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## Android Application for Online Admission Process

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**Abstract:** *As internet is developing it has become possible for us to broadcast information, share information and access it from all around the world easily. Development of internet has eliminated the need of physical presence of people in all aspects. Android being an open source operating system delivers a complete set of softwares for mobile devices. Innovative, multipurpose applications can be developed using android. It provides useful tools and libraries to develop rich applications. Combining the advantages of these both an application is developed that provides people a tool for filling the application form for schools and colleges. Users of this application would be able to fill in the admission form and the application would store this information in the central database. The scope of this paper is to show the potential use of Android application within organisations in the admission making process.*

**Keywords:** *android application, online admission, multipurpose application, admission form, central database*

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## 1. INTRODUCTION

Android is the open source operating system which powers many multipurpose applications. Mainly it is used in mobile devices. Android is built on Linux kernel version 2.6.25.

Android being free for commercial use, it has strong, wealthiest and innovative backbone of computing behind it: Google. According to Google, about thousands of Android devices are activated daily. This indicates that Android devices are gaining popularity amongst Smartphone users [1].

Android application is a collection of tasks; each task is called an activity. Each activity has unique purpose and user interface [2]. Applications of android are developed in the Java programming language using the Android Software Development Kit[3]. NetBeans and Eclipse are the two integrated development environment (IDE's) which are used for Android development using Android Development Tools as a plug-in.

This project aims to take advantage of fast growing popularity of Android devices by developing an Android application that would accept the admission form and generate merit list, thus enabling users to get up to date information anywhere they are once they have the application installed on their Android devices as well as an active internet connection. This would be achieved by (1) implementing and deploying a database that would host captured data and (2) developing a frontend application which would be an Android application that would interface with database in order to retrieve information and display it on Android device. Scope of this project is to show the potential of android based applications in private organizations in the decision making process.

This application would help students to fill their forms with the help of internet from anywhere and anytime. It also helps the organization to handle the available data efficiently [4]. In large private organizations it is important to make quick decisions based on available data. Gathered data is so

voluminous that making decisions manually would take a longer time. DB manager has to take decision and before making any decision they go through organization's records; decisions are made based on information gathered.

### 2. PROBLEM DEFINITION

For an institute, every year the admission process is a tedious task to perform considering the traditional paper based method. A lot of resources in the form of time and paper are being wasted in this method. With current lifestyle of people where time is an important and precious resource it is necessary to develop a mechanism to save the same.

### 3. RELATED WORK

The System is a combination of an android system and a database as the android system is at the frontend and a database in sql at the backend. Android is used by many companies which require a low cost operating system for devices with high technology. Android being an open source operating system makes it more desirable. The online admission system using an android application is feasible as it facilitates accuracy and reliability for both the user as well as an institute. The availability of the form 24\*7 makes it easy for the users to fill forms without time constraints. Being online recipient for all applications, the system also makes it easy for the remotely located applicants to submit their forms without requiring their physical attendance at the institute. It becomes manageable for the institute as there is only one central database which stores the entire details of the students who wish to get admission in the institute. It doesn't require different administration to handle the admission process. In the online admission process only a database manager is required to handle the data. The online process would also eliminate the paper transactions of the current systems and thereby reduce the maintenance. Providing a link to download the application through the institutes website also lead to increase in the number of hits for the website.

