Study-hub for CS Students

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Abstract: This system is an e-commerce platform, and it is an APP developed on the basis of Android. Android Studio and Google fire base authenticity are used as tools to develop.The APP design page is beautiful, friendly user interface, high user experience. Users can deal with their problems of hunting the books which are not readily available in book stores and are also cost effective .e-Learning is no longer a slogan but a way of teaching and learning that can be implemented since computers and internet are more and more universal. The traditional hand operated method of learning and accessing books from the library and bookstores. By using this app we can consume time, cost & labour.In this thesis, we have constructed a complete e-book solution as an application for teaching and learning. Meanwhile, this system allows the users fully to access ,read a variety of studying and teaching materials, such as syllabus , examination papers and books .This application can be accessed by anyone by just simple steps of login and few buttons.

Index Terms - **Android Studio,Google Firebase,e-Learning,Real-time Database**

I. INTRODUCTION

Study hub is a software that provides a one stop where they can access the best author's best work. Just by clicking few buttons one can dive into the stream of knowledge and learn the many aspects of Computer Science that the field has to offer. The Study hub application not only provides the raw information but also subject wise syllabus,quiz and video materials for all the 8 semesters of Computer Engineering Branch.

The application System for Study hub for computer Engineering is designed in response to the problems in the manual Store or library.At the present there is no system which provides free access to all the books easily . It is not possible for every student to buy the ref. books of each subjects per semester which costs more than 500 rs. per book.In today's world there is no literal free access to the books ,video material and quiz together which we want to study & even if a software does provide a way to access the study material it won't be free or it will be for a limited amount of time .Another thing,there are no tests available for every subjects,where after reading and learning the student can test himself to know how much he has understood.

Application Development is one of the most rising & promising arenas due to the increase in computation power and the never ending problems which lay the foundation for building the applications.In our application,there are reference book of subjects of respective semesters,subject wise quiz,video material as well as reference question papers. This is where the e-book application plays its role it not only gives free access to the reading material but also provides it with only one button click hence the time and labor of going to a store or a library and buying the book is saved.

II. EXISTING SYSTEM

In the existing systems, the purpose of the applications are singular & monotonous such as apps providing only books in the PDF format or else only Multiple Choice Questions (MCQ) to practice. The main issue here is the very nature of this concept is not much explored further neither the idea is broadened further inorder to aid students by minimising the efforts they need to go through. Hence by demonstrating our successful attempt to build an app that can be better and much more mass appealing.

III. PROPOSED SYSTEM

As shown in the below figure 3.1., user has to Register itself by entering the valid name,email-id, password to create an account. If he/she is already registered user then they can directly login. After login,they need to select their respective semester to further use the study material. After semester selection,they will be shown a drop down list,where they have to select - syllabus/subjects/question papers. If they select syllabus,they will see the Portable Document Format(PDF) of syllabus. If subjects then again three options will be given-video/ref.books/quiz. On selecting videos,they will be shown videos of important topics of the particular subject. On selection of books, PDF of ref.books will be shown. On selecting,quiz you will be given some MCQs to solve.
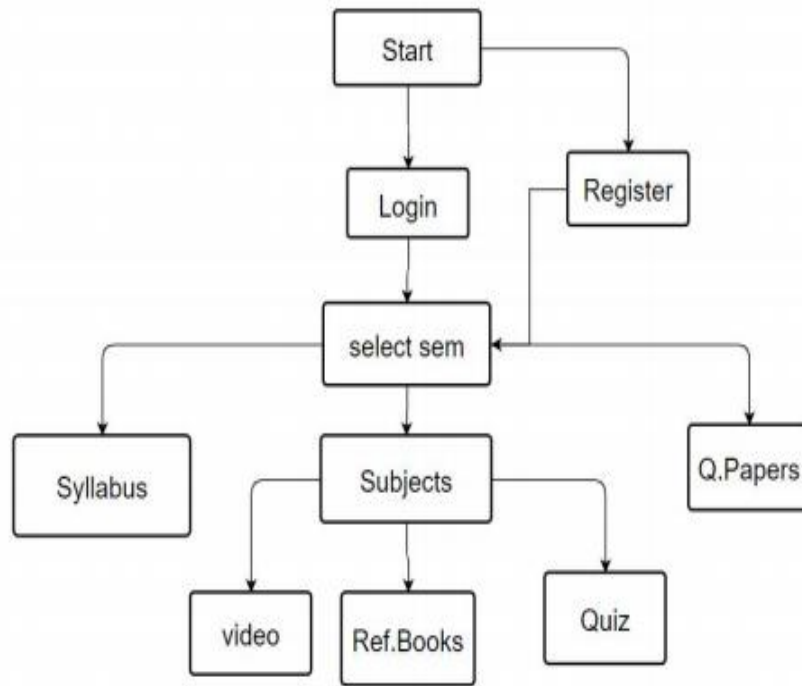
Figure 3.1. System Architecture

