

Alternative way for keeping contacts and SMS in Smart Phones
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ABSTRACT

a mobile phone is a portable telephone that uses to make and receive calls over a radio frequency carrier, and users can move within telephone service area. Mobile phones are used for many purposes, such as contacting family members or friends also for conducting business, and in order to use, you have to have their unique numbers each person. Mobile phones are now commonly used for data communications. Such as SMS messages and calling to your desire ones. In case to call or send message to someone we have to have his/her unique international number so we live in a world which is large number of population, relative members and so many friends and the majority of the people uses phones. Imagine how you should keep all these numbers in one isolated device. All mankind is in a loss. No a doubt to lose our phone, and losing your contacts with the closing of your mobile is a big problem that the mobile users suffering now days. Since contact numbers is important data, why we didn't ensure to secure and make them available when we needed.

In this study it is going to develop mobile application as an experiment research which solving this problem, also dedicated to my Somali society allow them to get off from this dark hole of losing contacts within losing their phones, losing your cell-phone doesn't mean losing your contacts if you are smart..

Keywords: Mobile application, android, SMS, multimedia systems.

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مستخلص

الجوّال هاتف نَقّال يُستخدم لإجراء واستقبال المكالمات. ويمكن للمستخدمين التّنقل داخل منطقة خدمة الجوّال. يستخدم الجوّال لعدّة أغراض مثل الاتّصال بأفراد العائلة والأصدقاء، وإجراء الأعمال التجارية، ولكي تقوم بكلّ هذه الأغراض لا بدّ من أن يكون لديك الرّقم الخاص لكلّ فرد.

يُستخدم الجوّال بشكل عام في إجراء مختلف أنواع الاتصالات مثل إرسال الرسائل القصيرة، وإجراء المكالمات. وعندما نريد الاتّصال أو إرسال رسالة إلى شخص ما فلا بدّ من أن يكون لدينا الرّقم الدولي الخاص بهذا الشخص إذ أننا نعيش في عالم يكثر فيه السكان. فالأقارب والأصدقاء وعدد كبير من المجتمع يستخدم الجوّال. لذا تخيّل كيف يمكن حفظ كلّ هذا العدد من الأرقام في جهاز واحد معزول. وباعتبارنا بشرا فلا شكّ من أننا قد نضيع هواتفنا النقالة مما يعني إضاعة أو فقدان قائمة الأرقام المسجلة في هواتفنا النقالة، وتلك مشكلة يعاني منها الجميع هذه الأيام. وإذا كانت قائمة الأرقام مهمة جدّا فلماذا لا نعمل على توفيرها في الوقت الذي يحتاج إليها؟!

هذه الدّراسة تسعى إلى تطوير تطبيق الجوّال لكونها عبارة عن بحث تجريبي لحلّ هذه المشكلة. وتكرّس أيضا إخراج المجتمع الصومالي من النفق المظلم المتمثل بفقدان الأرقام حالما يفقدون هواتفهم النقالة.

إذا كنت ذكيا، فلا يعني فقدان هاتفك النقال فقدان جهات الاتصال الخاصة بك!

الكلمات الرئيسة – تطبيق الجوّال، أندرويد (الروبورت أو الإنسان الآلي) وهو عبارة عن تطبيق مجاني مخصص للهواتف الذكية والحواسب، الرسائل القصيرة، وأنظمة الوسائط المتعدّدة.

I. INTRODUCTION

Technology changes the way we live, learn, and even communicate; this century is known as informational age, so every person efforts to keep his/her interested information to keep and store in place which it can be found in another time, despite this everyday people save contacts of their friends and family in their mobile phones to relate them when they need but it may happen to miss for some difficulty.

World is contracting with the growth of mobile phone technology. As the number of users is increasing day by day (D. K. Goldhammer D. A. Wiegand D. Becker M. Schmid, 2012, p 50). Mobile applications usually referred as “apps” are revealed to be one of the fastest growing trends in information system world. Apps users are really in well positioned of their life for enjoying the variety of features that mobile apps can offer quickly and without having any knowledge about how the Apps I make it. Mobile applications made life more comfortable and advanced for the users. The new Smartphone platform Android gained special interest among developers. Since it set open source, security tools can be developed even at kernel level (D. Schmidt R. Bye H.-G. Schmidt J. Clausen O. Kiraz K. Yüksel, 2009, p 55).

