**Software Requirements**

**Specifications**

**for**

**one to many file sharing application**

**Version 1.0 approved**

**Prepared by Supraja**

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**Usability**

**Availability**

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| --- | --- | --- | --- |
| Name | Date | Reasons for changes | version |
| Group | 21/09/16 | Initiation of project | V1.0 |
|  |  |  |  |

1.Introduction

1.1 Purpose

The main purpose of this document is to specify the software requirements specifications of a file sharing app. The detail study of this document helps to know the requirements of the application. Include software, hardware, functional and non-functional requirements. Careful understanding of this SRS ensure the security and easy accessibilityof the application to stakeholders and end users.

1.2 Document Conventions

Header size is 18 , Sub-heading size is 14 and the remaining text size is 11.We have taken some Priorities for the Document Conventions.

Db – data base.

1.3Intended Audience and Reading Suggestions:

It is a University project app under the guidelines of a course in charge. It is useful for file sharing. Any student

Marketing team

developers

testers

anyone who intended to share one to many files can use this. This include

1.4Product scope :

The purpose of the project is to make one to many file sharing easy and secured. When user upload a file it gets uploaded into cloud and generate a key. The sharing can be done only if you have the key. The file sharing is done without asking any user information. So, it’s helpful for user who don’t want to share any of his information. So, delegates who intended to share files without disclosing the information can use this.

1.5 Reference:

Azure visit the link - <https://azure.microsoft.com/en-in/services/storage/>

Directory of Azure - <https://azure.microsoft.com/en-us/services/>

Official website - <https://azure.microsoft.com>

Compatibility is not guaranteed for devices without GPS capabilities.

2.Overall description

2.1 Product Perspective

It is a one to many file sharing. The existing file sharing are mostly of one to one. If any, one to many sharing is there it requires user information to access. So, we came up with this idea. This is an advanced version of one to many file sharing. This includes all the features of normal file sharing. We included a new feature of accessing without any sign in. The file sharing is done without asking email id or any link or any sort of user information. The main aim is to share files in a secured way without sharing any personal information.

2.2 Product Functions:

Filedownloading

cloud

File getting uploaded

File downloading

key

key

File downloader

key

File uploader

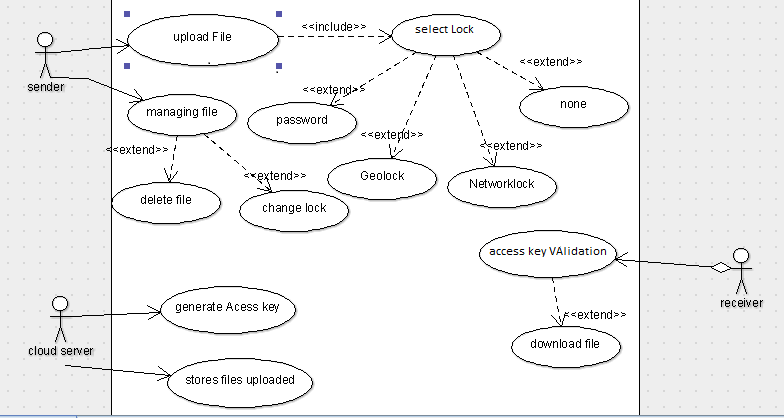
File downloader

The system works as follows:

* There will be no sign in required.
* The user/client can upload a file.
* There will be 3 type of locks for a file.
* User/client can select any one.
* There will be a key for the file.
* The people can only download the file if they have the key and based on the lock.

2.3 User classes and Characteristics:

There will be 2 type of user in this. Uploaders and downloaders. Same person can be both. This is a “one to many” file sharing. In this uploader is important. Because most of the functions depends on him. The choice of choosing lock type and the decision of whom to disclose the key depends on the uploader. The downloader should be aware of the key then only he can download the file. Thus, it will help in secure transfer and accessing of the data.



2.4 Operating Environment:

There are no specifications for hardware like HDD and processor and storage. But when it comes to software it works on Windows (8.1 to 10) and Android (4.4 to 6).This is not for Linux and IOS

2.5 Design and implementation constraints

One of the main constraint is server’s capacity. It must be able to tackle the downloaders. Another is versions it is developed for Windows (8.1 to 10) and Android (4.4 to 6). So the before versions are unable support this. Language is also a constraint as it fixes to only English. If there is any one file sharing (like china uses their own data). When it comes to network lock it may causes some issues because of poor network.

* 1. User Documentation
* User documentation includes how to install an app, how to handle the locks and error recovery if any.
* It also includes some security measures.
  1. Assumptions and Dependencies
* As discussed before it depends on the storage.
* If storage is full have to pay for extra space.
* The key also expires after 30 days we have to create a new key.
* The capability of the server also plays a major role.

