Software Requirements Specification

for

one to many sharing application

**Version 1.0 approved**

**Prepared by Srikar**

**17/09/2016**

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**Revision History**

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| **Name** | **Date** | **Reason For Changes** | **Version** |
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# 1 . Introduction

## Purpose

The main purpose of this document is to record the requirements for the development and design of a secured file sharing application.This is a document consists of the current requirements of the project as per the understanding of the project by the project team.This document is used by designers,programmers and testers and others during the maintenance and development of the software.careful understanding of this document by different stakeholders of the project including the user(end user) will ensure that the requirements outlined are complete,correct and the software will provide the desired level of consistency and functionality.

## Document Convention:

We have used TIMES NEW ROMAN, where the Header size is 18 which is BOLD, Sub-heading size is 14 and the remaining text size is 12.We have taken some Priorities for the Document Conventions .

* To highlight any text in the document we have used text size is 14 with Bold Italic fonts.
* Features of the application are indicated by ★

## Intended Audience and Reading Suggestions

Our intended audience mostly is students but it can be any one. This document is to be read by the development team, documentation writers, admin and our users may review the document to learn about the project and to understand the requirements and will give some suggestions if needed. Developers need to become familiar with SRS.

## Product Scope:

This application incorporates a system of file sharing in which the creator of a file is, by default, its owner. The owner can regulate the public accessibility of the file or folder.Files will be stored in Microsoft Azure storage services.The owner may also set an access level for regulating permissions.The storage solutions provide users and enterprises with various capabilities to share the data.This app lets the user protect and share your files people based on our state of the art Network Lock and Geo-Lock.This app does not store the data more than 3 days.

There are 4 types of locks by which the user can choose according to his requirements.

* Geo-Lock
* Network Lock
* Password
* None

This application does not give access to the other users without owner’s permissions

## References:

-This is optimized for smartphones,and computers also.

-Uses Azure storage services for storing files.For more Information about

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>

- Compatible with smartphones with Windows,Android operating system and PC’s having windows Version 8 - 10.0 installed.

- Compatibility is not guaranteed for devices without GPS capabilities.

- Compatibility information may be changed at any time(In upcoming updates).

- Information current as of September 19, 2017

# 2.Overall Description

## Product Perspective

We are designing this software to handle the privacy of data.

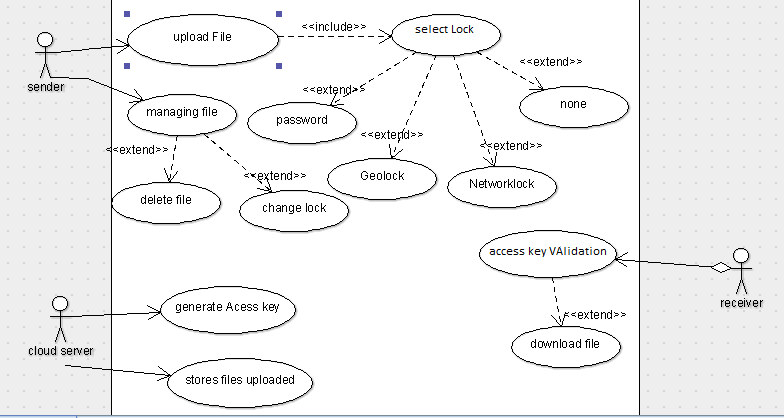
* The project is all about how we secure data from other clients and maintain the data sharing between various clients.
* How to restrict the users from accessing the files.
* Owner can apply the lock according to the requirements.

## Product Functions:

* No login required .
* User data is stored in the database.
* All the list of keys are stored in local area memory.
* User can add files which he wants to share with others.
* Any no. of users can access file with valid access key and access criteria(Location,Network).
* A list of all files that are shared by other are displayed with the name of user

and date. User can select all files or a single file at once to copy files in his

local memory area.



## User Classes and Characteristics:

* All the access keys and the history of the user is stored in the database.
* Now a user can add files for sharing and apply lock according to the requirements.
* A user also can download files from app to his local memory area.

## Operating Environment

Client:

|  |  |
| --- | --- |
| Processor | Any |
| HDD | Any |
| RAM | Any |
| OS | Windows(8.1 - 10.0),Android 4.4 - 6 |

- Not compatible for linux and IOS operating systems.

## Design and Implementation Constraints:

* Server capacity is how many users can access or can share at once. More is the no of users more will be network traffic and hence the server comes in down state. The constraint at the designing time is that users may keep their shared data in Server’s memory for a long time so Memory must be sufficient for this case.
* You get started with 5000GB free cloud storage space.
* Although, it's quite easy to manage the privacy settings of our profiles,but if we don’t utilize it carefully,it could potentially give access to the unauthorized users.
* All videos and image files that are stored via Google Drive must be downloaded each time they're accessed, which may be time consuming.
* The current version of the application does not support Linux editions,IOS.

## User Documentation:

* There should be enough documentation to the users about the configuration and usage of the system.
* The documentation provided should be clear enough to act as the first line of support for any problem.
* The documentation must include details regarding the knowledge of set-up,

configuration, maintenance, on-going management and error recovery procedures.