Mobile apps present a more attractive interface for interaction for business systems than using web application. Mobile applications or apps are a relatively new thing on the market. The mobile development community is at a tipping point. Mobile users demand more choice, more opportunities to customize their phones, and more functionality. Mobile operators want to provide value-added content to their subscribers in a manageable and lucrative way. Mobile developers want the freedom to develop the powerful mobile applications users demand with minimal roadblocks to success. Finally, handset manufacture Want a stable, secure, and affordable platform to power their devices. Up until now single mobile platform has adequately addressed the needs of all the parties. All mobile application or apps are intended to run a special operation system. For mobiles; and this study I preferred to develop application which runs on android OS. As we see apps is an application which intended to run on mobile platform, and android is a mobile operating system based on kernel Linux ...right so.

A. What is an android

Is a mobile operating system (OS) based on the Linux Kernel and designed for touch screen mobile devices such as smart phones and tablets. Android has become the largest installed base of all operating system of any kind. Android has been the best selling OS on tablets since 2013, and on smart phones (AM Farkade , 2015).

B. History of android

Android Inc. was founded in Palo Alto of California, U.S. by Andy Rubin, Nick sears, Chris White and Rich miner in 2003. The main aim of establishing Android Inc. were to develop an advances operating system for digital cameras. After realized that unfavorable market exist, the android Inc. owners decide to produce a Smartphone operating system that would rival Symbian and Microsoft windows mobile. Other hand the increasing of Google financial rate and intention of entering the mobile communication market Google decide to buy unknown companies to empower their demand issue and in July 2005,

Google acquired android Inc. after Rubin the owner of android Inc. run out of money. \$50 million with those important employees, including Rubin, Miner and White, stayed at the company after the acquisition. The cooperation of experts and the crucial investment from Google company android has seen numerous updates which have incrementally improved the operating system, fixing bugs in previous releases, adding new features. After all these they have a number of versions they released consecutively.

II. THEORETICAL BACKGROUND

A. Concepts of mobile phones and its importance

A mobile phone is a portable telephone that uses to make and receive calls over a radio frequency carrier, and users can move within telephone service area. Mobile phones are used for many purpose, such as contacting family members or friends also for conducting business, and in order to use, you have to have their unique numbers each person. In the early phone inventions telephones can handle only 30 contact number. So the more your demand increases the more you need to have handbook to save your friends contacts number. Fortunately Smartphone has built in application which allows you to save your contact numbers instead of using handbook. To make call GSM mobile phones need a small microchip called Subscriber Identity Model or SIM-card to function. A SIM card has a unique serial number, international unique number of the mobile user (IMSI). Two passwords PIN for usual use, PUK for unlocking and also temporary information related to the local network (William Enck , Damien Octeau , Patrick McDaniel , SwaratChaudhuri, A, 2011,p 20).

Mobile phones are now commonly used for data communications (W. Enck M. Ongtang P. McDaniel,2009,p 21). Such as SMS messages and calling to your desire ones. In case to call or send message to someone we have to have his/her unique international number so we live in a world which is large number of population, relative members and so many friends and the majority of the people uses phones. Imagine how you should keep all these numbers in one isolated device. All mankind is in a loss. No a doubt to lose our phone, and losing your contacts with the loosing of your mobile is a big problem that the mobile users suffering now days. Since contact numbers is important data, why we didn't ensure to secure and make them available when we needed. The developers tried to solve this problem to let the users to keep their contacts number in save place. There are many mobile application apps which intended to solve this problem issue, unfortunately mobile subscriber still in dirty position of getting and using these apps in case to make their numbers backed up and restore sometime else. In this study , it is going to be developed mobile application which solving this problem, also dedicated to my Somali society allow them to get off from this dark hole of losing contacts within losing their phones, losing your cell-phone doesn't mean losing your contacts if you are smart.

Google in well position for helping mobile users to back up their contacts list in Gmail and restore them when they needed. But that not helped to many mobile users, apps which intended for what we call now days next generation needs to be more stable, efficient security, well performance and attractive GUI.

B. Reasons may cause lost data on android mobile phone

While transfer data between phone and pc or Mac machine, you falsely eject the phone ahead of time and result in data lost.

1. Press "Delete" button in the process of using android phone and wipe out some or part of contacts or message you really don't want to lose.
2. Memory card in android phone got corrupted and meet messages like "Memory card error", "the card is not formatted, would you like to format it now", software corruption.
3. Android phone was dropped down and you can't read files in it.
4. Accidentally execute phone restore and erase everything in it without backup that is
5. Android unexpected lost data after reset.
6. Android system update to new version, day android firmware update made data lost.
7. Formatted memory card attached in the phone unexpectedly and more.

