Effective Classroom Application for Online Education during Era of Covid19

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Abstract— The covid pandemic has impacted numerous areas like the business area and education areas. In particular, in the education area, the point is heaps of switches in techniques for education in addition to training. Online participation computation is a significant issue for educators on the grounds that various Learning Management frameworks instruments are utilized. Large numbers of themselves give the list of participation and numerous are not. An Android build system for versatile clients is suggested and intended to deal with all activities in the classroom

Index Terms— Mobile Application, Android, Classroom, Education, Student, Professor

I. INTRODUCTION

During this COVID19 era educational area suffers from losses in terms of managing student's classroom activities. Different Online Learning the executive's devices are accessible which can monitor all study hall exercises. The issue that emerges with the framework are following understudies' presentation, understudies' participation, understudies' plan, and so on. Numerous such issues can be tended to and overseen by numerous analysts these days.

One of the attempt is made here to tackle the issue of understudies' study hall exercises. Class Room is an Android-based application. It is a "Smart classroom anagement System" used to manage all activities like attendance, timetable, and assignments. The primary goal of the computerized classroom system is to computerize the traditional way of recording participation, and assignments

and provide an efficient and automated method to track the classroom activities in institutions.

Different exercises charts are introduced to help the foundation of the framework. Android software is utilized to foster the portable app as a front-end instrument while other the backend support MySQL database and Java is utilized. Server side scripting web administration is likewise utilized for the advancement of the framework. Advancement could be done likewise be proposed related fostering the equivalent app for IOS. Besides, different security angles can likewise be bestwed with this app yet it tends to be carried out in the following variant of the app.

Keeping a record in any area is essential, and it ought to be kept up within a legitimate spot. The most widely recognized method for monitoring understudy's exercises on paper. In any case, experiencing the same thing, for under studies to perform actives on paper not is doable. So now in the suggest

framework, homeroom can be taken through far off mode study.

The proposed system indicate that how the classroom work can be done using application. In the app two clients first will be the teacher and the subsequent client will be the understudy. Both users involve the android app for their improvement. In the various jobs that both the clients need to complete. In that, the teacher's job is to deal with the exercises of understudies through the application. The student will able to submit and get the things via application.

Fig 1: Use Case Diagram

Fig. 1 shows the utilization case outline of the framework. Assuming that we investigate an outline we will observe the utilization cases (Login/Registration, Generate various list, Upload Assignment, Upload Timetable, Upload Result, View time table, View Assignment, and View Profile). So on a very basic level the chart covers the utilitarian necessities of the framework. It additionally gets the entertainers of the framework and the relationship among the utilization cases and entertainers.
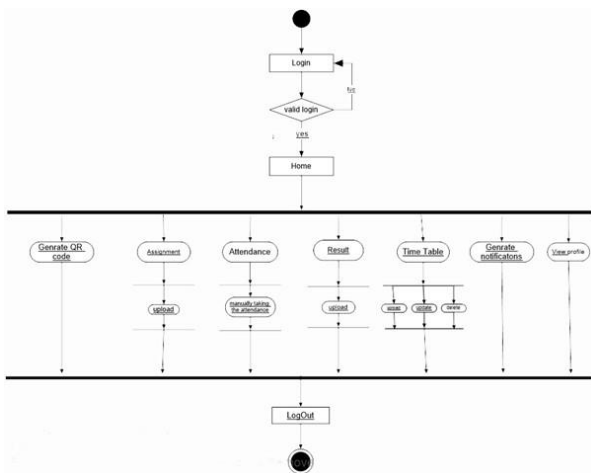

Fig 2: Activity Illustration [Professor]

