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Cloud Based Mobile Data Storage Application System

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Abstract
Mobile hand held device such as smart phones has increasingly became powerful in years. Smart phones are not only with voice oriented device but also equipped with wide capabilities with internet access. With the advent of cloud services for mobile application, it has greatly enhanced the scalability and security. As mobile devices become more like PC's, it tends to carry and store all kinds of data such as check books, cameras, planners, mp3 players, etc., in cloud that can be accomplished for Google Android phones. The primary objective of "cloud based mobile data storage system" is to create a full-fledged Android app where we can store all kind of mobile data in cloud and access simultaneously. The user can retrieve all the data in mobile itself and can also access this data through web. Thus ,it reduces the overhead of using only mobile to get back the data which serves the purpose of making our data secure and flexible (i.e) to be available anywhere.

Keywords
Android apps, Database connectivity, Retrieve, Upload, and Website

I. Introduction

The Cloud Based Mobile Data Storage System is the Android Based Phone Application which works on the input from the user in the form of mobile data such as Contact, SMS, Audio and Video so on. The User can select built data as input and accordingly it react. This mobile application is designed for the purpose of maintaining the online mobile data. The user can sign in their username and password. The online storage mobile data contain details about user data what they upload in cloud and also they can view the data simultaneously. In case user loss the mobile,they can retrieve all the data through web.

A. Cloud Computing

Cloud computing is the Internet ("cloud") based development and use of computer technology. It is the style of a computing in which the dynamically scalable and often virtualized resources are provided as a service over our internet. Users need not have knowledge of, expertise in, or control over our technology infrastructure "in our cloud" that support them [8]. This concept incorporates infrastructure as a service (IaaS), platform as a service (PaaS) and software as a service (SaaS) also Web 2.0 and other recent technology trends which have the common theme of reliance on the Internet for satisfying the computing needs of the users. Examples of SaaS vendors include the Salesforce.com and Google Apps which provide common business applications online that are accessed from the web browser, while the software and data were stored on the servers [2]. The term cloud is used as a metaphor for the Internet, based on how the Internet will depict in computer network and its diagram, and it is an abstraction for the complicated infrastructure to it conceals.

B. Android Based Application

Android is a software stack for mobile devices that will include an operating system and its key applications. Android is the software platform and an operating system for the mobile devices based on the Linux operating system and developed by Google and the Open Handset [10]. It allows developers to write managed code in a Java-like language that utilizes Google developed the Java libraries, but it does not support the programs developed in native code [11].The unveiling of the Android platform on 5 November 2007 was announced with the founding of an Open Handset Alliance, and a consortium of 34 hardware, software and the telecom companies devoted advancing open standards for mobile devices. When this released in 2008, most of the Android platform will made the available under the Apache free-software and open source license.

II. Related Work

Mobile phones have replacing laptops and traditional computers. These devices were used not just for only communication but also used for multimedia [2], [7] applications such as listening music, watching videos, and playing the games. Thus the storage space are available on these some particular devices limits how much multimedia files can be used for the device and the user can constantly removing files to make space to add new one[5]. Addition of the extra storage space is either by increasing internal storage space by manufacturers or addition of SD storage cards only serves to temporarily alleviate the problem until it run out of space again. There is something needed to be permanently had to solve this problem and integration of cloud based storage elegantly solves this problem. Cloud Based File System [1] solves this type of problem by providing anytime/ anywhere access to the unlimited storage of a "cloud" to the Mobile phone users. To show feasibly of this concept, Cloud Based File System App is implemented, which consists of Cloud Server app and Mobile Device Client app. The Cloud Server apps will be implemented using JAVA and it does not have a user interface and it runs on the "cloud".

Mobile Device Client app is an ANDROID app which runs on Mobile Phones implemented using the android programming [6]. This app will be providing the Mobile Device users with the facility to read, open, edit and save the Cloud files from a Mobile Devices such as android. The advantage of this application for mobile users can anytime/anywhere access to their personal Cloud files which will provides a way towards the efficient learning for the students and business for corporate professionals [1].

In recent years, two trends have been changed the way of mobile phones are used: smartphones will become a platform for application, and 3G connectivity has been turned them into the ubiquitous Internet clients. Increasingly, applications on the smartphones (like document sharing, media players and map browsers) interacting with the cloud as a backend for the data storage and computation [4]. We can observe that, for many mobile applications, the specific kind of data that willaccess depends

upon the current location of the user [10]. A holistic security of framework to secure the data storage in public cloud with the special focuses on lightweight wireless devices store and retrieving the data without exposing the data content to the cloud service providers. For this only it uses Attribute-Based Encryption (PP-CP-ABE) to protect users' data. It achieves the information theoretical optimality in terms of minimizing computation, storage and communication overheads [9].

III. Problem Identification

In many cloud storage system and application of mobile devices only backup the data and that will be retrieve it from mobile device using cloud [3]. In existing storage system cannot access the data in mobile and computer simultaneously. In Android, there is no proper facility to save the data in cloud with proper retrieval. Memory cards have less Data Reliability and Data Security. Because of memory cards cannot help to secure the data in case user will lose the mobile device, unless user has to copy the memory card data to the PC. Mobile Remote Access Apps have very hard to use user-interface. It is harder to view big PC screen on mobile device's small screen, which frustrates users because it takes long time to finish a small task.

IV. Proposed Concept

Cloud storage is used to store online data and mobile data. Some of the software developed to support online data storage. Some of them support both kinds of data.