All these reasons we mention in above are major action which causes the data lost issues. Mobile users must back up their cell phone data before these problems occur. There are many supports apps which developed for solving these problems of losing contacts and messages with the losing of cell phone completely, Google try to allow android mobile phone users to back up their contacts into Gmail and many companies also tried to help those who suffering for mobile data lose. And as I indicated that my project involving of solving this problem too but now only to Somali society. Many app are available on Google play store for backup and restore contacts among them "My Contacts", "Contact backup" and Gmail offers of saving contacts into Gmail. We will discuss the different between the existence apps and one this study is going to develop on comparison section.

C. Advantage of implementing app for keeping contacts and SMS

1. Allows for users to backup and restore their cell phone contacts and messages.
2. Easy to share contacts via stand-alone message for its users.
3. Easy to access your cellphone any android mobile phone which installed this app.
4. Available to access on computer by visiting the official website for and login using same username and password and manipulate your stored data.
5. Adding or removing or updating contacts from website using your phone or your computer.

D. Limitations for using the implemented application

The app is not suitable for all smart phones and it only works for android supporter phones.

1. Doesn't support early version of android mobile phones.
2. Doesn't have any version for IOS and Windows mobile phones.

E. COMPARE BETWEEN EXISTING SYSTEM

First thing first, let's look at those whose offers for android device holders to backup and restore their contacts and SMS to the external storage according to similarity and differences to ensure strength and weakness between the previous systems and state the developers, technology used, result and limitation.

1) My Contacts



With My contact you will always have a secure backup of your contact list priceless if you lose or switch your phone” this is welcome message for this company to the clients which explains the main aim of developing My Contacts project. Well-designed app which has more attractive GUI and more sufficiency functionality reliable secure. Unfortunately no documentation related this app about its developer's information. No chance for many countries to use My Contacts app because of the limitation of its boundary, this is the weakness of My Contact app. although this app demands to fill the needs of Somalia society and the difference between My contacts app and this app is that no chance for my people to use this since My Contacts app has registration activity which base on mobile number and supports only predefined countries that Somali is not in there.

SharePoint for Harvard provides a range of functionality for projects and teams, including the ability to manage documents in a secure central location.

2) Google +



Google Plus (also known as Google+) is a social networking service from Google (Marziah Karch,2017,p 23) . Google+ launched with a lot of fanfare as a possible competitor to Facebook. The idea is pretty similar to other social networking services, but Google attempts to differentiate Google+ by allowing more transparency in who you share with and how you interact. It also integrates all Google services and displays a new Google+ menu bar on other Google services when you're logged into a Google account.

3) Gap analysis

My contact system and Google+ do not support SMS storing and keeping, also they doesn't a search tool which it can be used to look for special contact or SMS, but in this study it will full fill this gab and further more special feature which is to find your contact list in another person's phone by using your privilege username and password.

III. METHODOLOGY

This study takes up experimental research design. The major purpose of utilizing is an attempt to maintain control over all factors that may affect the result of an experiment, experimental designs produce the strongest, most valid results; it represents the most valid approach to the solution of educational problems, both practical and theoretical, and to the advancement of education as a science.

A. OPERATIONAL FRAMEWORK

Operational Framework provides relevant, practical and actionable guidance for the project, the framework set out the way the experiment goes on and identifies the software development process. Water fall model is the first process model to be introduced. It calls a linear sequential life cycle model. It's easy to understand and use. In a waterfall model, each phase must be completed fully before the next phase can begin. This type of model is basically used for the project which is small and there are no uncertain requirements. At the end of each phase, a review takes place to determine if the experiment is on the right path and whether or not to continue or discard the project. In this model the testing starts only after the development is complete. In waterfall model phases do not overlap. So waterfall model is suitable to my project to choose as software development life cycle model.

