CENTERACT A NOVEL APPROACH

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Abstract : Android is the first complete, open and free mobile platform. It is developed by the Open Handset Alliance, a group of more than 30 technology and mobile companies. It is supported by Google and this project uses a Google Android Mobile SDK for testing an application.

The aim of our project is to develop an integrated Web and mobile phone application prototype for connecting users with other users using Android. The Web interface is used by the users who want to download and upload their profiles, and they use the web interface to post their activities through their respective accounts. The users must belong to an account. The mobile application is to be installed on the mobile phone.

This project focuses on developing a web application that is developed using java and Android where the users can have their profiles to know about each other. This web application increases the security allowing the service seeker to know the person who is going to connect by him. Both users will have an option to choose the person according to the ratings and reviews that are posted previously.

Index Terms - Java, XML, Android, Android Virtual Device: Emulator.

I. INTRODUCTION

This project uses the Google Android platform to build an application where users can upload their profiles, users can use and can see applications. The required application and mobile service providers can quickly identify the profiles and contact the persons. The overall concept is where users would use the applications through an innovative web application. A user using a smart phone running Google Android (for the project this will be an emulator) could either through GPS or by entering a specified code could request to show all applicants details needing for the profiles. The application will use SOAP API to retrieve database of users via web services the user could get extra information about the other users. Our Model Profiles take into account descriptions.

CenterAct is a suite of tools designed specifically to help users sort through large volumes of applications and develop a quality short list for further consideration. With your input, we develop Model Profiles for the contacts you want to use. Users complete the CenterAct questionnaire through links in your application or a personal invitation from you. Our system compares the applicant's profile to the Model Profile and calculates the percentage match between the two. The two main domains are the Web application and the Mobile application. The users shall use the Android mobile in order to learn the problems, which were faced by the other users. This application benefits both users so that the problems can be addressed quickly and accounts for a friendly relationship between both the groups.

1.1 What is CenterAct?

CenterAct is a suite of tools designed specifically to login by user and use applications and use app to connect with data of the android devices.

1.2 How does CenterAct work?

With your input details, we allow user to make account or to login as a user. Users complete the CenterAct questionnaire through links in your application and can make a call or message or E-mail the people. The user can access other details like gallery, videos, images, calculator etc with the help of app.

1.3 How will CenterAct tools save me time?

Once your data is loaded, our CenterAct tools take no more than a few seconds to access. Our system will automatically connect you to the other app of the android device. Instant SMS, Call and E-mail connect user any time with the people.

1.4 What makes CenterAct different?

Two words describe what makes CenterAct different: technology and speed. Our iPhone, Android and Blackberry applications allow you to track and interact with your efforts in real time. CenterAct will automatically route profiles of users and even contact you the instant users in contact. You can email, SMS or call your contacts with one tap of your touch screen. Whether you have 5 contacts or 1,000, CenterAct will instantly create a short list of profiles and connect you with them.

II. TECHNICAL DETAILS

This section focuses on technologies used in Web interface and Mobile Interface.

- *JAVA:* As the android platform understands Java the application was built on it.
- *XML:* XML is a simple, very flexible text format which was designed to carry data, not to display data.
- Android: The Android platform is a software stack for mobile devices including an operating system, middleware and key applications. Developers have full access to the same framework APIs used by the core applications. The application

architecture is designed to simplify reuse of components; any application can publish its capabilities and any other application may then make use of those capabilities. Developers can create applications for the platform using the Android SDK. Applications are written using the Java programming language and run on Dalvik, a custom virtual machine designed for embedded use, which runs on top of a Linux kernel.

- *Android virtual device - Emulator:* The Android Development Tools (ADT) include an emulator to run an Android system. The emulator behaves like a real Android device (in most cases) and allows you to test your application without having a real device.

Via the emulator you select which device should be started, you can also start several in parallel. These devices are called "Android Virtual Device" (AVD).

III. DATABASE DESIGN

3.1 What is SQLite

SQLite is an Open Source Database which is embedded into Android. SQLite supports standard relational database features like SQL syntax, transactions and prepared statements. In addition it requires only little memory at runtime (approx. 250 KByte).

SQLite supports the data types TEXT (similar to String in Java), INTEGER (similar to long in Java) and REAL(similar to double in Java). All other types must be converted into one of these fields before saving them in the database. SQLite itself does not validate if the types written to the columns are actually of the defined type, e.g. you can write an integer into a string column and vice versa.

3.2 SQLite Architecture

3.2.1 Packages

The package android.database contains all general classes for working with databases.android.database.sqlite contains the SQLite specific classes.

3.2.2 SQLite Database

SQLite Database is the base class for working with a SQLite database in Android and provides methods to open, query, update and close the database.

More specifically SQLite Database provides the insert(), update() and delete() methods.

The object Content Values allows to define key/values. The "key" represents the table column identifier and the "value" represents the content for the table record in this column. Content Values can be used for inserts and updates of database entries.

IV. APPLICATION'S LIFE CYCLE

A Linux process encapsulating an Android application is created for the application when some of its code needs to be run, and will remain running until

- it is no longer needed, **OR**
- the system needs to reclaim its memory for use by other applications.

An unusual and fundamental feature of Android is that an application process's lifetime is not directly controlled by the application itself.

Instead, it is determined by the system through a combination of

- the parts of the application that the system knows are running,
- how important these things are to the user, and
- how much overall memory is available in the system.
-

4.1 Component Lifecycles

Application components have a lifecycle

- A beginning when Android instantiates them to respond to intents through to an end when the instances are destroyed.
- In **between**, they may sometimes be *active* or *inactive*, or -in the case of activities-*visible* to the user or *invisible*.

