

Android App Based Assignment & Notes Management System

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Abstract:

The reason behind this work is to design and develop a system for assignment and notes management that will stores assignment work and their solution and other course material from faculty to students. The requirements for this system are just a smartphone and internet. It is very difficult to manage paper-based assignment for most of the educators and institutions they work for, and maintaining the record related to an assignment. An effective system is discussed in this paper to solve the problem related to paper-based assignment management system.

The Android App Based Assignment and Notes Management System was implemented with Android Studio IDE in which XML is used for UI design, JAVA is used for logic and backend programming and Firebase is used for the database of system.

The main contribution of this work is to provide assignment and notes virtually with more reliable and efficient manner. Assignment and Notes Management system is an automated system that give power to educator to assign marks to students, and student can view the assigned marks also the lecturer can view marks of all students. This is important. In essence, the proposed system can be helpful for preventing data loss for assessment records in any institution, organization or establishment. Keywords: Assignment, Framework, Online Assignment Management System.

Keywords —Automation, Firebase, IDE- Integrated Development Environment, UI- User Interface, XML- Extensible Markup Language.

I. INTRODUCTION

In this revolution of the digital era it is very important and necessary to adopt current technologies to avoid some deficiency and complexity of fundamental system. It is essential to adopt new way of learning as well because the problem arises from manual system used by

colleges is that it has no proper record about the time or marks of student assignment. Some of the student submit their work after the final submission date. Some of the assignments can be lost by students as well as faculty and as we do not have any record about it. students have to write the assignment once again. As there is no record of assignment faculty would not able to check whether

the student have submitted the assignment or not. Notes are also most important resource for the student to gain the knowledge with more accuracy. Studying with the help of notes is the key to resolve the complexity during study of complicated subjects. This system keeps the record of notes which can be accessed any time anywhere.

The objective of this system is to develop a module to monitor and control the student's assignment as the following:

- a) To increase student and educator accessibility and availability for very important resources.
- b) To provide notes regularly.
- c) To provide feature of file-sharing (increase accessibility and availability of files) as well as reducing redundancy through online repository.
- d) To keep the record of results of students provided by faculties.

Thus, an online assignment and notes management system will be able to cater for a wide range of requirements either for students or educator.

II. LITERATURE REVIEW

An We have gone through many research papers and some existing system to find the best technique for Assignment and Notes Management system in terms of workability, availability and flexibility.

Tregbov(1998) divides the process of assignment management system into 4 phases: submission, record of assignment, marking and return. Assignment and Notes Management system involves the use of the Android App, the Internet and Smartphones to aid this process.

V. Ramnarain-Seetohul, J. Abdool Karim, A. Amir (2012), in their study they found that in traditional assignment submission system, lots of problems arise especially when the students have to submit the answers of the assignment to the lecturer. There may be problems due to distance, time, or format of the assignment (written or printed). Also every learning process requires administrative support. Much of this

administrative support is to some degree transparent but if the latter is not well organized it could disrupt the flow of learning between students and the staff.

Chi-Sang et al (1999) report a reduction in the assignment submission cycle from 2-3 weeks to 2-3 hours. The best result achieved through Assignment and Notes Management system at CQU resulted in the return of 72 assignments from students throughout Australia and SouthEast Asia within just over 3 days(1 working day).it.

Some existing systems :

A. Google Classroom

Google Classroom is an internet-based tool provided by Google as an e-learning system (Martínez-Monés et al., 2017). Google Classroom was designed to help teachers create and distribute tasks to the students in a digital way. Users of this system must have an account in Google. In addition, Google Classroom can only be accessed by institutions that have Google Application for Education. Google Classroom was used to provide features of the interaction of a professor or teacher with a student or students virtually (Liu & Chuang, 2016). Faculties can freely hand out study materials and provide assignments to the students (Wijaya, 2016). In addition, faculties can also open space for online discussion for students.

B. Blackboard Learning Management System

Blackboard learn is a virtual learning environment and learning management system developed by Blackboard Inc. in January 21, 1997 that gives access to online course materials, grades, and many other academic and functionalities. Some of the Blackboard learning and teaching functions are to deliver content management and sharing, communication and virtual collaboration which includes - online assessments, student progress tracking, assignment and grading management.

C. Edmodo Social Learning Platform

Edmodo Social Learning Platform. Online Education. Based in San Mateo, California (USA),

Edmodo was founded in 2008 by Nicolas Borg and Jeff O'Hara. As an online networking application for educators, students and parents, it is in a controlled environment appropriate for schools, colleges and universities. It is functional as a free-of-charge tool for communication with over 500,000 students worldwide.

III. METHODOLOGY

The Android App Based Assignment and Notes Management system was developed with the help of Android Studio IDE. In Android Studio XML is used for designing UI and JAVA is as logic and backend programming. Firebase is working as database for this system. The system is developed to facilitate the way of giving assignment to students by faculty and the which student reply the submitted assignment, Notes are uploaded by faculty so that student can access them easily. All the data uploaded by the teacher will be stored in Firebase database.

