

AN ANDROID APP: E-OUTING FOR HOSTEL STUDENTS

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Abstract: Today authentication and authorization is the key factor for smooth functioning of administrative department at various domains. Especially for the institutional academia has a vital role. Most of the academia are maintaining the hostel student permissions for out and in campus through black and white. This proves to be quite tedious, time consuming also the accuracy is not maintained due to improper authorizations and authentications. Android applications are very feasible to mankind. This application provides an authorized request from the guardian to the concerned authorities for their ward about in-out permission. Then accordingly desired approval is remarked. Further the authentication is done by the security of the institution during leaving out of the premises. The administrator manages the accounts of the users in the application. The outing information record is also maintained for future analysis. Overall performance of this application improves the current process. This application can be deployed in any of the academic institute which has the campus residence facility of its own.

Keywords - Authentication, Authorization, Security, Android, Hostel.

I. INTRODUCTION

Authorization is the process of specifying access privileges to resources related to information security and computer security. Authentication is the way of determining individual identity. The two terms seems to be similar but differ in the process. The objective is to provide more secure, authenticated and authorized environment to hostel students regarding their out-in permission which reduce pen paper work, frauds and also saves time. The traditional approach uses manual process and may not be secure and most of the guardians using fax based approach which cannot provide best authorization. This application provides more secure way to guardian to permit their ward to go out of college campus through a message from register login. It also helps the hostel warden to manage the outing record information.

II. LITERATURE REVIEW

Norarina Ezzati (2017) discussed the case study conducted on E- Outing system at Sekolah Menengah Sains Dungun School where his school management is currently using manual procedure system. The paper also outline the development approach of E-Outing System that has implemented record management system using adopted prototype design. Two types of evaluations has conducted, where the first is based on the expert evaluations and the other is on user acceptance. With evaluation outcomes, EOS is redesigned and redeveloped. Final user acceptance evaluation provided that, EOS is rated highly consistency, perceived usefulness, ease of use, efficiency, satisfaction, and user interface with minimum mean score of 4 as per the data collected.. Thus it can be the paper finally concluded that EOS has improved the usability of e-outing management system in Sekolah Menengah Sains Dungun. ^[1]

Sudhakar Avareddy (2016) C proposed web based application for outing system to the hostel students. The authors discussed about the permission procedure to leave the campus. In this paper student sends request to warden for outing and warden provides remark on the request. The data record is saved and a notification is sent to food manager of the hostel. This notification helps the manger to suggest the cooking people about the strength of the students who are going to dine on the particular intant. ^[2]

WBA enables information management system for organization makes easy accessible. According to Cho (2009), record management system is a management system used to direct and control an organization with respect to records. Record management activities include organizational structure, maintaining, planning activities, and improving record keeping policies and etc. Incredible volume of record and various formats requires an organization to manage it effectively (Porter, 2006).

Record management system services are applicable to any organization. Record management ensures the rapid availability of the information where and when it is needed. Besides, it also helps free flow of record through an organization (Makhura, 2005). In addition, by allowing only authorized operations and actions against them, record management systems can secure records properly (Porter, 2006). ^{[3][4]}

Android Studio is the official^[7] integrated development environment (IDE) for Google's Android operating system.. It is a replacement for the Eclipse Android Development Tools (ADT) as primary IDE for native Android application development. The features provided in the current stable version: Gradle-based build support, rich layout editor that allows users to drag-and-drop UI components, refactoring capability, ProGuard integration and app-signing capabilities Support for building Android Wear apps and etc.^[5]

