

Docs Point: A-Z Study Material Platform

G. PAVANI REDDY¹, K. SAI KIRAN², M. GOUTHAM³, M.D.N. AKASH⁴

^{1, 2, 3, 4} Student, Vardhaman College of Engineering, Hyderabad, India

Abstract- *E-Learning is gaining popularity through smartphones. With the increasing popularity, many applications related to studies are being developed continuously. The release of mobile application services compatible with Internet browsing with mobile devices allows users to search for desired information quickly. Therefore, learning is no longer permitted in the classroom and time frame. In our proposed system, the students can access the materials related to their particular courses or related to higher studies. Using this, students have easy access to study materials, access to raise a request for new materials. Understanding the concepts is a major concern for students, for this Student library application helps them to get new materials and all study resources.*

Indexed Terms- *Java, Object Oriented Programming, Android Studio, XML, SQLite, Study Material.*

I. INTRODUCTION

The use of computing technology for learning has been observed in various ways. In the past few decades, electronic learning or e-learning had been adopted and used by public schools and university students in many parts of the world. They were familiar with both the e-learning terminology and technology but in recent years, the rapid progress in mobile technology has created a new area which is known as a mobile learning technology. Mobile learning is the next generation of E-learning that is based on mobile devices (Sharples, M.,2005). Wireless technologies such as IEEE 802.11, Bluetooth, and GPRS are used in a project for the development of informal classroom and school bag systems at Aletheia University in Taiwan (Chang C., Sheu J., 2007). Android phones are now becoming handiness to many and many people with the advance of electronics and communication technology. They are getting wide acceptability because of their utilized cordial applications. With the advent of the android

operating system, lives have become smoother and to a great extent comfortable. You can get the latest android apps for almost each and every need today. Mobile software serves individual functionality of the users able by Android platform is called Android applications, generally known as "apps". Recently there have been lots of attempts to design android apps that come in the aid of students and teachers like taking attendance of students using a mobile phone, virtualized lab infrastructure for different computation and engineering courses, practicing and learning software development through the virtual world, etc.

During the semester exams, many of the students who do not maintain any notes or the students who may have missed some important topics are in a need of proper Documented notes, which would help them to understand the concepts easily in a very less time, in order to fulfil this, need we have decided to create an application which would consist of best learning material which was prepared according to the syllabus, collected from the course lead. In order to develop this app, we have used android studio software and applied the knowledge of java programming. According to the suggestions received we have also decided to add study materials related to higher studies and many of the students aim to pursue GATE, GRE, etc. Android application is software designed to run on any android device. This android app can be written in various programming languages like Java, Kotlin, C++, etc. Android studio is the integrated development environment for Google's Android operating system designed for Android development. Android Studio provides a unified environment where one can build applications for android phones, tablets, android wear, Android TV, etc.

II. LITERATURE SERVEY

Niveditha, V.R.Anantham, T. V(2009) - The paper gives brief information on Android Operating System which is widely used in this world. It explains different security frameworks and safety at distinct levels,

Improved user experience, and also grants permission to the application whenever required. It explains fully Android Application Development [1].

Jia-Wen Xie (2018) - Most teachers nowadays use a range of resources in the classroom to make teaching more engaging. As a result, in addition to listening to lectures, students can use images, audio recordings, and the Internet to help them with their studies. However, because educational materials come in a variety of formats, taking notes is more difficult than in a traditional classroom. As a result, this study created the "GoNote" note-taking app to address this issue and assist students in improving their learning efficacy [2].

Shrawan Kumar Sharma (2018) - As Technology changed our daily routine and lifestyle. So, in today's world, everyone has a smartphone, so students need a mobile app that can have all examination notes, lab records, and Placement Training content [3].

D.T N. Truong (2019) - According to the author There was no app linked to negotiation education in the Vietnamese language on the Google Play Store, according to the results. The ability to customize educational apps, including the levels of complexity, was missing. The authors believe that by filling the aforementioned deficiencies, curriculum designers and engineers can improve negotiation training apps for smartphones [4].

R Sangadikar (2017) – This paper tells of recent upgrades in Android Applications based on Academics which are very useful for students, parents, and mentors. Students get their daily attendance. Parents can track the attendance and digital progress reports. All this data will be stored in the college Server [5].

