security, blood glucose meter, et cetera. In , a robotized participation organization system was executed both in electronic and compact stage using stationary matrix AR 400 RFID peruser with four circulatory spellbound reception apparatuses and Symbol MC9000- G hand held RFID peruser independently. Yet, the framework is exceptionally costly[5]. Soewito et al. proposed a participation framework utilizing finger print and GPS innovation through cell phone. The framework is tedious as it utilized unique mark innovation. The framework can gather information however can't produce pdf or .xlsx record. Noor et al. built up a framework for the understudies participation robotization. In this framework, every understudy have an ID relegating a standardized tag which is perused by the cell phone application. In this framework, one understudies can convey the ID of the others which will misdirect the participation framework.

V. SMARTPHONE VS RFID CARD AND BAR CODE SYSTEM

- a) The cell phone can control just by course educator what's more, instructor can retake or adjust the participation which isn't conceivable in RFID and bar coding.
- b) The cell phone is savvy and speedier where the cost of RFID per user or standardized tag per user is much higher. In this framework, there is no additional cost for purchasing RFID card or standardized tag per user.
- c) In RFID or bar coding framework one understudy must convey his/her RFID card or standardized tag card which is troublesome to do constantly, even one understudy convey another's card
- d) Reading from RFID or bar coding is tedious furthermore, infrequently it needs an administrator to work yet in Cell phone requires least time and no need an additional administrator to work.
- e) Endeavoring to scrutinize a couple of labels at any given minute may realize signal effect and in the end to information mishap in RFID framework, our framework is free from this kind of issue[6].
- f) Assembling of labels isn't yet 100% dissatisfaction free today; around 20– 30% of labels used as a piece of early RFID pilots have been broken.
- g) In bar coding framework there emerge a few issues like as optical perceptible pathway checking, compelled detectable quality, bound traceability, unequipped for thing level following, work concentrated, vulnerable to environmental annihilation, slanted to human bumble.

VI. HIGH LEVEL SYSTEM DESIGN

The Smartphone-based Student Attendance and function monitoring System utilizing versatile application enhances mechanized account of understudy participation in school/school/college. With a particular end objective to system design, different Smartphone-based procedures also, frameworks have been executed. Related research on the system change and testing were furthermore examined to provide guidance in evaluating the framework while taking the sensible approach in arranging the proposed system[7]. Our proposed system contains three essential modules specifically the Mobile application, Database module and Web server module. Those modules are coordinated together to get the wanted outcome.

Each module passes on its own abilities and exceptional components. The framework piece chart is sketched.

A. MOBILE APPLICATION

The portable application gives every one of the offices of the arrangement of Smartphone-based Student Attendance and function. The application furnishes a UI which speaks with the course instructor and takes participation. At that point it can be spared in telephone SQLite database and additionally in MySQL database all the while. The MySQL database is put in web server which guarantees the remote store of participation. By utilizing this application client can ascertain rate naturally, print.

B. DATABASE AND WEB SERVER

A database is portrayed as a made assembling out of information. Our database is used to especially store the information assembled by the versatile application. Notwithstanding more highlights to the customers, our online structure can work the recorded understudy participation record and event record by inquisitive the database. This joins automated task, for instance, gathering a particular understudy participation by figuring the participation rate for a remarkable course[8]. The web server gives the office of MySQL database. The server is the remote store of participation record. Just the versatile application can speak with the web server. The application can refresh the MySQL database and can recover information from web server. On the off chance that the loss of information happens client can reestablish from web server MySQL database. An educator may modify points of interest of an understudy yet an understudy isn't allowed to do any modification to their data.

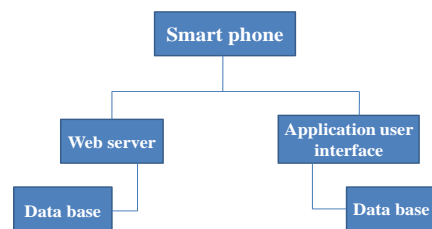


Fig.2.System block diagram.