Fig. 2 shows action chart for the workforce. It portrays how enacts are composed to the assistance. In Fig.2, the main documentation display the beginning spike from where the framework begins. Then, the client needs to login utilizing qualifications and in the event that a client isn't enrolled then the client should need to enlist inside the framework by giving substantial subtleties. In the following action, the divider showed to the client after login in inside the framework. The following action will rely upon the client's decision whether the client needs to check the profile, list, and other things.
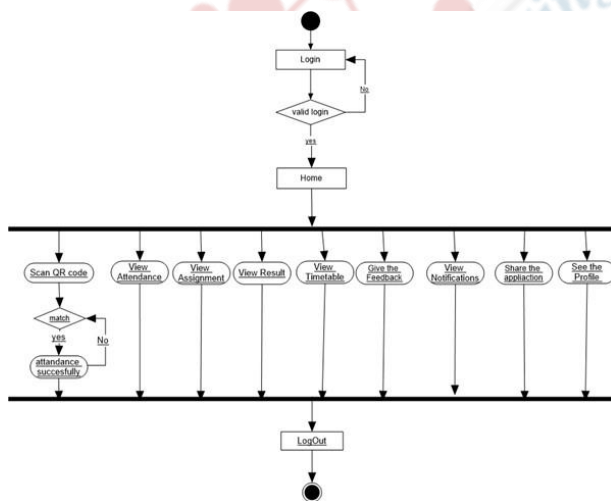

Fig 3: Activity Illustration [Student]

Fig. 3 display the action chart for understudies. It portrays how enacts are facilitated to the help. In Fig.3, the principal documentation displays the beginning spike from where the framework begins. Then, the client needs to log in utilizing qualifications and in the event that a client isn't enlisted then the client should need to enroll inside the framework by giving legitimate subtleties. In the following action, the divider showed to the client after login in inside the framework. The following movement will rely upon the client's decision whether the client needs to examine the participation list, or check the profile.

II. WORDS FROM LITERATURE

Jun Lio. (2016) had fostered a participation framework utilizing a cell phone and web application. An instructor can set up the understudy various list and transfer the information of enrollment. User can check the presence during addresses using own enlisted app on a versatile using sign. Different kinds of it are additionally talked about to exist techniques for checking participation. A mix of cell phone and the web server is utilized. [1].

Sadat Duraki et al. (2019) had fostered a versatile app to mark the participation in remote climates. To keep up with the participation data effectively they have fostered a framework that depends on unique mark various sensors and Zigbee parts. Cooperation was taken using an interesting imprint various sensor and through a distant Zigbee part it is moved into the server informational index. [2]

Milon Islam et al (2017) had cultivated a PDA-based interest structure for following the users in the class. The educator is an executive for participation who can make participation data and interface them to cell phones through a databsse information base. This structure can check cooperation and make gives an account of investment concerning rates. When the participation is refreshed and an email message or normal message is shipped off understudies from the framework. [3]

Refik Samet et al. (2017) had worked on a study hall participation framework in view of face acknowledgment. It utilizes the ideas and methods of face acknowledgment like Eigenfaces, nearby parallel examples, and faces. Three unique adaptations of portable applications are created. They are for understudies, guardians, and instructors. The framework design is made sense of as far as the application module, correspondence layer, and server layer. Highlight base activity-based attempt are utilized to extricate highlights here. [4]

Mohitsinh Parmar et al. (2022) had fostered framework for following understudies keeping up with participation. The framework utilizes the android application to check and produce QR codes. An android application is created for keeping up with participation. Information login is expected through verification. Four distinct buttons are displayed on

the dashboard application after effective login. They are as indicated by understudies, and instructors. By choosing fitting choices participation can be made and checked by instructors. [5]

III. SOFTWARE AND LANGUAGES USED

A. Fronted Software and Languages

1) Android Studio 4.0:

Built on JetBrains' IntelliJ IDEA software and customized exclusively for Android development, Android Studio is the official integrated development environment for Google's Android operating system.

2) Android Front-end(XML):

It is used to develop the front end. In the same way that HTML uses fixed labels as its customizable structure, markup languages do as well. A few XML documents make up the front end of an Android application. Each action has its own XML design record (or more if you're supporting several device sizes), as well as format documents for different displays. Constant strings that will be used throughout the designs, such as the text on a button, are also described in XML.

B. Backend Software and Languages

1) JAVA:

It is a stage-independent coding language. It was designed to have the same view and feel as C++, but it is more user-friendly and implements an article-based coding model. It may be used to make entire apps that can use on a single computer or be shared among servers and clients in a organization. It's possible to use it to create a little application.