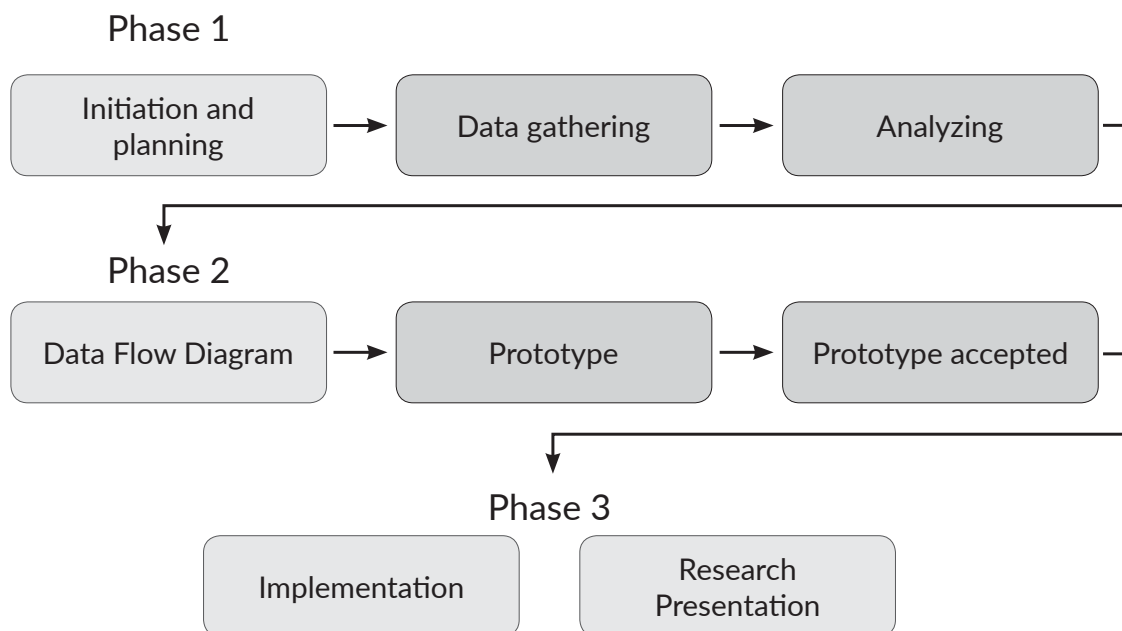


Figure 1: Operation Frame work of the system

1) Advantages of waterfall model:

1. This model is simple and easy to understand and use.
2. It is easy to manage due to the rigidity of the model each phase has specific deliverables and a review process.
3. In this model phases are processed and completed one at a time. Phases do not overlap.
4. Waterfall model works well for smaller experiment where requirements are very well understand.

2) Disadvantage of waterfall model:

1. Once an application is in the testing stage, it is very difficult to go back and change something that was not well-thought out in the concept stage.
2. No working software is produced until late during the life cycle.
3. High amounts of risk and uncertainty.
4. Not a good model for complex and object-oriented experiment.
5. Poor model for long and ongoing experiments.
6. Not suitable for the experiments where requirements are not suitable for the experiments where requirements are at a moderate to high risk of changing.

3) When to use the waterfall model:

1. This model is used only when the requirements are very well known, clear and fixed.
2. Product definition is stable.
3. Technology is understood.
4. There are no ambiguous requirements.
5. Ample resources with required expertise are available freely.

IV. EXPERIMENTAL IMPLEMENTATION SCOPE

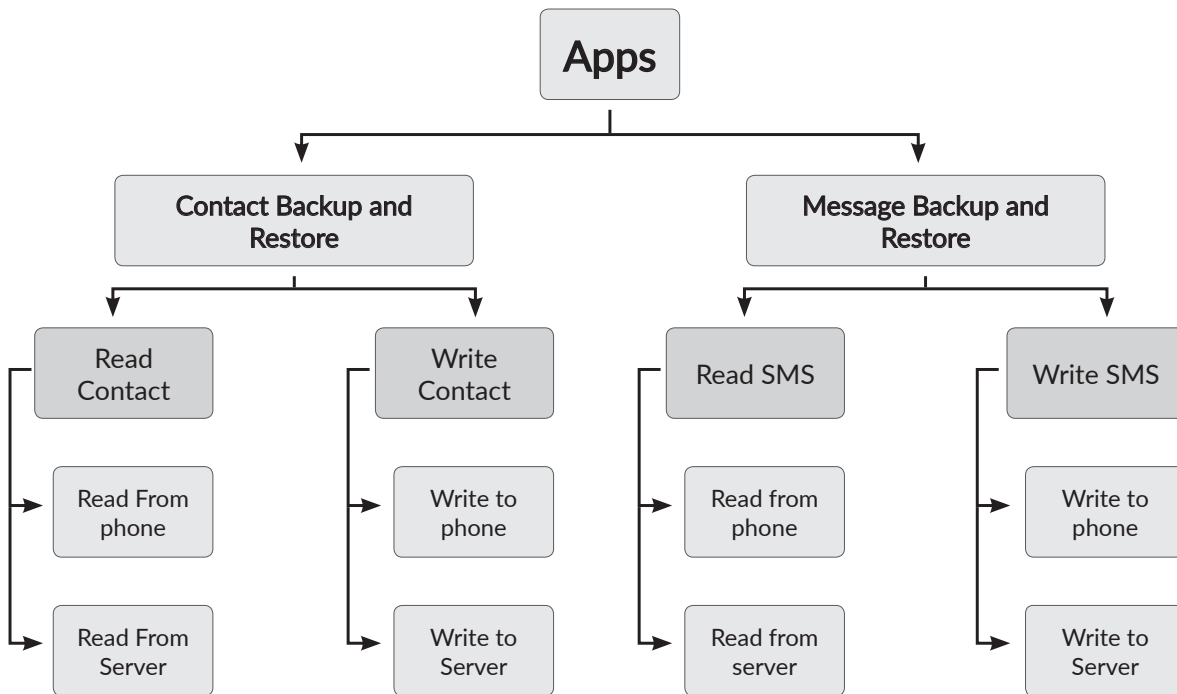


Figure 2: below describes the breakdown of activities for android app implementation that constitutes the scope of this study.