VII. FEATURES OF THE APPLICATION

- A. Taking Attendance and Percentage Calculations Each understudy participation against each course is separate on the preface of remain in the class. On the off chance that stay time in the class ties with the required time, at that point participation is signified as 'Present'. The participation of understudies who were out of class amid a class hour is set apart as 'Nonattendance'[9]. There is no way of duplication record in the framework. The rate counts are performed consequently by portable application for each understudy in each enrolled courses keeping in mind the end goal to check his/her execution to go to in the examination. On the off chance that the computed rate is less than the required rate then the understudy will be endured.
- B. Messaging System On account of low rate, an email is sent to understudy's watchman including the rate points of interest and a notice. By this, the understudies' folks will be consequently refreshed about his/her youngster's advance[4]. For sending Short Message dministration (SMS), the versatile application is utilized. At whatever point the understudy gains a low rate, a SMS is sent to his/her gatekeeper to refresh them about their Child's Progress on the off chance that they are not ready to browse their email.
- C. Monitoring the event with an application is automated. Even the according staff is absent they can monitor task updates by using this application. There is no need of paper entry and time will be saved.

VIII. TECHNICAL IMPLEMENTATION

In perspective of the system graph showed previously, the framework execution was expert.

A. VERSATILE APPLICATION

The framework utilizes in Android API level 19. The application is executed in obscure android ADT package as IDE. The framework utilized the inside SQLite database as telephone database and

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B. MYSQL DATABASE AND SQLITE DATABASE

The Smartphone-based Student Attendance System is unequivocally connected with MySQL database. In our database, there are four guideline tables created to store the recorded information. A table called the participation table is used to store all customers' taken participation information with date and other data. These information gathered by the application is securing the information onto the database. The educator table is another table in the database that is used to record the educator's unobtrusive components that join their profile information, for instance, name, ID, address, email, phone number et cetera. Courses information, for illustration, the course code, arranged class scene, start and end time class is stacked into the course data table. The understudy information table holds the subtle elements data of the considerable number of understudies. In the break, the examined understudy's participation information is recorded in the Attendance database. A game plan of precharacterized SQL request are incorporated with standard limits allowing straightforward data increases, revive and recuperations for both telephone and web server is gathering reason.

IX. WORKING PRINCIPLE

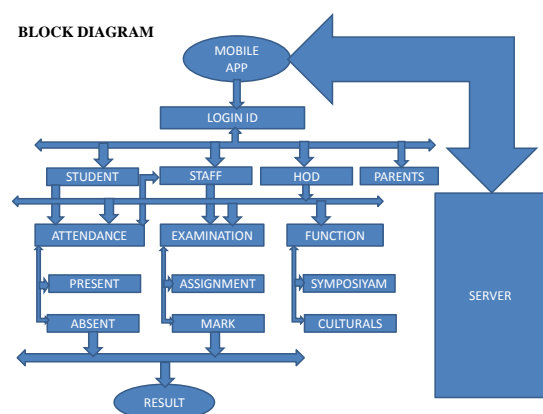


Fig.3.smartphone-based student attendance and function monitoring system

The above figure demonstrates the operation of the block diagram. This mobile which is used by

students, staff members, HOD and parents to access the information. First of all, students they can see their daily attendance and they update their task completion in function management like symposium and if it possible they can see their semester results in their application. Next for staff members, they enter daily attendance for their class students and also save their records. The associative members can manage function arrangements by student's task completion and updating their results [8]. They can see whole department performance from that HOD can easily identify that which class giving good performance and which one is low and also they can think about to improve performance for the low performance. And student's performance send sms to our parents.

C GRAPHICAL USER INTERFACE

A course instructor is allowed to enter the application client interface by marking in to the structure through a login page by giving his/her required data. This sort of approval is imperative with a particular ultimate objective to balance get to by gatecrashers. The course instructor has full access to the framework. The course educator can direct and change the information in the structure.