Jeanne Lam (2015) – This paper tells that As Usage of Smartphones and increasing m-Learning Students Developing web and smartphone interfaces in Higher education this paper gives awareness of m-learning and future scope [6].

Yen-Hung Kuo(2014) – This paper talks about the Mobile Library app. Which are all the resources available in it. Students no need to visit and waste the

time searching for books. As students have mobile phones with good internet access, they can access the resources and learn wherever they want [7].

Jui-Le Chen (2020) – This paper describes the need for learning mobile app development and encourages students to make mobile apps based on real-time problems [8].

Mahesh K. Banavar (2018) – This paper gets an awareness among Engineering graduates and professors about how essential it is to learn Mobile App development in today's world. Making an interactive app including practice sessions with new outcomes [9].

M. Sharmila Begum (2016) - This paper describes an application that assists students in higher secondary school with their careers. It increases student availability and accessibility of courses, degrees, entrance examinations, eligibility criteria, and institutions [10].

Hardika Dwi Hermawan(2018) – This paper talks about This research focus on the utilization of adaptive learning in the nearby intelligence app that is currently being made; nearby intelligence is a mobile learning solution that allows self-directed learning, collaborative learning, interactivity, and adaptive learning among many other things [11].

Hadeel Mohammed Jawad (2019) - This paper presents the findings of an experiment that evaluated the impact of Android mobile development on students' interest in programming and their desire to pursue computer science degrees. It also tries to figure out if there's a link between Play Store app sharing and students' enthusiasm in mobile development. The study found that building Mobile applications might increase learners' interest in programming [12].

III. PROPOSED APPROACH

We have proposed this application mainly for the sake of students. This application consists of students' study materials, placement materials, and higher education materials like GRE, GATE, etc. For example, at the time of examinations, every student finds it difficult to get all the related course materials, this difficulty is

faced mainly by the students who do not maintain any running notes or may be absent for a long time, etc. and this application also consists of Higher Education related material which will be helpful for many students who aspire to pursue further education. This application also includes a course-related syllabus which would always be helpful for students during their semester exams. Therefore, this application is useful for all students for preparation for their exams. As technology changed, everyone is using smartphones, as these are portable, they can be carried anywhere, and it is also easy to access study materials from anywhere and at any time according to their convenience and requirement, and because of the presence of audio recordings, students can listen to lessons any number of times [2][3]. Here users can only access the resources. All the updates like uploading of resources/ or updating the features or interface are done by the admin. If the user wants any material related to a particular course or related to competitive exams, they have the access to raise a request. To raise a request the user needs to navigate to the request page and must fill it with some description regarding required material like book name, domain in which materials should be shared, etc.

This application also enables the user to download the related material for their future reference, which would also be helpful for students when they are offline. Users can only view or download the materials from the application as we use the best searching techniques to sort the Materials according to the user's like and other ratings and priorities. Application is divided based on the academics, labs, and competitive exams. Users can always use the help comment to post their problems. It expands the range of programs, degrees, entrance examinations, eligibility requirements, and institutions provided to learners [10]. Admin will post all the materials and they are stored in the database so that users can access them. Students do not need to travel and waste time looking for books. Students may access information and learn wherever they wish because they have mobile phones with good internet connectivity [11]. Docs Point helps various students and faculty to find the resources and acts as a mobile Library in their pockets.