3.1.SYSTEM CONFIGURATION:REAL-TIME DATABASE

We planned to use Android Studio and Google firebase for the integration of ebook and quiz into the application.To store ebooks within the application we use Google's Realtime Database.The pdfs are loaded in the Real time database.Any changes made in the pdfs will be directly updated in the application if we make updates in real time database,hence no need to make changes everywhere in the applications.After logging ,when user selects its respective semester,if user chooses syllabus the pdf will be shown .Even for the subjective books the pdfs will be shown.This pdfs are loaded in the Real time database.
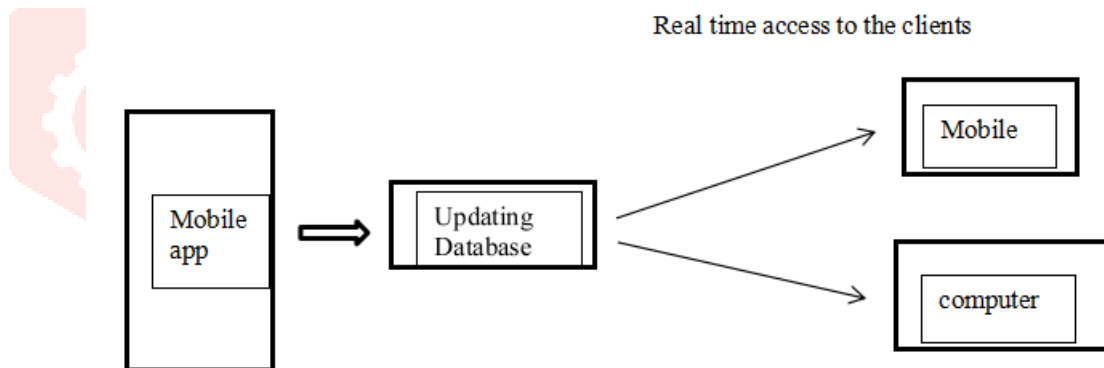

Figure 3.2. Real time database update process

Above figure 3.2 shows the process of updating any of the pdfs in database and the changes will be automatically done in the application.

The new user when register itself ,its credential details:-email address,password is saved in firebase.So,next time when the same user logins to the application the password is verified with the email address,if both of them are not same then error occurs.

IV.LITERATURE SURVEY

Anand Shanker Tewari and Kumari Priyanka developed a Book Recommendation System based on Collaborative Filtering and Association Rule Mining . Recommendation systems are tools in e-commerce websites which helps user to find the appropriate products. Collaborative filtering provides a way to do recommendation on the web and creates a database of preferences for items by users . Association rule mining discovers interesting association and correlation relationship among large data set of items. Purpose of this book recommendation system is to recommend books to the student according to their comfort price range and publishers. This recommendation system stores recommendation in student's web profile and works when user remains offline.

Yuan- Hsun Liao, Hsiao-Hui Li ,Ming-Hsiang Su and Pao-Ta Yu built an integrated system that allows the teacher to design teaching steps, record portfolios of students, and assign homework exercises into an e-book project. The teacher can teach the e-book project and record the handwriting steps at the same time, and then upload to Cloud Bookcase. The students can also download the e-book projects from Cloud Bookcase and then read them. They designed four major parts for Cute Page Write system and five major parts for Cloud Bookcase system.

Zhenhai Mu and Lizhen Jiang created an Online Bookstore Management System based on Android Studio and CLOUD Service Bmob. The system is divided into two modules-foreground and background: foreground is for book buyers, and the background is for bookstore administrators. The APP is divided into two main structures: Bookstore users buy books, bookstore managers manage books and orders. The database uses the cloud service platform Bmob . To achieve the development of this APP, the use of IDE is Android Studio, the language is a powerful Java, the edition of JDK1.8, the database is a convenient, powerful Android to develop third party back end cloud service Bmob.

V.RESULTS

Once the application is installed,user will see the splash screen for 2-3 seconds as shown in figure 5.1.