2) MYSQL:

It is a database, and it is the widely used open-platform data collecting framework. The free database informative collection is used with PHP as much as feasible. In MYSQL, data is saved in tables, which are informational collection objects. MYSQL can be downloaded actually and energetically if the PHP labourer does not have a database informational collection. MYSQL will be scaled back in general to enable embedded data set applications, which is amazing. Various people acknowledge that database can manage essentially nothing to medium-sized structures, which may be a direct outcome of this standing. In truth, it is the industry-approach database for websites that handle large amounts of data and end-users (such as Yahoo, and Google).

C. Web Service:

1) PHP:

Interoperability between two outstanding lingos is possible because to web organization. PHP is a programming language for server-side configuration. It has to be interpreted on a server that supports PHP. It comes with built-in assistance for working in tandem with MySQL. It also maintains large shows such as POP3, IMAP, and LDAP.

D. Web Server:

It is a free and open-platform cross-stage XAMPP is a free and open-source cross-platform web server stack bundle that consists mostly of the Apache kind of HTTP Server and translator's scripts mentioned in the PHP and Perl programming languages. It is simple, light, and easy forcreators to create a local web server for analyzing and organization motive.

IV. EXPERIMENTAL RESULTS

The system referenced in the mentioned area is made utilizing Android software. The outcomes are given and investigated for different telephones recorded as below.

The outcomes are valuable for understudies in getting the utilization of the system. Different strategies and boundaries are engaged with outcome are for getting time table, assignments, attendance. An action outline is likewise used to display the exercises of the system. Execution of the system is estimated by changing information boundaries like approval of enrollment and sign in page.
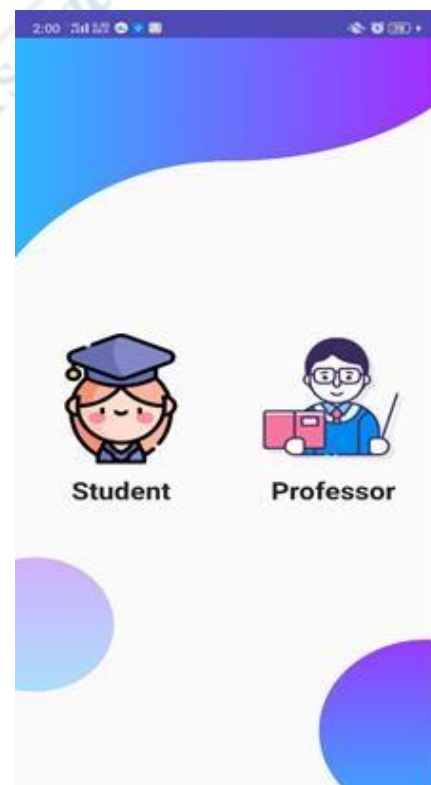
A. Selection Screen

Fig 4: Selection Screen

Fig.4 shows the choice for teacher or understudy. The client will choose according to job for utilization of the application. The client will ready to utilize the application as per his/her job..
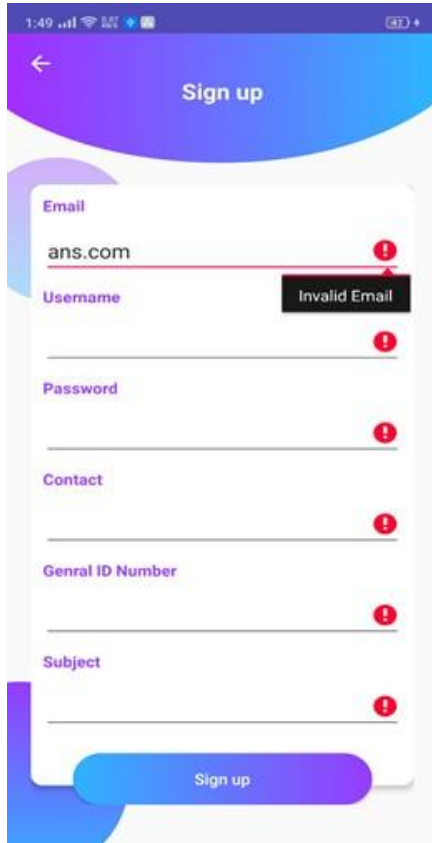
B. Registration & Login

Fig 5: Registration Screen

Fig.5 shows an enrollment screen. With the figure, the client can be ready to watch the structure options like common id number, email, and secret key, which will be utilized for profile production of understudies as well concerning resources. The enrollment structure incorporates approvals for the vacant field as well with respect to an interesting number that validate the teacher and understudy number.