### 4. PROPOSED SYSTEM DESIGN AND METHODOLOGY

#### 4.1. System Components

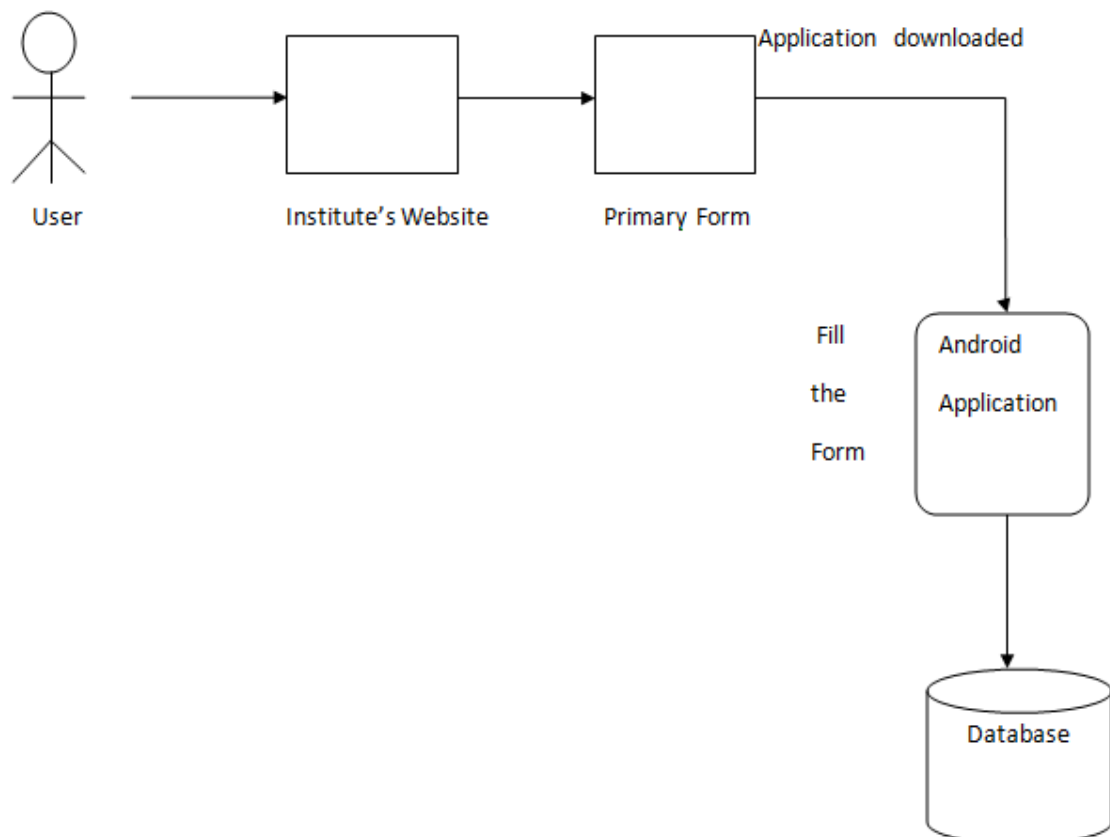


Figure 1. System Architecture

Website

Website would be unique for each institute. It will contain all the information related to that institute. A link to download the application for admission form will also be present on the website.

Android Application

It will contain the admission form of that particular institute. All the data fields required by the institute will be included in that form. Each data field will be validated for, by the database manager.

Database

A central database will be maintained to store all the submitted forms. It will store the information in a certain predefined format. A database manager will look after the entire database. Secondary database will be present as a backup in case of data loss.

### 4.2. Description of Proposed System

The system consists of an Android Application where in the frontend the user will fill the form and in the backend the database manager will validate the data.

Frontend Operation

The user will go to the institute website. A link to the application will be provided and filling of primary form will then lead to downloading of application. The application will include the admission form for the institute. The primary form will be used to catch the IP address of the client demanding the application form which will help in reducing spams. All the information needed by the institute will be included in the admission form.