Figure. 5.1: Splash screen   Figure. 5.2: Registration Screen
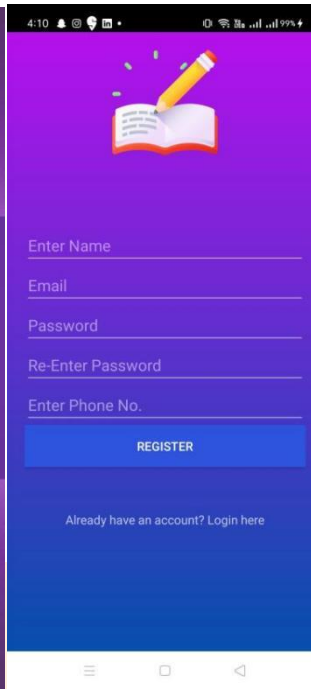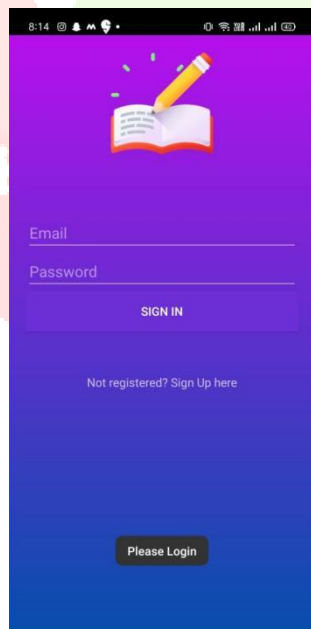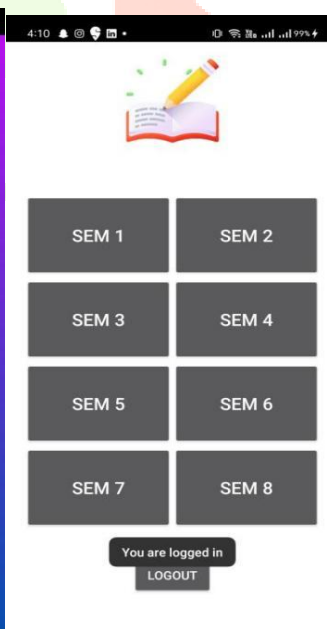

Figure. 5.3: Login screen   Figure. 5.4: Semester Screen

If the user is an existing user ,he can directly login to the application and after logging in there will be displayed blocks from semester 1 to semester 8,as shown in figure 5.3 and 5.4.

Figure 5.5 shows syllabus,question papers and subjects of respective semester,on clicking syllabus the pdf of syllabus is shown as shown in figure 5.6.
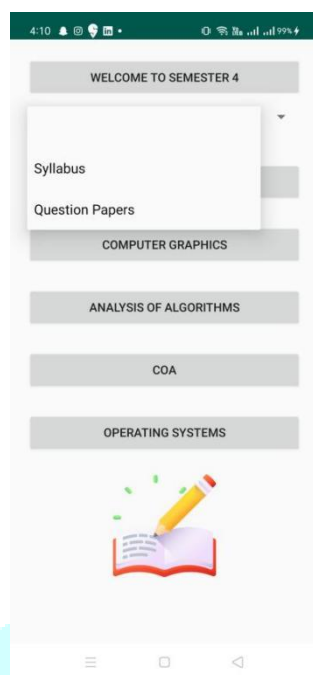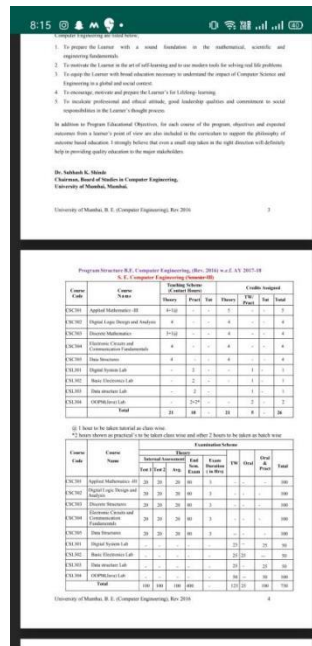

