Implementation Paper on Digital Classroom

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ABSTRACT

This paper represents digitalization of education method. Digital Classroom (DC) application provides platform for effective communication between teacher and student for educational purpose. It can be used by educational institutes or colleges to regulate classroom activities easily. It aims to simplify creating, distributing, and grading assignments, implement all classwork activities. Digital classroom developed for teachers and student. Teacher can monitor the progress for each student by automatic progress report. Digital Classroom application deals with assignment management, attendance management, classwork management. It facilitates attendance of students, classroom scheduling. Student can get all messages and notices through alert notifications.

Keywords: Digital Classroom, Digitalization, Teacher, Student

I. INTRODUCTION

Digital Classroom is application developing for colleges that aims to simplify creating, distributing, and grading assignments. The primary purpose of Digital Classroom is to streamline the process of sharing files between teachers and students. The main purpose of application is effective communication between students and teachers.Students can join class through joining link. The joining link will be sent by teacher. Teacher can invite in classroom to students and also other teachers. Teachers can schedule classroom activities. It provides functionalities like assigning assignment, tutorials, test series, etc. Teacher can keep track on students' performance through automatic progress report system. Student get all notification of their progress, academic, assignment, college notices, attendance provided by teacher. Teacher can arrange meetings or online lectures through Digital Classroom ecosystem. Digital Classroom is an application that handles various academic activities of classroom.

II. LITERATURE SURVEY

Paper [1]: A Learning Management System Including Laboratory Experiments on Measurement Instrumentation: Each and every student and teacher of every program can use our application.

Paper [2]: A Research Paper on College Management System: In our application, we have provided functionality for teachers and student for educational purpose.

Paper [3]: Web Based Student Information Management System: User can easily register into application.

Paper [4]: Android Based Smart Learning and Attendance System: Teacher shares joining link to students and teachers for joining classroom, hence students and teachers can join particular classroom.

Paper [5]: College Activity Management System: We have now developed a computerized and automatic environment which replaces issues regarding storing data regarding student information.

Paper [6]: Smart College Management System: The Students can download different subjects notes according to their departments.

Paper [7]:Cloud Based College Management System: In our work we have made system where student can add assignment and lecture report.

III.SYSTEM DESIGN

A.   System Architecture

There are many existing software's for the college management system. The application includes Registration, Creation of Classroom, Adding participants, Scheduling timetable, Attendance, Notices, Classwork. The main purpose of application is to interaction between teacher and student. The following diagram(fig.1) shows workflow of Digital Classroom project:
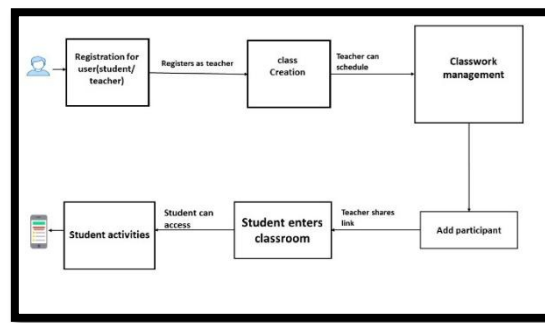
Fig.3.1: System Architecture

First user will visit home page, user will be going through registration process, in this process user should add Email ID and password.

When user registered as teacher, user will able to open teachers' windows. When user registered as student, user will able to open students' window. After user registered as teacher, first teacher will create classroom, in this process teacher should include name of classroom, section and description. After creation of classroom, teacher will be able to schedule for classroom. In this module teacher can generate timetable, add participants, assign assignments, etc.After creating classroom, teacher can add participants of two types, teacher and student. Teacher can invite participants through joining link so, participants can join their particular classroom. If user registered as student, student will be able to access all classwork provided by teacher.

Modules

Registration Module: In this module user (teacher/student) needs to register. While registration user needs to provide his/her E-mail Id and password and the registration will be completed.

Login Module: After the completion of registration process. User (student/teacher) should follow the login process and complete it with the details like E-mail Id and password. Then the user will be logged in.

User Identification: Now, when user has already registered and logged in, the next process is to choose his/her role as we can categorize them as teacher or student.

1) Teacher-

1) Classroom Creation: This module is for teacher end-user. In this module teacher will create classroom to access the functionalities of classroom. Teacher should enter the details of classroom as classroom name, section and description.

2) Add Participants: After creation of classroom teacher will be able to invite students in particular classroom. Teacher will share the link to students and then students will enroll the classroom through link, and then classroom will be created.

Classroom Management-

Classroom scheduling: In this module teacher can manage timetable of classroom. He/she can create timetable for every day, for scheduling timetable he/she should set time with name of subject.