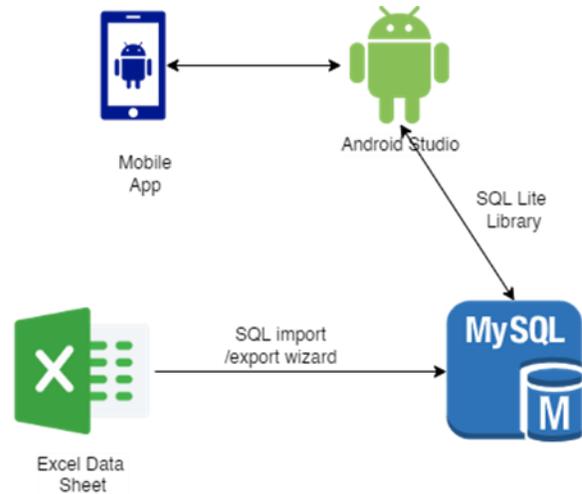


Fig 1: General Process Flow for the Proposed Approach

IV. EXPERIMENTAL SETUP

The process of developing apps for Android devices is known as Android software development. Using the Android software development kit (SDK), Google claims that "Android apps can be created in Kotlin, Java, and C++ languages," however other languages are also supported. All non-Java virtual machine (JVM) languages, including Go, JavaScript, C, C++, and assembly, require JVM language code, which can be provided by tools with limited API support. Cross-platform compatibility is possible with several programming languages and tools (i.e., for both Android and iOS). Since the first SDK was released in 2008, third-party tools, development environments, and language support have all evolved and grown [13]. "Mobile Library APP System" was used to assess usage and satisfaction. The results of the experiment revealed a positive correlation between students' satisfaction with the "Mobile Library APP System," indicating that the system could certainly assist them in improving their work efficiency, such as reducing the time spent searching for books and lowering the cost of obtaining electrical resources [7]. The user can access all the library notes and all resources which are helpful for them during their semester exams. This would also help them to understand the concepts easily in very little time, to fulfill this need we have decided to create an application using android studio by using knowledge of java programming, which would consist of the best learning material which was prepared

according to the syllabus, collected from the respective course leads. The Docs Point Application uses various resources that are uploaded by Authorized users and their indexes are stored in the Database and simultaneously update Excel Sheet data and this can be further used for storage Analysis. Because the system can adjust to diverse learning capabilities and characteristics of learners, adaptive mobile learning is a critical platform in helping students understand the lesson. This study focuses on the usage of adaptive learning in the nearby wisdom app that is currently being developed; nearby wisdom is a mobile learning platform that supports self-directed learning, collaborative learning, gamification, and adaptive learning among other things [11]. As this app is mainly for the sake of students, surveys help us in gathering opinions, suggestions, and their views on the app. This mainly encourages us in developing new features and including them in the application. By Clicking on specific resources users can read and download. We are releasing new versions of this app with different features by making simple surveys among college students.

V. RESULTS AND DISCUSSION

Docs Point is a free app that can be downloaded and used on the internet. Docs Point focuses on supplying study materials and employing cryptographic ways to keep user information secure. This app is primarily designed for students, instructors, and those preparing for competitive exams. Docs Point allows users to request resources in the supplied part, which can be kept private or public depending on the user's preference, however, the resources are maintained available for the benefit of students. The App is more user-interactive since it connects the administrator and the user for feedback on user requirements, which helps both the user and the administrator enhance the current system. Docs Point is a rapid search feature that allows you to find the best-sorted materials based on other user reviews. Aptitude materials and placement training notes are also included in the app. We upgraded both the user interface and the user experience, and we tried to make the user interface as simple as possible for everyone to grasp. Users can download or bookmark materials with the app, allowing them to return to the page they were on earlier. The app keeps a database with all the user's

information so that we may give them updates on new resources and other crucial e-mails. We also do a storage study to see how much space we'll need in the future. The app is always being updated with new features and information for users to ensure that we do not lose touch with our community. We listen to user comments and add new semester materials and lab records for future references and studies. We've observed that app traffic increases during the examination period, therefore we maintain the app updated according to user feedback and requirements. Unless the user has decent internet connectivity, the app responds quickly and without latency.

