

E-Sara Android Application

J.SangeethaPriya¹, B.Nihitha^{2,3}, M.Raziya Rizwana³

^{1,2,3} Department of Information Technology

^{1,2,3} Saranathan College of Engineering, Trichy 620002, TamilNadu, India

Abstract- Nowadays mobile application plays an important role in the digital field, because it's faster, looks better and the navigation is easier compared to website. And one more thing is that the mobile application consumes less internet data than using the websites and obviously it is cost effective. We are spending lots of time online in mobile than with any other media. So this thought made us to develop an android application. E-sara is an android application that can be accessed by the students and staffs with proper login credentials. Using this application the students stay updated regarding the information related to the college with the help of their android smartphones. The information may include their academic details, placement details and so on are readily provided to the user. They are also provided a space to express their talents which can be viewed by all. The staffs can also make use of this application to know the information provided with the help of the proper login credentials. Priority is given to the admin, who post the information on to the database and that will be notified to the other remaining users. This E-Sara application is more convenient and saves time for the users when compared to the traditional way of accessing web pages through the web browser.

Keywords- E-Sara, database, login credentials, details, Android, notification, application, college.

I. INTRODUCTION

Nowadays, Due to the rapid advancements in technology all the information are available one hand in the form of smartphones. Instead of using traditional form (i.e websites) for communication, newer form such as mobile technology can be used for quicker and easier access. This had led to the evolution of mobile applications. The mobile applications are initially offered for general productivity and information retrieval. However public demands and the availability of developer drove rapid expansion to other categories which inturn leads to the creation of wide range of application. Mobile applications are playing an ever increasing role in today's digital world. In a real world scenario such as college campus, information is provided in the form of notices, handwritten manuals, oral communication and through websites. So to provide all this information at ease, this application is developed wherein users can access any

information regarding college using their android enabled mobiles [3]. Thus E-sara is an android based mobile application which is developed to provide information regarding department wise student details like their profiles, marks, attendance and other general college details like training and placement, recent updates and so on. The users may also get the notifications on any recent updates and extension of the library due date without getting into the application. This makes their work more easier. So the students need not line up in front of the notice board or login on to the college websites for any details. This mobile application leads to the SMART connection between the client and the server [1]. SMART refers to

- 1) Secure: Only the user who have the proper login credentials can access the application. The unauthorized persons are not allowed to enter into the application.
- 2) Mobile: In spite of getting into the websites to know about the particular information the user can access the data at anytime and anywhere in an easier way using this android application.
- 3) Android application: This application has been developed using android studio which gives user an interactive GUI.
- 4) Response: Once the user login into the application he/she can get the required details in an instant manner. And also they are provided with notification even they are offline to the application.
- 5) Trustworthy: It provides the accurate and correct information and the authorized user data cannot be changed by unauthorized one.

ANDROID

Android is a mobile operating system developed by Google, based on the Linux Kernel and designed primarily for touchscreen mobile devices such as smartphones and tablets. Android user interface is mainly based on direct manipulation , using touch gestures that loosely correspond to the real-world actions, such as swiping, tapping and pinching, to manipulate on-screen objects, along with the virtual keyboard for text input.

