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Mobile Application for University Library Management System

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Abstract

Library is a place where there is a large collection of reading materials are available for reference. It provides enormous support to all kinds of knowledge seekers for a range of purposes. However, with the introduction of new technology, behavior of academics and students' life style has changed. They tend to seek knowledge on mobile devices and computers rather than physically visiting libraries to refer materials which they found convenient and more over it saves their time. Statistics show that smart phones were owned by more than 80% of the student population. With advancements in technology and the rise in smart phone usage, people are taking advantage of being connected to data wherever they are. Mobile phones aren't just phones anymore: they can be used to access e-mail, search the web, video chat, play games and many more services. Even mobile devices like iPad and iPod touch can bring social media, productivity tools, and entertainment literally into the palm of your hand.

It is important that libraries adapt their services to this new technological environment expanding their services to the students and all categories of staff members, 24 hours throughout the year. The purpose of this paper is to present the university library's experiences of adopting mobile services and explain how libraries can play a leading role by providing support to the university community.

Applying mobile applications for library management system is increasingly important as libraries compete in the always changing technological world. Hence, the purpose of this paper is to carry out a case study in order to better understand the possibilities of using a mobile application in the process of library management system, and this application is based on Android platform. After identifying and analyzing the needs of library staff, academics and students developed a mobile app which could be followed by the other universities. This illustrates how library services can be adapted to the mobile environment and how the library can play a role in broader campus mobile initiatives. The main purpose of the system is to make the library in the user's palm.

In this application modules of the system capture user data and various databases. The mobile application development used here is Java standard language for Android application development within the Android Studio and used MySQL, for backend development. Since all these technologies are open source which enabled to complete the project with minimum cost.

This mobile application has many features which are generally not found in contemporary library management systems. For example, this app enables to track book location and reservation before going to library. It has a facility for system administrators to login through which he/she can monitor the whole system. It also has a facility for students to log into their account and check the list of books that has been issued to them. Further this enables them to check the issue date, due date and any due fines. All these services are available at their fingertips. The Mobile app enhances its services to the library staff enabling them to add, remove and edit books as well as members and their details. It allows the library staff to provide their services at any time anywhere. This will enable the work flexibility.

With the rapid development of internet technology and the gradually accelerating rate of information technology, most of the library functions were enabled in the web based environment. However to

facilitate that, users need to have computers and internet facilities. Unfortunately, most of the undergraduates in the state universities do not possess computers or laptops. Therefore, the web based library access is not that popular; however, the mobile technologies in the smartphone surpass such barriers. The most surprising and encouraging reality is that almost 80% of our undergraduates possess smart phones or even those who do not have could easily afford to have one. This mobile application is being developed to help the students as well as the library staff to maintain the library in the best way possible. Also this new mobile app will reduce the human efforts to increase the efficiency in library activities. All libraries will be interested in exploring the library services that are developed and adapted for mobile devices of particular interest. Eventually, academic libraries will be the place which creates collaborative relationships with other academic departments to provide services to students. Once this service is set up, it will create a conducive environment for student centered learning activities, where the higher education teaching methods encourage, over to use teacher centered learning. Finally, the results of the study will illustrate how library services can be adapted to the mobile environment and how the libraries can play a significant role in broader campus mobile initiatives.

Keywords: Library, Management Information System, Tracking, Mobile application.