1. External Interface Requirements

3.1 User Interface

There are 4 types of primary elements which are displayed through starting page

The primary navigation is present on the top of the page. It is represented with the horizontal link of graphical links

There are 2 types of buttons for sending and receiving files

There will be 4 options for the user to lock the file. Namely geo lock, network lock, password, none

2 types of errors connection error and upload error that displayed on the page which are controlled by the user

The keys generated over a month are known to the user by key list

3.2 Hardware Interface

* System that support app are
  + Smartphones with windows and android operating system
  + Pcs with windows 8-10.0 version installed
* Devices without gps installed cannot support this app
* The file can be transformed even in offline after the confirmation
* Beyond the storage limit the file cannot be transformed

3.3 Software Interfaces

If the user or client applya geo lock, then the file requests the gps to provide the access. The iP address access the file if the user applies for the network lock. The user has to enter the key generated by the applicant if user uses the password lock.

3.4 communication Interface

The storing and access of data by a file is done by using SMB (Service Message Block)protocol. This protocol is also known as CIFS (Client Internet File System). CIFS provides authentication inter process communication mechanism, communication between nodes on a network.

4.1 System Feature1

**Geo Lock**: - This is one type of lock in file sharing application. Firstly, we have to fix one location based on latitude and longitudinal basis. This lock uses GPS of the user and identify the location of the user. If the physical location is different from that of the fixed one, it won’t allow the file sharing.

**Network Lock :-**In this the lock is based on the internetwork. If a client is connected to another network rather than the fixed one, even though they are in the same physical location it won’t allow to access the file. It simply shows an error message.

**Password Lock: -** It just works as a normal password.

4.1.1 Description and Priority:

Mostly, people uses password lock. Because it is easy and safe to access when compared to Geo and network lock. When it comes to geo lock, it is purely GPS based lock. So, it has to be maintain with high security. Network lock we have to take care of the internetwork to which clients are connected. It should be strong or else file sharing won’t be able to process. So, people uses them based on their requirements.

4.1.2 Stimulus/ Response Sequences:

After downloading the app, the following sequence is done.

* User selects the file to be shared.
* Then it come to locks.
* User/Client should select which lock should be apply.
* After that, the file gets uploaded into cloud and a key is generated.
* The key will be stored in a list. The list keeps track of past
* Accessing or downloading a file can be possible only with the help of the key.

4.1.3 Functional Requirements:

REQ 1:file encrypt and upload

REQ 2: type of lock

REQ 3:password

REQ 4:geo-lock

REQ 5:network-lock

REQ 6:none

REQ 7: managing file

REQ 8: delete file

REQ 9: change lock

REQ 10: generate key

REQ 11: stores, files uploaded

REQ 12: access key validation

REQ 13: download file

4.2 System Features 2:

* 1. Based on our geo lock, it restricts the access to the files uploaded.
  2. While the files are being accessed by the receiver, user/uploader can be offline.
  3. The geo locking ranging from 30 to 250 mts.
  4. Network lock is Wi-Fi based and depends on SSID.

5. Other non-functional requirements

5.1 Performance Requirements

When it comes to performance requirements, we should take care of security. Since, in case of network the file can be visible to all the users who are connected to the that particular network. Here security problems may rise as shared data freely flows in the network. Here, the keys will be helpful, as the downloading is possible only with the help of them. We should also take care of capacity of the server/cloud. By implementing the above, the performance can be increased.

5.2 Safety Requirements:

As we are using Network lock, if the network is secured then no problem will arise. But if it is not secured then SSID can be changed, because of this problem can arise. So we should take care of this. This type of cases can be handled by preferring Geo lock and Password lock.

5.3Security Requirements

Security is one of the important aspect. For better security purposes, the files are encrypted before they get saved in the server. And the access keys also get deactivated after 30 days. It also restricts the access of uploaded files based on location by using Geo-lock.

* 1. Software Quality Attributes

Maintainability

We will be in constant implementation of the requirements according to the product backlog throughout the process of designing the program and after release of it. So we can make significant changes in the latter stages of the program for better userinterface.

Adaptability

It is easily adaptable. Just have to install the setup. Even log in is not required. So its easily adaptable.

Usability:

It’s very easy to use. You just need an internet connection for uploading and downloading a file.

Availability:

## Targeted availability is 24x7: 24 hours a day, 7 days a week. Availability is the term which defines the efficiency of the system.

* 1. Business Rules

Team Members:

1. Chowdavarapu.Sriker
2. Loga Prakash
3. Mallela Murali Manohar
4. K. Priyanka
5. Marthala.Supraja Reddy

Division of work:

K. Priyanka: - Analysis(Functional and Non-functional Requirements).

Marthala.Supraja Reddy: - Design (Architectural design, database design and

&

Mallela Murali Manohar interface design).

Chowdavarapu. Sriker: - Coding and Testing

&

Loga Prakash

6.Other requirements:

1. It has to overcome the geo spoofing techniques
2. Reliability is very important.
3. Owner should have the capability of changing the lock type even after sharing the file.