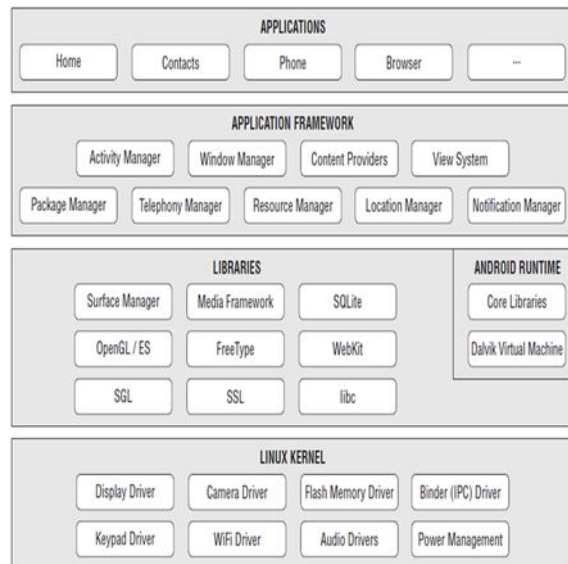


Figure 1. Android Architecture

In addition to touchscreen devices, Google has further developed Android TV for televisions, Android wear for watches, each with a specialized user interface. It is also used in other electronic gadgets too. Android has the largest installed base of all operating systems of any kind. Android has been the best-selling OS on tablets since 2013, and on smartphones it is dominant by any metric. Initially it was developed by Android, Inc., which Google bought in 2005. Professional developers see android as their priority target platform, which is comparable to Apple's iOS. Android's source code is released by Google under an open source license, although most Android devices ultimately ship with a combination of free and open source and proprietary software, including proprietary software required for accessing Google services. Android is popular with technology companies that require a readymade, low-cost and customizable operating system for high tech devices. Its open nature has encouraged a large community of developers to use the open source code as a foundation for community-driven projects. The success of Android has made it a target for patent litigation as part of the so-called "smartphone wars" between technology companies [4].

II. OBJECTIVES

The main objective of this application is to provide up to date information of the college by increasing the efficiency of the college record management and decreasing the distance between the students and the college. It also reduces the time consuming tasks and also makes the system more secure [2].

The following are the main features of this application

1. Notification: Alerts have to be send to all students in the college.
2. File Sharing: The students can upload their creative ideas and talents, comment on it.
3. Activities Information: Students can view details of schedules for various events. This will help students keep better track of activities and events.
4. Library Information: The extension of due date of the borrowed books of a particular user is intimated in the form of a notification.
5. Check Academic Details: The student can view their marks, syllabus, attendance details, profile and so on.
6. Ease for use: The app can be used by anyone with the effective GUI.
7. Cost effective: Being Android application uses less internet than that of the websites.

III. PROPOSED SYSTEM

[E-Sara]:

E-Sara is an efficient and user friendly Android application for all college related activities. This application will be installed on the user's smartphone. This intend to provide an interface to the students and staffs and reduces the manual work. The academic details, notices regarding placement drives, events, notification regarding library due date will keep the students up to date. In the existing system majority of the colleges maintain the records and any other information in a manual form or in the form of websites. It may consume more time for the users to know the details. But this mobile application give us a better solution for the above problem. Nowadays all are having their own smartphones so they need not to search on the notice board or to visit any department to know any information all are available in one hand using the smartphones. They just have to login into the application and it will give the entire details. Even though the websites provides similar details like application it is not much in a confined way like mobile application. Initially in this application the user have to login using their proper username and password. Once they login the application will be personalized to that particular user and provide information regarding that user only. They are allowed to view the personal details of any other persons. Instead the general details like notices, placement drive dates, events in college are viewed by all the users. The admin is the one who give the proper login credentials to each user and update the database to provide information. If a person borrowed a book from the college library then he/she should have to return it before the due date. The extension of due date may be forgotten by the user and this may lead to increase in the amount payable for that book. In order to avoid this situation this application

provides a way to notify the users when the due date going to be expired. The another advantage of this application is that a special area called student's corner is available for the students wherein the students can express their creative ideas by uploading their file. Once a particular student has uploaded a file then other students can be able to view it and can post comments and likes on it. They are not suppose to modify or change the file, they are only allowed to view it. The E-Sara application has 6 main modules in it.

They are

1. Login verification.
2. T&P Department.
3. Academic details.
4. Recent updates.
5. Student's corner.
6. Library due date notification.

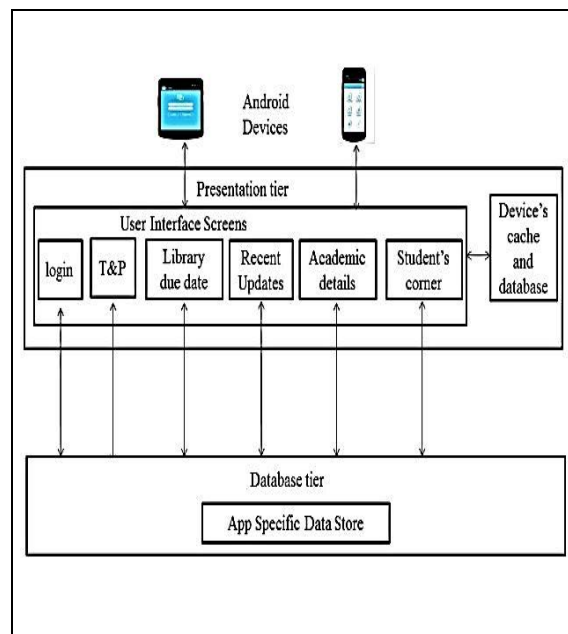


Figure 2.