Figure 5.5: Subjects screen   Figure 5.6: Syllabus Screen

Figure 5.7 shows the three options of each subject-pdf,video and quiz,and on selecting any subject the book's pdf is displayed as shown in figure 5.8.
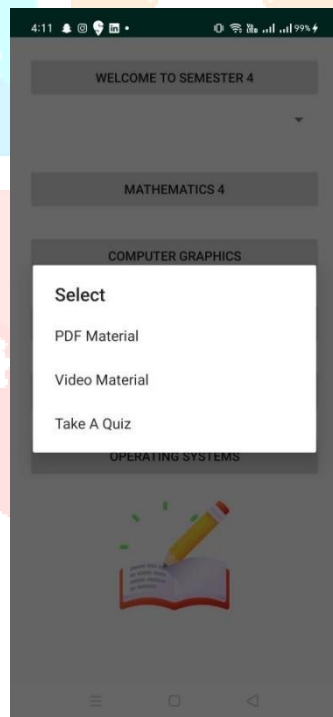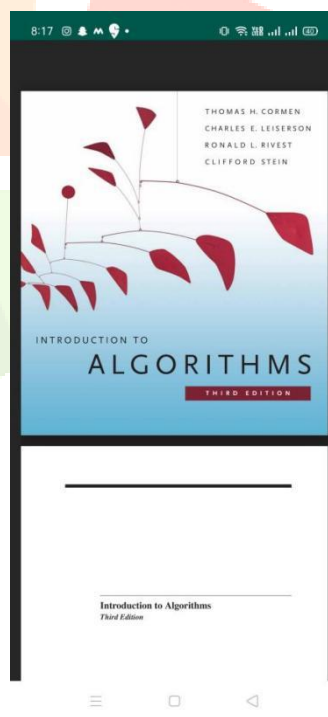

Figure 5.7: Features' screen   Figure 5.8: Book pdf screen

After clicking one of the four options as shown in fig.4.9 if the ans is wrong ,a small toast message will be displayed which will show the correct ans.Otherwise,toast message of "correct" will be shown.While solving each question and clicking one of the option ,we can know whether we are right or wrong.The user can click finish test button when he/she wants to leave the quiz.A dialogue box will be shown ,where after clicking "Yes" the user will be out of the quiz screen and redirected to subjects screen.
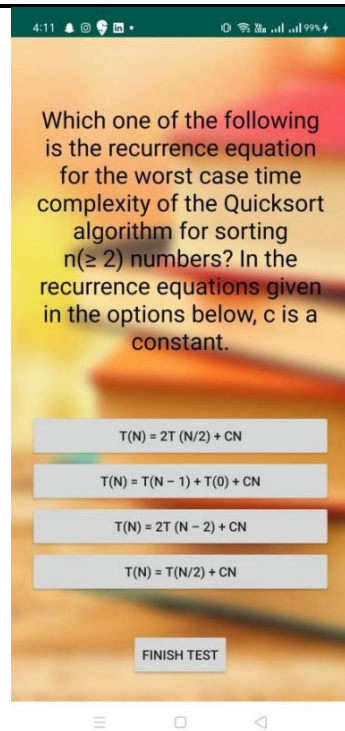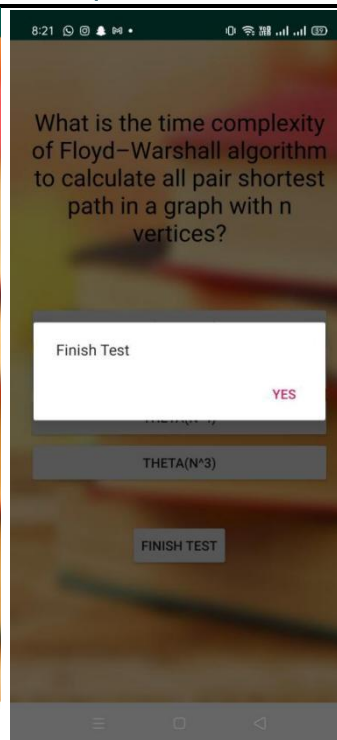
Fig 4.9: Quiz screen   Fig 4.10: Finish screen

VI.CONCLUSION

The main job of this application is to help students acquire knowledge at free of cost and at moment's access.In a nutshell, we are providing everything a student asks for through this app from books & reference papers to syllabus, video materials & quizzes. Through this system we are taking difficulties such as the unavailability of the books & being less cost efficient head on.

VII.FUTURE SCOPE

In future, we believe this attempt of ours to amalgamate all the amenities a student desires for in one single application will further be expanded with more and more developers predisposing towards this idea. By not only adding much more features but by also enhancing the user interface, making it much more easier to use hence alluring a broader group of people from all walks of life depending upon the very nature of applications. We are also very determined that similar nature of applications would be used in various fields of all encompassing educational institutes to help shape a prospective future.

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