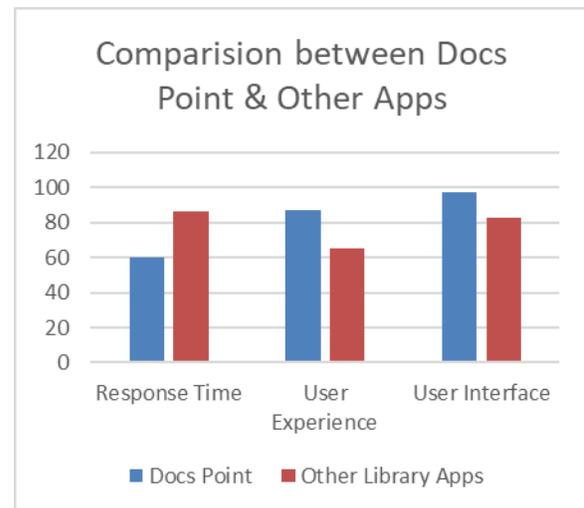


Fig 2: Comparison between Docs Point and other Apps

CONCLUSION

The Docs Point application is free and open-source and designed for students to take notes and materials more efficiently. The students can download the materials. The more times a student studies a note, the better he or she understands it. This application is useful to the students who desire to achieve their dreams and goals can be easily achieved.

REFERENCES

- [1] Niveditha, V.R., and Ananthan, T.V., 2019. Improving Acknowledgement in Android Application. *Journal of Computational and Theoretical Nanoscience*, 16(5-6), pp.2104-2107.

- [2] Li, I.H., Wu, P.J., Lin, Y.L., Xu, H.L. and Xie, J.W., 2018, April. "GoNote": An aided learning note APP. In 2018 IEEE International Conference on Applied System Invention (ICASI) (pp. 550-553). IEEE.
- [3] Kumar, S., Kumar Sharma, S. and Dagwar, D., 2018, February. Android Based College Campus App. In 2018 Second International Conference on Computing Methodologies and Communication (ICCMC) (pp. 328-333). IEEE.
- [4] Nguyen, T.Q., Dang, T.N., Hoang, C.L., Truong, D.N. and Nguyen, V.A., 2019, May. Educational Mobile Apps for Negotiation: Evaluation and Design Criteria for Curriculum Designers and Developers. In 2019 IEEE Canadian Conference of Electrical and Computer Engineering (CCECE) (pp. 1-4). IEEE.
- [5] Sangadikar, R., Aote, N., Kokate, M., Patil, S. and Waghmare, A., 2017, October. Recent trends in Android Application for Academic Tracking. In 2017 2nd International Conference on Communication and Electronics Systems (ICCES) (pp. 208-211). IEEE.
- [6] P. Hung, J. Lam, C. Wong, and T. Chan, "A Study on Using Learning Management System with Mobile App," 2015 International Symposium on Educational Technology (ISET), 2015, pp. 168-172.
- [7] Chiu, P.S., Pu, Y.H., Chen, T.S., Kuo, Y.H. and Huang, Y.M., 2014, October. Design and development of a mobile library APP system. In 2014 International Conference of Educational Innovation through Technology (pp. 43-48). IEEE.
- [8] Chen, F., Chen, J.L. and Tseng, S.P., 2020, December. Design of a problem-based curriculum: A constructive approach for Mobile APP Learning. In 2020 8th International Conference on Orange Technology (ICOT) (pp. 1-3). IEEE.
- [9] S. Rivera, M. K. Banavar and D. Barry, "Mobile apps for Incorporating Science and Engineering Practices in K-12 STEM Labs," 2018 IEEE Frontiers in Education Conference (FIE), 2018, pp. 1-5
- [10] M. S. Begum, P. Aruna, and N. Vetrivelan, "STEP — A career zone Android APP for higher secondary education," 2016 International Conference on Emerging Trends in Engineering, Technology and Science (ICETETS), 2016, pp. 1-2.
- [11] Hermawan, H.D., Wardani, R., Chu, J., Darmawati, A. and Yarmatov, M., 2018, August. Adaptive Mobile Learning in the Nearby Wisdom App. In 2018 International Seminar on Intelligent Technology and Its Applications (ISITIA) (pp. 221-225). IEEE.
- [12] Jawad, H.M., 2019, May. Android Mobile App Development as a Motivation towards Computer Programming. In 2019 IEEE International Conference on Electro Information Technology (EIT) (pp. 169-175). IEEE.
- [13] Anjali, Pudiyadatha, Nunnabhatla Harshita, M. D. N. Akash, Patlolla Vinith, and GS Prasada Reddy. "VMATE–Intelligent E-Learning Management System for Educational Institutions." In *IOP Conference Series: Materials Science and Engineering*, vol. 1042, no. 1, p. 012011. IOP Publishing, 2021.