## Assumptions and Dependencies:

* This is not cross platform software.
* This depends on Azure cloud services for storing the files.
* The key generated will be expired after 3 days for security purposes.So,If the user want to share the file after 3-days he had to reupload the file to give access.

# 3.External Interface Requirements

## User Interfaces

There are four primary elements, and each of these may

be accessed directly from the main window

* Within the windows, primary navigation is provided on the top of the

screen, in a horizontal list of graphical links.

* Buttons for sending and receiving a file.
* Error messages like Connection error and file Upload error will be displayed in popups which the user has controls.
* The keys list let the user know all the keys that has generated in last 30 days.

## Hardware Interfaces

* Compatible with smartphones with Windows,Android operating system and PC’s having windows Version 8 - 10.0 installed.
* Compatibility is not guaranteed for devices without GPS capabilities(Geo-Lock).
* Even if the device is offline the user can download the file after confirmation of the access..
* No limit for size of the files.

## Software Interfaces

After getting access to the file the user can download the file.If the owner applies Geo-lock for access the application verifies the location by GPS location service to provide access.

If the owner applies Network lock the application verifies the SSID and provide access to the file.If the owner applies a password based lock the user has to enter the key which is generated by the application which is unique.

## Communications Interfaces

* File Service allows storing and access of data on the cloud using theSMB protocol.

* **SMB:**(reference **-** <https://en.wikipedia.org/wiki/Server_Message_Block>)

Server Message Block(SMB), one version of which was also known as Common Internet File System(CIFS) operates as an application-layer network protocol mainly used for providing shared access to files, printers, and serial ports and miscellaneous communications between nodes on a network. It also provides an authenticated inter-process communication mechanism.

# 4.System Features

* **Geo-Lock** is a form to control what can be accessed where access to content is restricted based upon the user's geographical location. In a geo-lock , the user's location is calculated usingGPS techniques, by this we can restrict the access to the file to certain location.

* **Network Lock** is a technical to restrict the access of the files to specific networks.

* **Password Lock** is used to protect a file with password,So unlike Geo-Lock and Network Lock,It does not depend on the user location or network.

**Requirement Id Function**

**R0 - file encrypt and upload**

**R1 - select lock**

**R2 - password**

**R3 - geo-lock**

**R4 - network lock**

**R5 - none**

**R6 - managing file**

**R7 - delete file**

**R8 - change lock**

**R9 - generate key**

**R10 - stores files uploaded**

**R11 - Access key Validation**

**R12 - Download file**

4.1.2 **Stimulus/Response Sequences**

* When the owner wants to share a file with some user,first the owner of the file can select a file which will be uploaded and the owner can apply lock to the file.
* The key is saved in the list.
* The receiver has to enter the valid key and access criteria in order to get access(password,location,network).

4.1.3 **Functional Requirements**

* Azure Cloud storage
* Azure storage blob.
* Access key management
  + The key must be expired after 3 days after key is generated.
  + All the access keys the user has used are stored in the database.
* Internet
* Android(4.4 - 6)
* Windows(8.0 - 10.0)

# 5.Other Nonfunctional Requirements

* GPS service.
* Network Adapter.

## Performance Requirements

In the past if a user wants to share his/her private data with other users that are

presently connected to the network that file is accessible for all users.Files which are shared with network lock may not be accessible but available to all the users connected the network.Same in the case of Geo-Lock.In such system we cannot control the access to one’s personal information.

## Safety Requirements:

Using such conventional process two users could not share their private data due

to the factor of privacy and security. So the user may use another alternative.For example geo-lock recognizes and verifies SSID of the network.For secure network it cannot be changed(Network spoofing).But for insecure networks the SSID can be changed,In that case Geo-Lock or Password lock is suggested.

## Security Requirements

## Security is the main criteria for the proposed system.Since illegal access may damage the privacy. So security has to be given in this project.The system must be secured, so that unauthentic users cannot enter in the system.

## Authentication

## No login required.

## For the user to download a file he should have the valid access key and have specific requirement(location,network,password).

## Software Quality Attributes

## Security:

* + Access keys are encrypted and the user should have a valid access key and must fulfill the required criteria like location,network or password criteria to get access.
  + The files will be deleted 3 days after uploading and keys will expired after the three days.

## 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 user

interface.

## Portability:

This works both in smartphones and personal computers.

## Reliability/Availability:

## The availability of the system is a key requirement by nature. The candidate architecture must ensure failover capabilities. Targeted availability is 24x7: 24 hours a day, 7 days a week.

## Business Rules:

## Team Members:

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

## Division of work:

|  |  |  |
| --- | --- | --- |
| S.No | Name of member | Work |
| 1 | K.Priyanka | Analysis(Functional and Nonfunctional Requirements). |
| 2 | Supraja,Manohar | Design (Architectural design, database design and interface design). |
| 3 | Ch.Sriker,Loga Prakash | Coding and Testing. |

# Other Requirements

* Reliability is very important.
* It has to overcome the geospoofing techniques
* Owner should have the capability of changing the lock type even after sharing the file.