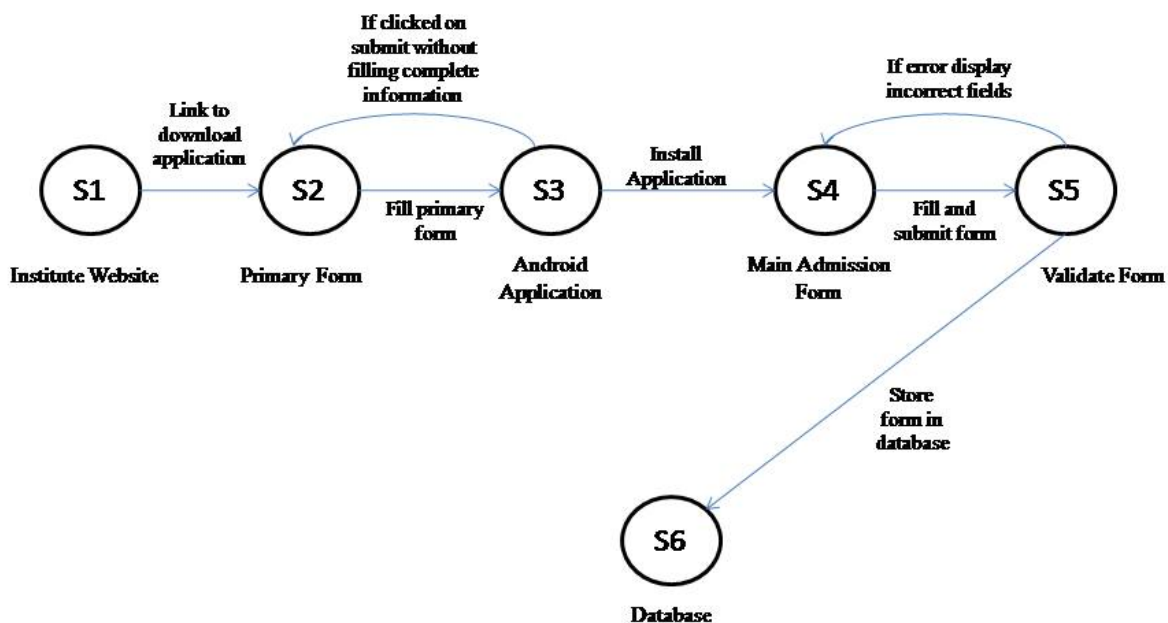
Backend Operation

The database manager would be responsible for the backend operations. The form submitted by the user would reach the backend. The database manager will then validate the data fields based on the respective criteria. Database will store the information from all forms in a particular format. All the reports can be generated from this database by firing appropriate queries.

System Integration

The frontend which is android application communicates with the backend. The backend is a Database which is an sql database. Our application will fire a query to the database using which the report will be generated.

### 5. SYSTEM IMPLEMENTATION



S1: Visit Institutes website.

- S2: Display of primary form.
- S3: Download Android Application.
- S4: Main Admission form
- S5: Validation of form by the Database Manager
- S6: Storing form in Database.

**Figure 2.** *State Diagram of Online Admission System*

The admission process will begin with a user visiting the institute website. It will contain all the information of the institute that a candidate may need to know before taking the decision of making an application. The website will also include a link to download the application. Clicking on the link will direct you to a primary form. The primary form will include basic functionality such as name, address, age etc. All the fields in this form will be mandatory. It will be used to identify the IP address of the user machine that requested the form. On submitting this form the application will be downloaded to user's machine. If the form is left incomplete the primary form will be prompted repeatedly until all information has been filled completely. The applications of only those users who have filled and submitted this primary form would be accepted. This will reduce the number of spam applications being submitted to the database and will indirectly also increase the number of hits to the Institute Website. On successful installation of the application, the main form would be displayed. The main form will be fit to screen according to the users device so as to avoid unnecessary scrolling. The main form will include the fields of all data that an institute requires from the applicant. Applicant should fill all the data accurately, based on particular fields. Softcopies of any required documents in the desired format should be uploaded at the same time. On verifying the correctness of all the fields, submit the form for storage. Submitting of the form the form will undergo validation. Validation is a process of verifying whether the details entered by the user are as per the requirements (such as only numbers for date of birth).The validation rules will be set by the database manager .The form after validating will be then stored in the database. The format in which the database should hold all the data will be predefined and the forms submitted will get stored according to this format. A copy of all data from primary database will be stored in a secondary database so as to backup the data as a precaution to data loss. Report will be generated based on the data.

## 6. CONCLUSION

This project when implemented would help the large organizations to reduce the manual work needed for different reasons. This would also provide up-to-date information to the users on their android devices and would also make the complete data available to organization at one site.

It would also help in reducing the human errors such as misplacing the form due to paperless transactions. The time required to generate the reports from the available data will be reduced significantly as the computation will be done by the machine. The project will make an effort to eliminate the geographical boundaries through the means of Internet.

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**Siddhant Gokule** is pursuing Bachelor of Engineering degree from RMD Sinhgad School of Engineering, Warje, Pune-58. Author is currently looking into the user interface part of the project.