

Android Based E-Learning Application design Features for academic and non-academic students

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Abstract

The popularity of smart mobile devices is growing fast in E-Learning Application. This Application is to help the students in Academic and Non-Academic. With this Academic Application, student could learn at his or her own pace, anywhere and anytime. Presently there are many websites and Applications available for Academic materials. But there is no application or website that provide Academic and Non-Academic materials in one platform. So this paper details on development of an E-learning Academic Application, which is user friendly for students and also helps the students to get study materials related to University and Competitive exams materials. This application also provides solved question papers for UG and PG degree and Competitive exams in a single platform. This paper presents the design and development of E-learning Academic Application on Android Platform using java Programming Language. In Android studio XML is used for user interface and SQL server is as a backend server that helps us to build the application.

Keywords: E-learning, Academic and Non-Academic, Mobile device, Android Studio, SQL server.

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I. INTRODUCTION

The education system is more advanced and dynamic. Mobile learning, the use of the handy electronic device to approach and share information. Education system using android app is the new trend in Education system. In e smart phone a variety of educational apps which can teach us academic and non-academic related subjects anytime anywhere. These educational apps proceed as a considerable asset to ones learning as they create a blend of innovation and primary learning.

This paper presents the Mobile Learning Application and its usage among Students in educational subjects and also professionals to take non-academic courses. The main ambition of this work is to develop an app which is compatible for all mobile operating system and also develop an user interface which is simple and userfriendly to use for novice users.

This application consisting of three modules namely admin, lecturer and students. Admin is the super user of this application and can manage the whole application. He can login to the website and can have the option to add the academic and non-academic categories and add all the subject categories and subject names related to the main category. Admin have the option to approve the lecturers who have registered to the application. Lecturer is another module of this application, they can have the android app for their use. They can have the option to add the materials like notes, question papers along with the solved question papers. Students can create the username and password while registering to the app. Students have the option to view all the materials uploaded by the lecturers. They can have the option to give comments and feedback about the materials here.

II LITERATURE SURVEY

Due to the rapid growth of technology, universities around the world are investing heavily in e-learning system to support their traditional and improve their students learning experience and performance [1]. The application of mobile learning can be used through the android operating system that is chosen in consideration to that Android has been dominating the smartphone market and is an open source operating system that is easily developed [2]. Emerging digital technologies and increasing interest in the computerised delivery of higher education have led to e-learning through the internet [3]. This mobile learning application intends to supplement the current traditional e-learning system. It makes learners at any time at any place they want to get the knowledge without having internet in their android mobile device [4].

III. OVERVIEW OF THE E-LEARNING ACADEMIC APPLICATION

Our application can be installed only on android platform phones. This application consists of the real time

e-learning that provide a reliable mobile learning application. This app is used online. It means need to have Internet connectivity to use this app. This application basically consist of four parts first part has Notification of Academic and Non-Academic materials, Second part is Academic and Non-Academic related YouTube videos, and third part is library it contains materials related to Academic and Non-Academic. Fourth part students can give the feedback to the Application and materials. The application we have developed is to reduce some drawbacks of the existing system. This application is basically based on the Android smart phone. From the literature survey on the growth of mobile phones, it shows that this application has a wider scope area. The Application provides the reliable and convenient way for the mobile learning.

3.1 Android Studio IDE

Android Studio Integrated Development Environment (IDE), which also includes the Android Software Development Kit (SDK). Android Studio IDE includes tool windows, the code editor, the Designer tool, cloud-base file storage and Integrated Firebase-Real-time Database. In addition, it also includes Google Play specific topics such as implementing maps using the Google Maps Android API, in-app billing and submitting apps to the Google Play Developer Console. Advanced features of Android Studio such as Gradle build configuration and the implementation of build variants to target multiple Android device types from a single project code base.

3.2 Java

Java is an object oriented, multithreaded programming language develop by Sun Microsystems in 1991. It is designed to be small, simple and portable across different platforms as well as operating system. The Popularity of Java is due to its unique technology that is designed on the basis of three key elements. They are usage of applets, powerful programming language constructs and a rich set of significant object classes. When a Java Program is compiled, it is translated into machine code or processor an instruction that is specific of the processor. In the Java development environment there are two parts: a Java Compiler and a Java Interpreter. The Compiler generates byte code (a set of instruction that resemble machine code but are not specific to any processor) instead of machine code and the interpreter executes the java program. In this research, Java is used to perform the server side/back-end operations.