IMPLEMENTATION DETAILS:

Login credentials:

The login module is very essential for the application, because it gives the access rights to the user. The user can make use of their respective username and password to login into the application. The users who are allowed to use the application include the student, the staff, the parent and the admin. In this module the user has to select what type of user he/she is and then have to enter their respective username and password. This prevents the unauthorized user from accessing it. Once the user has logged in into the application it will get personalized which means he/she can know only the details of

their own. They are not allowed to view or change other's details. After logging in the user can view the following page. From this he/she can view the information by clicking the respective buttons.

Training and Placement

If the user has clicked the training and placement button the information they may come to know include campus drive details, details of the students who have already placed, list of recruiting companies and also the test links. The students can make use of the details provided in campus drive details to know the date of any drive and other details about the company. This makes them stay updated of any recruitment and prepare according to it. By clicking the placed students button the user get the chance of knowing the details of the students who have already placed. This details may include the company they got recruited, their salary etc., The students can also view the list of companies which arrive to their institution for recruiting students, this help them to get prepared related to each company. They can also get the chance of improving their ability by attempting the tests provided by the test links button. It contains a list of test links which allow them to know their capability.

Academic details

The third module is Academic details within which the student can know their personal academic information. If the user is a parent then he/she can know the details of their children. This module contains the personal profile of a student, their respective mark sheet, syllabus, internal marks they scored and the percentage of attendance. If any student is unaware of his/her marks or attendance then they can use this application to know their exact details. They can also check whether the details provided in their profile are correct or not. If any correction is found then they have to pass the request of change to the admin. The admin is the only authority to change any details. It is also not mandatory for a student to visit the website and search for their syllabus it is readily available in this application. This reduces their burden. The parents can easily get updated about their children without have to ask them. This makes this application to be more comfortable.

Recent Updates

In order to make the students stay updated about their college they are provided with a separate module/page called Recent Updates. This module enables the students to have the knowledge on any events to be held at the college, regarding any recruitments, announcements, notices etc., These are

available in a separate page and also notified to the students. Because it is not sure all the users visit the application daily. They may be unaware of the campus drive going to be held. So if it is provided as a notification then they are intimated to enter into the application. This makes them to be stay tuned. They also get notified about any notices and announcements this reduces their task of being waiting in front of the notice board and searching for any details. All information are provided in-hand by this application. The users are updated without getting into the application with the help of the notifications.

Student's Corner

Sometimes the students may not get the proper platform to express their talents, it is necessary to expose them out. This student's corner module is especially for the students. Only the students are provided with this page when they login. This enables them to upload their creative talents like painting, poetry, technical ability etc., Once they uploaded their file it can be viewed by all the students in a separate page, in that page they can post comment on it and like or unlike it. They are not allowed to change or modify the file, they are only given the rights to view it. This module creates the opportunity for the students to easily bring them out and express their talents.

Library due date Notification

Usually in the college library the students and the staffs are allowed to borrow a book and have to return it before the due date. If the date has exceeded then he/she have to pay the fine to the library. Sometimes they may forget the date of return. This leads to the increase of fine amount. So in order to avoid this situation this application provides a better solution. Each user is notified about due date before two days of expiry. This helps them to return the book on date. This facility makes this application more interesting. The details of the book the user had borrowed will be available in a separate page inside the application which provides in depth information.

V. CONCLUSION

The summary of this Android project is to focus on the development of a mobile application in campus environment that provide information services for the college. There is a need for the development of mobile services for college, using which students are able to retrieve information at anytime and anywhere. The college staffs can also access thus application to know any information regarding the college details and events. This makes a better relationship

between the students and the college. The data is stored in an efficient and secure manner so easy retrieval of information is possible. Notifications will be send to the users which inturn reduces the time consumption and work burden. Hence this will be simple, efficient and adaptable to all users.

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