A. Main Modules of The System

There are two module proposed for this system which are as follows:

- 1) **Student:** This is the interface for students by which they will download the assignments, notes and results.
- 2) **Teacher:** This is the interface for teachers so that they can upload assignment and notes for students. They can also be able to assign marks to students rewarding the assignments they done.



Fig. 1 Home Menu of Application

B. Activities of The System

The other module of the system are:

- 1) **Register:** The teacher will have to register first by registering himself as teacher using register activity. His data will be stored in Firebase database Authentication if he registered successfully.
- 2) **Login:** The teacher can login into application by login activity using Email and Password. If he forgot the password then he can reset it by clicking forgot password.



Fig. 2 Teacher's Login and Register Activity

- 3) **Dashboard:** After login it will redirected to Teachers Dashboard where following options will be there:
 - a) **Teacher Profile** – Information about teacher.
 - b) **Update Notice** – Teachers can add or update notice.
 - c) **Upload Notes** – Option for Upload notes.

- d) **Give Assignment** – This option will be used for assigning the assignment and checking how much.
- e) **Syllabus**: This will be used for add and change syllabus.
- f) **Result**: used for assign and update result.
- g) **Edit Profile**: Teachers can update their profile by this option.
- h) **Logout**: Used for logout from the teacher dashboard.



Fig. 3 Teacher Dashboard

4) **Student Activity:**

Student activity has no more login activity it will directly redirected to Student Dashboard. Student Dashboard has following options:

- a) **Notes** – Students can see the notes uploaded by respective teacher.
- b) **Assignment** – Assignments can be accessed and submitted with this option by student.
- c) **Syllabus** – Syllabus uploaded by the teacher can be seen by this option.
- d) **Result** – Results will be available in this option after declared and uploaded by teacher.
- e) **Back** – This option is used for back to home page activity.

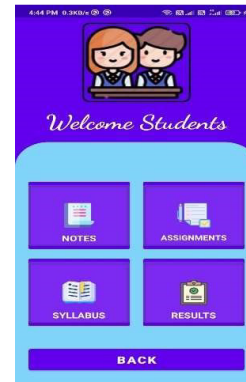


Fig. 4 Student Activity

C. **Data Flow Diagram for the system**

Design is the most basic unit when developing a system, it focusses on changing the ideal of the system into diagram by drawing.

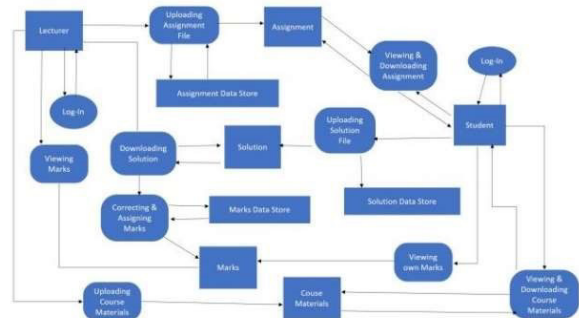


Fig. 5 Data Flow Diagram for the system

IV. **RESULTS**

The The system developed is a working prototype and this system able to give benefits to the students, lecturer and university as a whole. Below are several advantages that highlighted:

A. **Students**

- Convenient for students and teachers, using the online Assignment giving system is a lot easier to use since they can simply go online 24/7 without any time restriction.
- Timeline of the project is visible thus deadlines can be achieved on time.
- Cost saving, eliminates the unnecessary meeting and the cost of travel.

- Higher security and privacy.
- This is Android mobile based app so easy to use.

B. Teachers

- Convenient for faculties, using online student project management system teachers can simply monitor the progress of students.
- Reduce the effort of collection of assignment physically and make their job more convenient.
- As this system reduce the time hence, it will increase the teaching experience of teachers.

V. CONCLUSIONS & FUTURE WORK

The Android App Based Assignment and Notes Management System is a system that has been designed to fulfil the deficiency of old and manual assignment and notes management system. because it is a very difficult to get Information by online anytime anywhere. The project presented a workable prototype of an educational android app based application that is capable to track students assignments allow communication between student and educator and equip with study materials. The prototype was developed with XML for UI design, Java for logic design and Firebase for database.

Employing the conventional method of marking college assignments is no longer adequate in this age, given the technological, informational, and electronic advancement in various fields of life. Hence, it is necessary to move from the erstwhile old systems to new electronic systems that are more effective. In this case, the possibility of marking assignments electronically becomes real and available. The electronic marking of student assignments will save time, efforts and energy as well as expenses. It will also mean more accuracy and reliability for both the students and their instructors.

Future Work

Recommendation for Future Work Any academic research has shortcomings and

weaknesses that will be a research gap for the future researchers, therefore in our system has a number of future works for those who may conduct a similar study and it is a knowledge gap that needs to be achieved and they are as follows:

The points we are recommending to the developers behind us are

- The system has to give capability to lecturer that is to deny student or list of students not to send assignment because of punishment.
- The student could have a capability to send request (excuse) to the lecturer if he did not send the assignment and lecture can these request (excuses) and deal with it.
- Online Class Assignment.
- Group Assignment.
- Online Attendance taking feature.
- Online class through video calling.

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