III. SYSTEM ARCHITECTURE

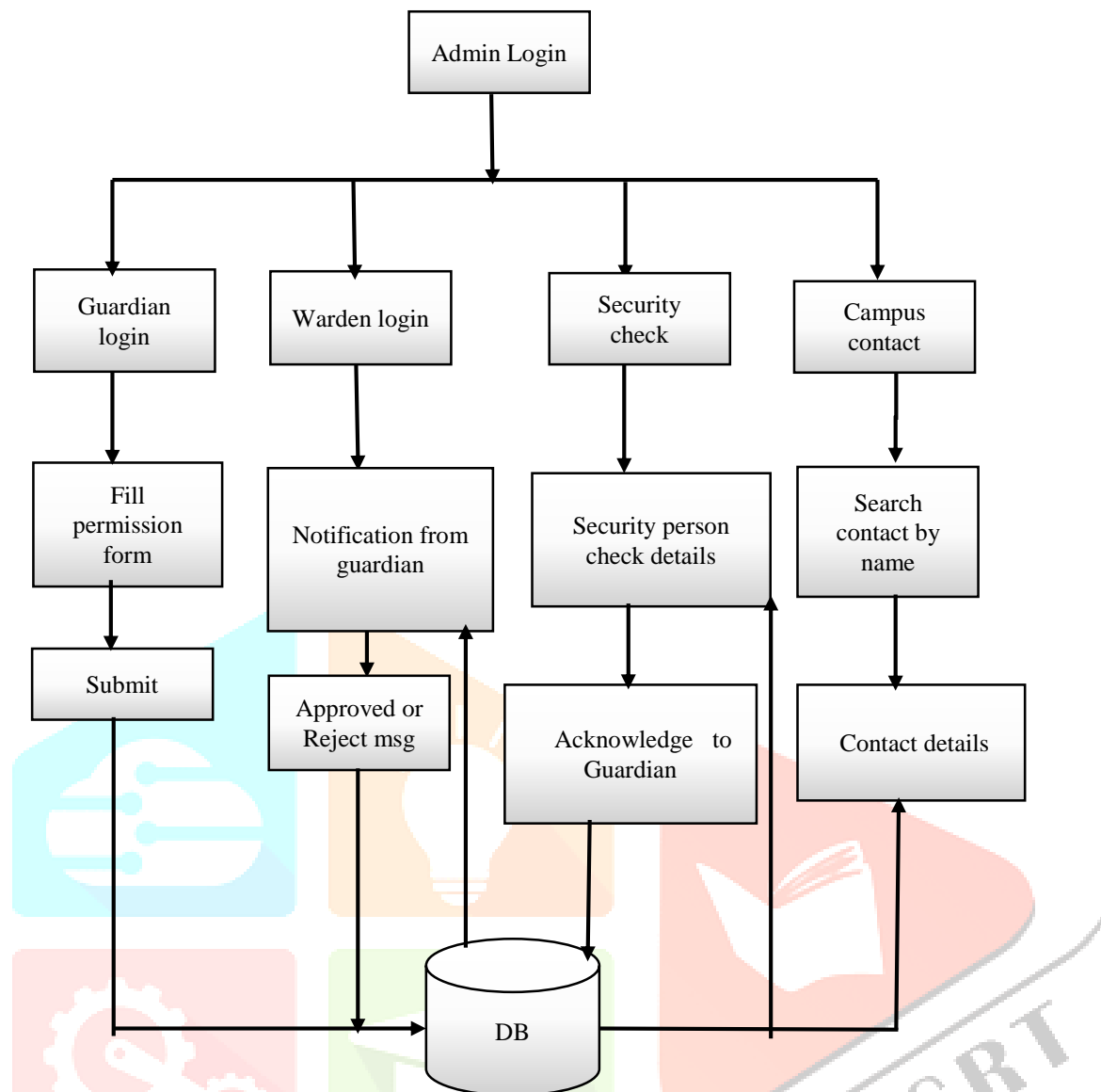


Fig 3.1: system architecture

IV. MODULES

There are seven modules for this application which are as follows:

1. Guardian module
2. Warden module
3. Security check
4. Campus contact

4.1 Guardian module

If the ward wish to go out from campus for any purpose, the guardian will login through the registered login then the guardian will send the permission request to warden's android phone by specifying the purpose and also duration. After successful sent, the message is available in the warden login for further action.