Fig.6 indicates a sig in page. With the figure, the client will actually want to watch the structure fields like valid input locations, and passwords which will be utilized for signing in to understudies as well concerning resources. The sing in structure incorporates approvals for the unfilled field as well with respect to substantial certifications.

Fig. 7 shows eight options first is for plan and the subsequent one is for tasks report and different options are for task and for different things.
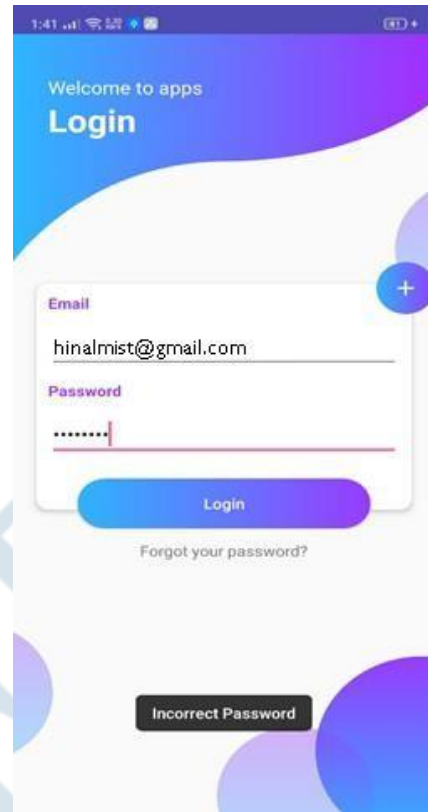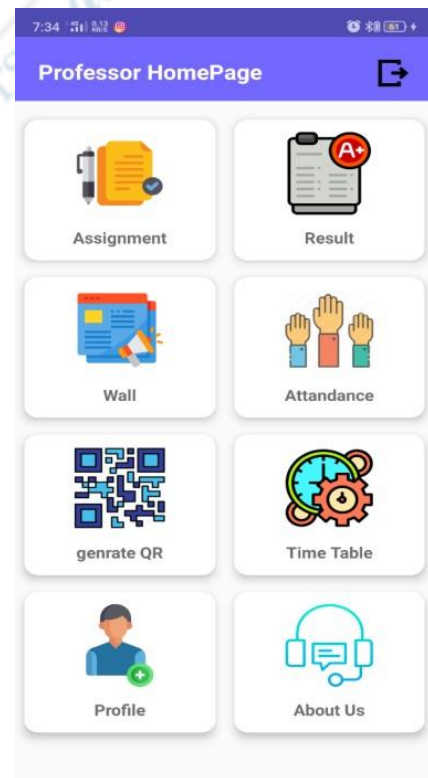

Fig 6: Login Screen

C. Professor Dashboard

Fig7: Professor Dashboard

Fig: 8 Time Table

D. Student Dashboard

Fig: 10 Student Dashboard

E. Result

Fig: 9 Edit Time Table

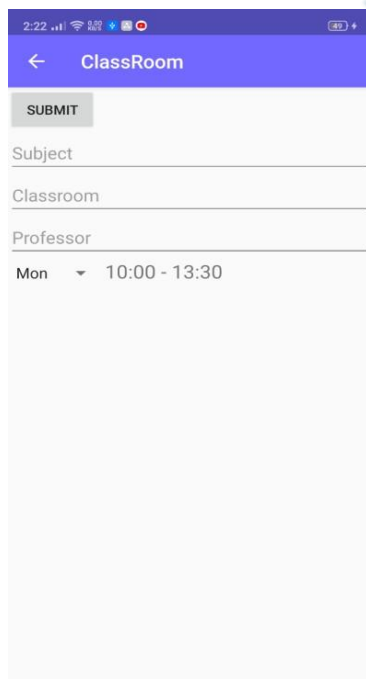**Fig: 11** Result

Fig.8 indicates a schedule page. With the figure, the teacher can actually want to watch the schedule and furthermore ready to alter and add another plan.