4.2 Life Cycle States

An activity has essentially three states:

- It is active or running
- It is paused or
- It is stopped

V. FUNCTIONAL REQUIREMENTS

This section explains about the individual functionality and requirements of two major sections of this project

- Mobile Application
- Web Application

These requirements are identified from the sequence diagrams that are drawn to identify the flow of these two applications and the communication between them.

5.1 Mobile Application:

Application requires service providers User Name and password. When a service provider starts this application a menu showing various options . If he/she selects the **fun app** list of all sessions will displayed, he/she can retrieve information of applications from these sessions and they can call, message or send mails to the users . If he/she clicks on the **user details** then information of user will be displayed. When clicks on **the user name** then a window consists of various information or further fields where in you type name, last name, address and contact information will be displayed.

5.2 Web Application:

This application starts with a Flash intro and it later redirects the user into the web page where he can only login and use the services according to his account type. This application has 2 types of services:

- FunApp
- User Details

VI. SECURITY & PERMISSIONS

- During deployment on an Android device, the Android system will create a unique user and group ID for every Android application. Each application file is private to this generated user, e.g. other applications cannot access these files.
- In addition, each Android application will be started in its own process.
- Therefore, by means of the underlying Linux operating system, every Android application is isolated from other running applications. A misbehaving application cannot easily harm other Android applications.
- If data should be shared the application must do this explicitly, e.g. via a
- Android also contains a permission system. Android pre- defines permissions for certain tasks but every application can also define its own permissions.

VII. RESULTS AND DISCUSSION

This paper, examines Android, that is recently gaining huge amount of attention because of its recognized unmatched chances and advantages.

Working on the project was good experience. I understand the importance of Planning and designing as a part of software development. But it's very difficult to complete the program for single person.

Developing the project has helped us some experience on real-time development Procedures.

Figures:

Figure 1 Activity Stack

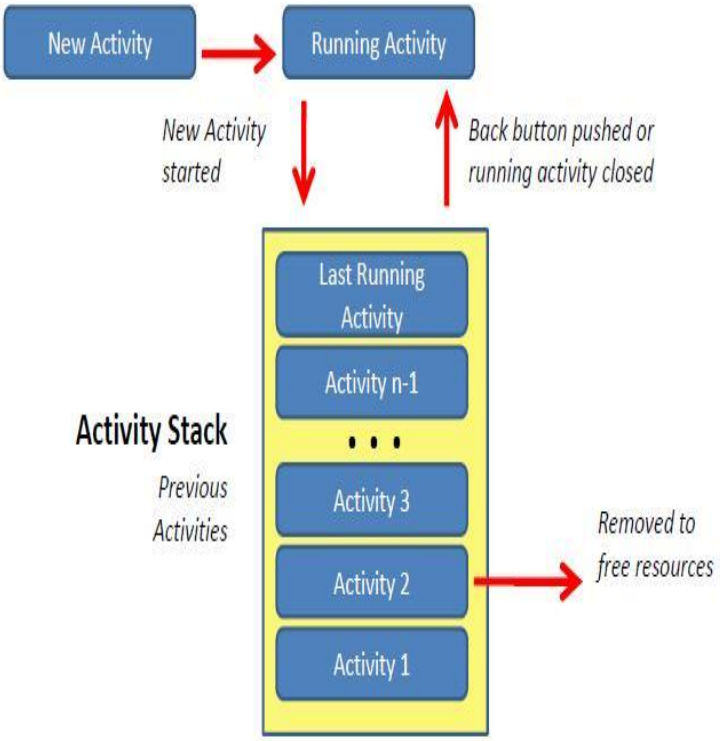
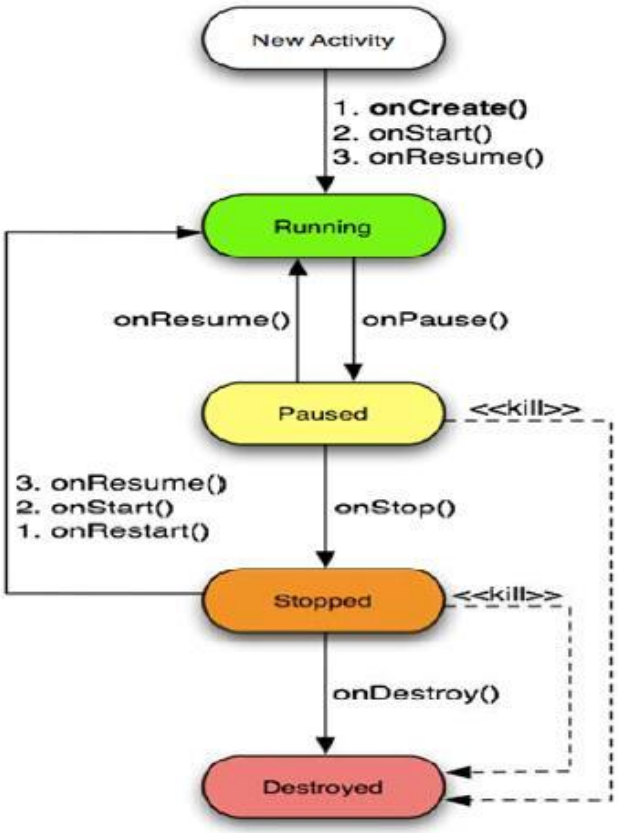


Figure 2 Life Cycle of States



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