4.2 Warden module

After receiving the guardian's message, Warden has a choice with options approve and reject. Based on the purpose of out campus, Warden Selects approve or reject. If approves then the message with the ward details are sent to security check which indicates the request made by the guardian is permitted.

4.3 Security Check

After getting permission from warden student go to security check then the security will check the details through their registered login. The security checks for the approval and if it is found then the security records the details manually in a register. Here security after entering the record, they select checked option provided. With this action, an acknowledgment is sent to the requested guardian.

4.4 Campus contact

This is an additional feature provided in the system for contacting the staff in emergency.

It maintains all the staff members contact. By providing the name and department, it displays the contact details.

V. SYSTEM SPECIFICATIONS

5.1 Minimum Hardware:

Processor: Intel core i3, i7 or any latest

RAM: 4 GB

Hard Disk: 200 GB space

5.1 Minimum Software:

OS: Windows, Linus

Programming Language: Java, Android

Front end: HTML, CSS, JSP, Android layout

Web Server: Apache Tomcat

VI. RESULTS AND DISCUSSION

Fig 6.1: Student Registration screen

Fig 6.1. Admin Adds the Student details by entering their Name, Full-Address, E-mail and phone number. After adding the Full-details of Student the E-mail will be sent to the particular student's Registered mail ID. i.e. Username & Password.

Fig 6.2: Guardian Login screen

Fig 6.3: Guardian request screen

Fig 6.3. Guardian seeks permission by entering the respected details of student and submit request form and after it reflects on warden database.

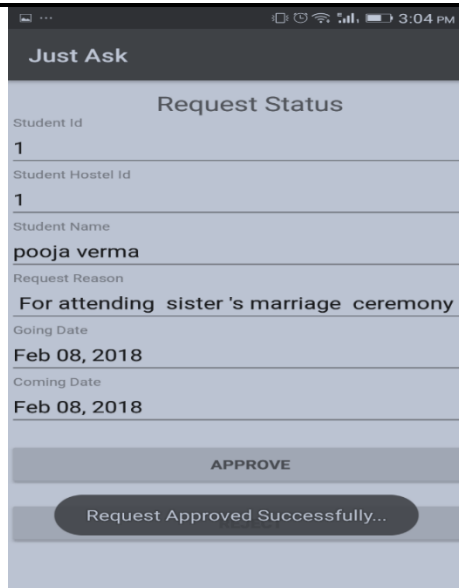


Fig 6.4: Warden Approval screen

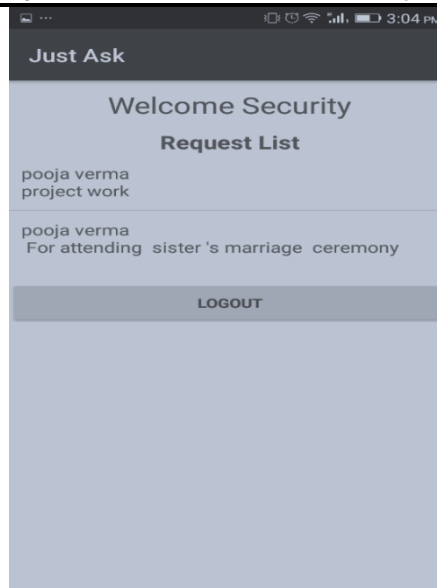


Fig 6.5: Security authentication screen

Fig 6.4 warden notify the gaudrian request in text format and then approve or reject the request. The notification will reflect on the security database. Fig 6.5 Security watches the approval from warden and allows the student to leave the campus.

VII. CONCLUSION

The paper discussed E-outing procedure using android application. It also explain the drawback in the existing system. The users are authenticated through valid logins which are maintained by admin department. This is a user friendly application which has flexibility to change the scenarios. The application provides a watch on the ward who leaves the campus out. The data of outing students can be used by food management department in making meals. The sample data collected from technical educational institute that has hostel facility. This can be further extended as per the requirements of any educational institute.

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