Fig.9 shows an alter time table page. Through the figure, the teacher will ready to alter the time table.
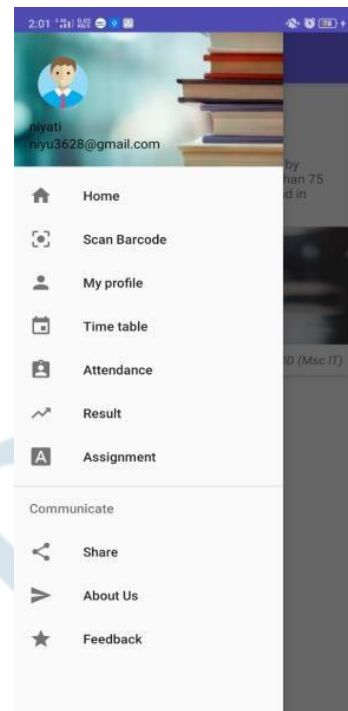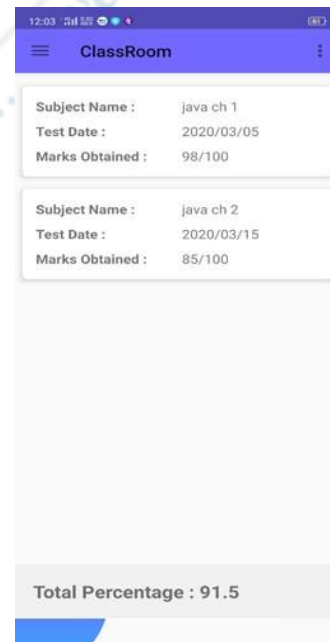
Fig 10 shows student dashboard through student can perform different activities according to their needs.

Fig 12 shows a result page for student it will help to show result of student which will going to enter by professor.
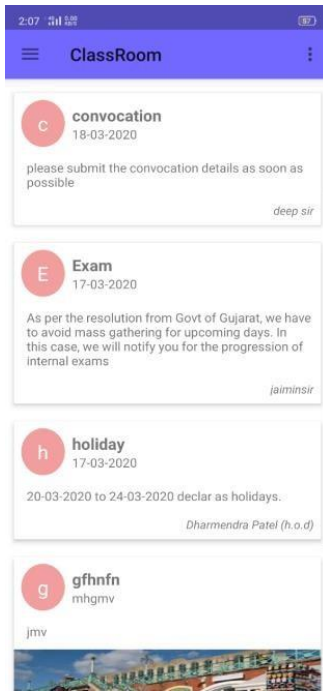
F. Wall Page [Student]

Fig: 13 Wall Page

Fig. 13 shows all the recent news and results details.

G. Testing Results

One well known technique is black box technique in that the analyzer simply call the wellsprings of data that would be apply to the app should give. This sort of checking is moreover called reasonable or direct checking. The clearest utilitarian it is thorough attempting to test framework. One norm for delivering check is to make them haphazardly. There are simple principles for arranging tests for utilitarian testing. There are no models for picking tests, believe it or not.

The subtleties of approval that create the system work effectively are displayed in Table. It indicates the info approval, anticipated yield, and genuine result. Different experiments at various application pages are login check, and finishing up the enlistment structure. The normal and genuine results are a similar while real testing is finished.

Table 1: Test Table

Sr No.	Test Attempts	GivenInput	Expected Result	ActualResult
1	Validate SignIn	Email Address and password	Redirect tothe Dashboard	Redirect to the Dashboard
2	Fill Registration Form	Contact No More Than 10 Digit	Not allowed to input	Not allowed to input

Table 2: Comparison Table

	Application for Wireless Attendance System [3]	Effectual Attendance Application [5]	Classroom Application
Assignments	No	No	Yes
Result	No	No	Yes
Time Table	No	No	Yes
Attendance	No	Yes	Yes
Feedback reports	No	No	Yes

V. CONCLUSION AND FUTURE ENHANCMENT

In the COVID19 Era, it is extremely challenging for schooling areas to keep up with their status. An endeavor is tried here to keep up with the norm by fostering an android system for homeroom exercises. This framework depends on making tasks and tests likewise results and opposite side admittance to see all subtleties. A professor can produce the list of a class as well as of users. An IOS adaptation of this system is intended to execute from now on.

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