A. Mobile Data Storage in Cloud

Mobile data Cloud Storage is a form of Cloud Storage that provides opportunities and service offerings for using cloud based file hosting on all computing devices and in particular, how to select and use of these services on the mobile devices such as laptop, computers, tablets, and smart phones. Providers of cloud file storage offer many different solutions that allow the user to create and organize files and folders, access music and photos, offers software that can be downloaded that is specific to the type of device. Mobile device access can be used with it's a File hosting service generally for private use or networked or business use with Cloud Storage solution. Most cloud storage providers offer limited free use and charge for additional storage once the free limit is exceeded. For Android G-cloud is used to back up the data. Backup the Messages, contact, all call logs, documents, photos, settings, music and videos.

The Cloud Based Storage Mobile System designed is for the purpose of implementing to store the all kind of mobile data in cloud. Here user can save all kind of mobile data and also retrieve simultaneously. In Case users will loss mobile. It will provide a unique username and password for each user, through that they will login the particular website and retrieve all the data.

B. Mobile Application Android App

The proposed Android applications is a copy of the Android SDK and the Java development kit. Eclipse is particularly well supported to make development a little easier. Versions of the SDK, Java, and Eclipse that are available for the Windows, Mac OS, and Linux, The SDK will includes an emulator for all type of OS environments, because Android applications are run on a virtual machine.

Android application will have registration process in order to authenticate a user. The registration form that give a chance to register new user.In registration form user needs to enter fields User Name, Password, Confirm Password like this have nearly ten fields are there,then need to check whether this username already exists or not if username not exists it needs to register user otherwise need to display message like username already exists.

Login form accepts user name and password from the user and sends to remote server application for validation/authentication. From the SD card it can retrieve all the data like contact, images, music, sms, video, and so on to upload in to the cloud.

C. Database for Storing Data and Providing Connectivity with the Website

It is possible to create the required database using Phpmyadmin with help of Wamp Server and also able to create the tables

1. Database connectivity of mobile with the server

To connect the android Application with the server Database MYSQL will be using PHP files. When android application start to execute, it will connect the android device to PHP Script. PHP Script will fetch the data from the database.

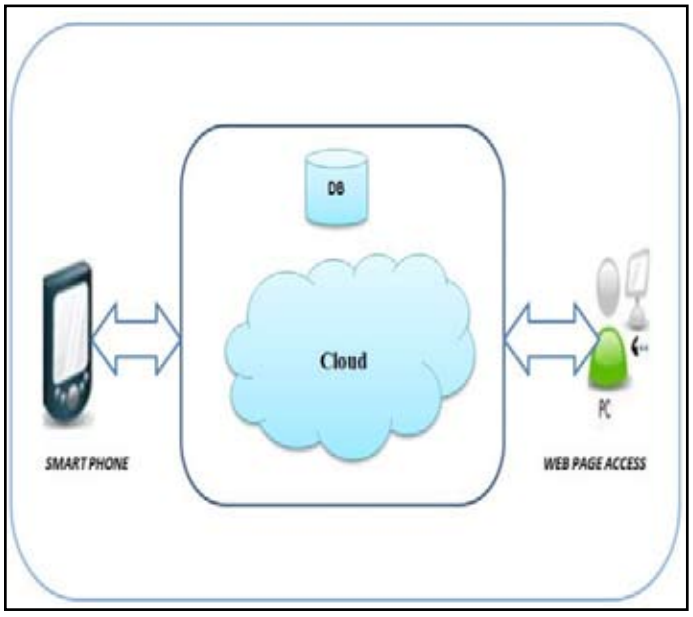

Fig. 1: Proposed Architecture

Then it will be encoded it into the json format and send it to the device. Then android application will get these encoded data. It will parse the data to it and displays it on the android device

2. Database connectivity of website with the Cloud

The web page created for the user as a front end design for login details and storing the personal data and retrieving from mobile via cloud. This webpage can be connected with the database which is already created for android application to store data from it with help of Wamp server. The user can register as a new user or they can login if already as a registered user.

3. Save & Retrieve data from database through mobile as well as from website

The webpage and the Android application can interact with the database which has been created using Wamp Server. Now from Mobile as well as from webpage and it can store the selected data in cloud. This acting as an online data for the registered user that

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can be able to store and retrieve the selected data from database either in mobile or webpage.

D. Website for accessing the Cloud data and provide retrieval

After connectivity of database with Android and the Webpage in cloud can provide the following details for the user to make use of their data can be very secure for accessing and retrieving it in cloud even though their mobile was missed. The website providesfor the new user to register as a new user, to store and retrieve their mobile data in cloud and also for existing user to update their data in cloud without using mobile.

The authentication user can get all the data which they stored in the cloud from webpage or from mobile itself. Also they can access it simultaneously from both webpage and Android Mobile.

V. Conclusion

Marketing of an Android app Google has created an incredible and growing opportunity for developers around the world to achieve success on the Android Market and other sites that showcase Android apps. Although not without its flaws and complaint, the Android Market has been created a tremendous opportunity for individual developers and app companies to build and sell mobile technology for the masses. Thus in its initial launch, it meets a very promising feature of offering a combined services of the power of cloud and at the same time giving a well secure storage and retrieving through the web client. This can be used anywhere anytime with the same facility and same power. Hence the overall view say that this project perfectly fits the demand of the generation and current times on the lines of its reliability, flexibility and scalability.

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