3.3 XML

XML (Extensible Markup Language) is a buzzword you will see everywhere on the Internet, but it's also a rapidly maturing technology with powerful real-world applications, particularly for the management, display, and organization of data. XML is an essential technology for anyone working with data, whether publicly on the web or privately within your own organization. In this work, XML is used to design user-interface which is user friendly and easy for novice.

3.4 MS SQL Server

MS SQL server is a data base server it is help to mobile and web application development and that helps us to build, improve and grow your app. Using SQL Server we can save and retrieve the data by connecting to the Server. SQL is back end server it is store and maintains all real time data in the table format. By using this SQL Server can retrieve the stored data and files by connecting to the server using password and database name.

IV. SYSTEM DESIGN

4.1. Existing System

Presently many numbers of android apps are obtained in the play store for the use of the users with number of materials regarding to the studies, but students still are in confusion to find their syllabus and related material in one platform. Also it is difficult to get the corresponding subjects solved question papers in a user friendly manner. To overcome all these difficulties a new app is developed which is try to minimise the difficulties faced in the existing apps.

4.2 Proposed system

To overcome difficulties faced in the existing apps, this paper explains the new app which is designed using android for the use of the lecturers and students. This app provides the lecturers to upload the academic and non-academic materials in one platform. Lecturers can upload their subject materials along with the solved question paper also. This can helps the students to view the notes and solved papers in one application easily

anywhere, anytime. This can help the students to get both the academic and non-academic materials with respect to their university materials. In this way this app is more useful for both Lecturers and students. The proposed system is depicted in the figure 1.

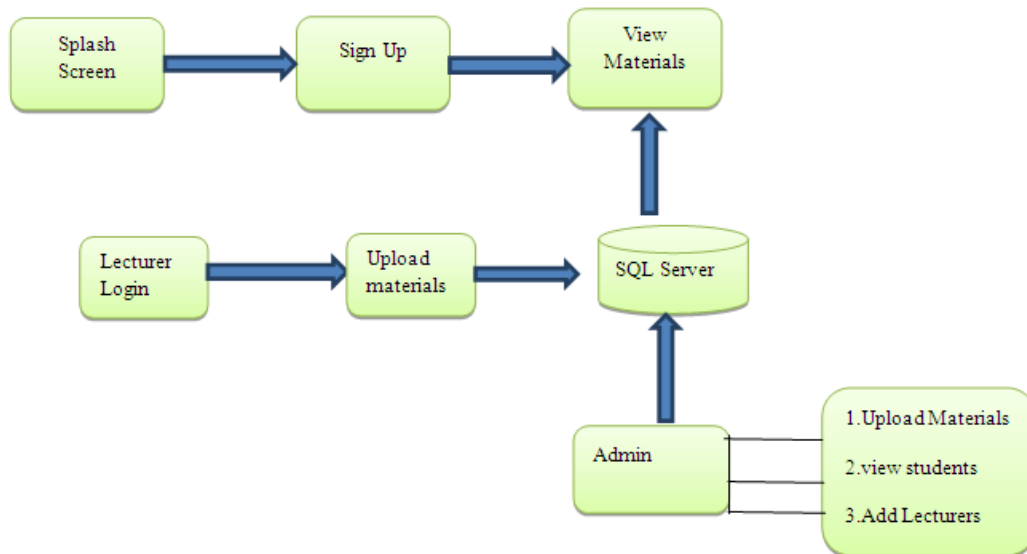


Figure 1: Proposed System

V. CONCLUSION

This Paper elaborates the use of the newly designed E-Learning app. This E-Learning Academic Application is a user friendly for the students and also for Lecturers. This application provides more facilities to students regarding study materials of any universities. And also this app provides Academic courses, class wise materials; Competitive exam materials and also solved question papers are available in a single platform. Student can easily view University study materials and non-academic study materials. This app also provides space for feedback and comments about the study materials and also usage of this app.

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