Notifications: Teacher can notify students about deadlines of classwork assessments, examinations, important notices etc. Even teacher will receive the notifications of students' classwork, attendance and timetable.

Assigning classwork: Teacher will upload the assignments, syllabus and offline videos in the format of PDF files, images, videos and links respectively.

Attendance Management: Teacher will share the attendance sheet to students. He/she will be able to keep track on the students' attendance.

2) Student-

Classroom scheduling: In this module student can view timetable of classroom. He/she can attend activities as per the timetable scheduled by teacher.

Notifications: Student can receive notifications about deadlines of classwork assessments, examinations, important notices etc. sent by teacher.

Assigning classwork: Student will upload the completed assignments and classwork in the format of PDF files, images.

Attendance Management: In this module student will respond to the attendance sheet to given by the teacher and can be able to complete daily attendance.
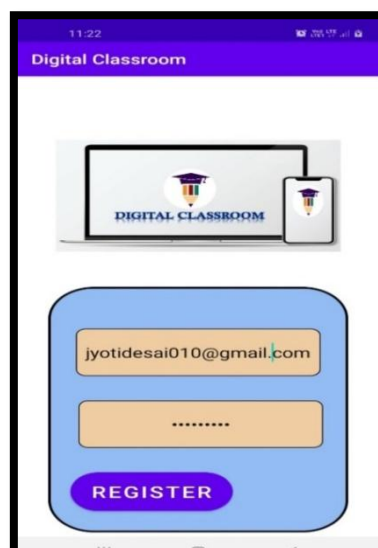
IV. RESULT
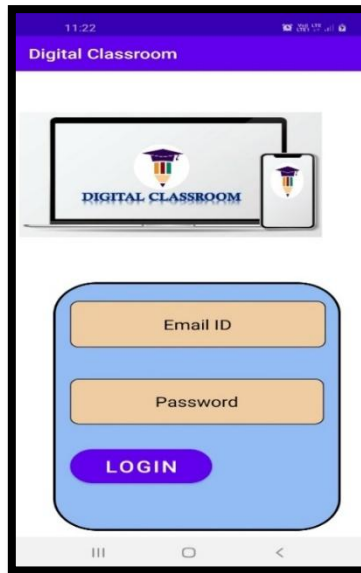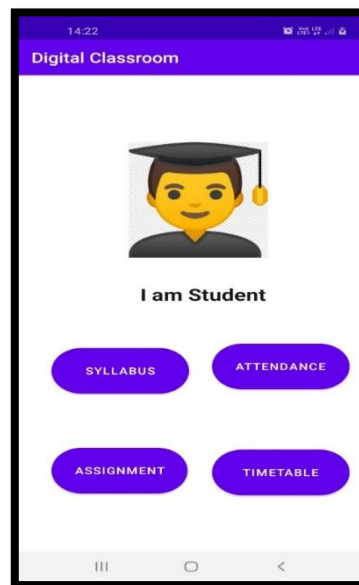
Fig.4.1: Registration Module.

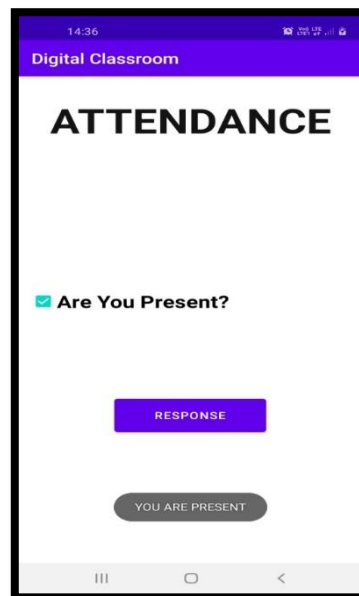**Fig.4.2:** User Login Module.

Fig.4.3: User Identification Module.

Fig.4.4: Teacher Module.

Fig.4.5: Student Module.

Fig.4.6: StudentAttendance Module

V.CONCLUSION

The application provides appropriate information to users according to the chosen service.The project is design keeping in view the day today problems faced by college.

Deployment of application will certainly help the college to reduce unnecessary wastage of time in personally going to each department for some information.

Digital Classroom is application developing for educational institutes that aims to take one step towards digitalization. The main purpose of application is to interaction between teacher and student.User can able to learn and teach from anywhere, anytime during situations like pandemic and disasters, etc.Step towards digitalization in education. User can use it free of cost.User can keep or get data at same place.The application includes Registration, Creation of Classroom, Adding participants, Scheduling timetable, attendance, notices and classwork.

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