X. SYSTEM TESTING AND RESULTS

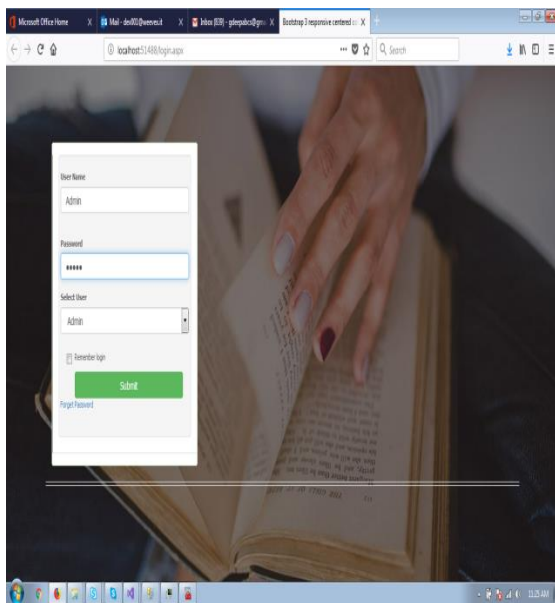


Fig.5. Smartphone-based student attendance login page

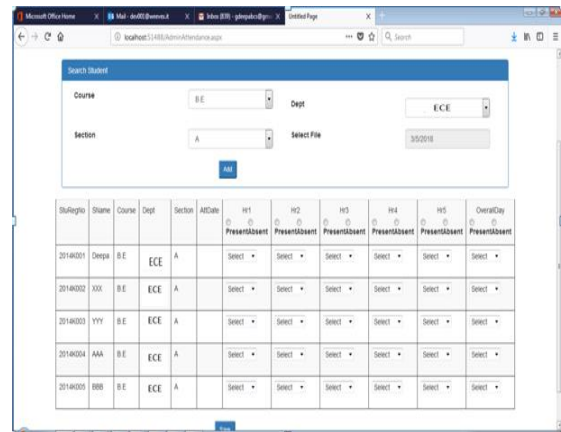
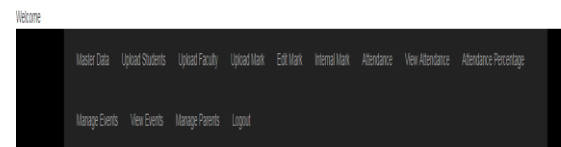


Fig.6. Smartphone-based student attendance system result



EventID	EventName	EventDetails
7	Presentation	Paper presentation and project display are completed or not
8	Technical	Workshop, E-design, work the network are completed or not
15	Face painting, short film, mehendi, photography, poster design, group dance, solo dance	Cultural
10	Online events	Connection, E-polls, online quiz are completed or not
11	Debugging, line follower, technical quiz, project, expo, paper presentation	Technical symposium
16	Non-Technical	Quiz, debugging, treasure hunt, word hunt are completed or not

Fig.7. Smartphone-based student function system results.

XI. CONCLUSION

Cell phone based Student Attendance and function monitoring System will altogether build up the traditional technique of understudy participation and event system in a college/school/school environment. Cell phone based Student Attendance and function system is an automated data gathering innovation, which prompts more exact information section. The put away understudy participation and event information are surrounded and explore definitely with no loss of information, contrasted with a customary account strategy [12]. A course educator can undoubtedly screen the participation and event of understudies which may build up the perfection of guideline on the grounds that the less

time required to gather and process information. Actualizing the framework in instructive condition encourages the client to distinguish participation, intermediary participation, update event, event details table, delete the events and ascertain rate and so forth. SMS furthermore, Email messages are sent by means of the framework naturally to illuminate guardians with the goal that they can get informed about their youngster's advance in the organization.

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