A. WORK BREAKDOWN STRUCTURE

A work breakdown structure is a key experiment deliverable that organizes the team's work into manageable sections. The experiment Management Body of Knowledge defines the work breakdown structure as a "deliverable oriented hierarchical decomposition of the work to be executed by the project team.

B. Experiment Requirement

There are three critical issues that are unique to mobile apps and should be addresses in the requirements phase: choosing a platform, security and usability.

1) Platform

While we are defining mobile app requirements, we need to determine which operating system the application will run on. This app is android mobile application, this project requires android OS as a platform and support only android mobile devices. If the device is android compatible we still have to mention the API (application program interface) level and the minimum SDK (software development kit) and target SDK. This android app has API level 11 and above which the minimum SDK is 11 and target SDK is 23.

2) Security for mobile apps

Security requirements must also address authentication and authorization, allocation of data in offline mode (William Enck, Damien Ocateau , Patrick McDaniel , Swarat Chaudhuri,2011). This app has security log in activities for users to ensure user(s) authentication, data safety and navigations.

3) Usability

This apps has login activity which users must has a unique username and password, to establish a smart activity which allows users to go through security steps once and then no need to login until logout required and our requirements must strive a balance between protecting data and maintaining user-friendliness.

C. Software Requirements Specification

A software requirements specification (SRS) is a comprehensive description of the intended purpose and environment for software under development (J. Bergeron M. Debbabi J. Desharnais M. M. Erhioui Y. Lavoie N. Tawbi,2001). The software requirement specification fully describes what the software will do and how it will be expected to perform. Since this app is android application there are many ways to develop android application development. To establish what the users will actually use the software for and recorded in a way that will be meaningful both to users and developers.

No.	Requirement	Description
1	Operating system	windows (any version) / Linux / Mac
2	Front End	Android studio IDE (android SDK (software development kit)).
3	Back End	PHP and MYSQL.
4	Web server	Apache.
5	Browser	Internet Explorer, Google chrome, Firefox and others

V. DISCUSSIONS

After a lot of time of using handbook for saving contact number list, the smart phones and semi smart-phones came up with a built in application which users can save their contacts instead of using handbook. These built in application for contact store really helped mobile subscribers a lot, and you can save it more numbers of your people. But another issue rise up with using these built in application for number keepings, the aim problem is when you lose your cell phone then you already in loss for your contacts list, which you saved in that mobile. It's been a long time to gather your friend's unique numbers and save them in place for future contacting to them, losing them quickly is harm full. Google is a large company and also provided for mobile users to back up their number list into Gmail to avoid losing them, but no interaction in that system such as you can't see your back up when you visit into your account Gmail and lack of awareness, no data manipulation and it's seems like filing system. These concurrent problem we face every day needs to be solved, developers around the world has tried their best to develop applications which makes our contact list more secure and available on more than one device. But users still facing these problems. According to researcher, I would like to take the responsibility of my society to rescue them from losing their contact with the closing of their cell-phones and to develop android application, which is more familiar with my people according to the base language is made to interact with apps subscribers.

VI. CONCLUSION AND FUTURE WORK

We exhibited what causes to lose information that is stored in cell phones and how it can be kept in permanent to ovoid missing the contents and SMS. We discussed what android app is? How and how our life is affected since we use smart phones. We presented small application that everyday store us our contacts and SMS, and also mentioned alternative ways that can be get that data when the phone is lost, theft, or damaged it. We consider three critical issues that are unique to mobile apps and should be addresses in the requirements phase: choosing a platform, security and usability.

Finally, we establish the experiment requirements that include: operating system, Android studio, apache server, and PHP and MySQL technologies.

VII. RECOMMENDATION

There is further improvement in terms of efficiency and easy to use for achieving enhanced storing information. In our study we success to implement away to store contacts and SMS but the personal data of every phone is not only what it holds but there is multimedia in the phones which includes Images, audio, and Videos. Our study is only about contacts and SMS but it is open to make further study to save the missing data of images, audio, and videos.

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