**Software Requirements**

**Specifications**

**for**

**one to many file sharing application**

**Version 1.0 approved**

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**Table of Contents:**

[**1. Introduction**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.l0ws3q46v5w3)

1.1 [**Purpose**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.3znysh7)

1.2 [**Document Convention:**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.p9ym7eith8nb)

1.3 [**Intended Audience and Reading Suggestions**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.hfwmc9eh485k)

1.4 [**Product Scope**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.j3qw4o2hyji4)

[**2.Overall Description**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.uhgqahhungge)

2.1 [**Product Perspective**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.2s8eyo1)

2.2 [**Product Functions:**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.e9uujh23m4gw)

2.3 [**User Classes and Characteristics**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.99u9mgbj7qn0)

2.4 [**Operating Environment**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.r0a6mis5c84l)

2.5 [**Design and Implementation Constraints**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.pzkau8o7chb5)

2.6 [**User Documentation:**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.cunvt5jw1hfc)

2.7 [**Assumptions and Dependencies**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.2y1ymyni9gb2)

[**3.External Interface Requirements**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.myvzyqsyb1lb)

3.1 [**User Interfaces**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.2jxsxqh)

3.2 [**Hardware Interfaces**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.fair1wesvlbg)

3.3 [**Software Interfaces**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.ylekybm1xiqe)

3.4 [**Communications Interfaces**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.h9ngjc5jnr1n)

[**4.1 System Features**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.rr4nezf6vv5t) 1

**4.1.1 Description and Priority**

**4.1.2 Stimulus/ Response Sequences**

**4.1.3 Functional Requirements**

[**4.2 System Features**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.rr4nezf6vv5t) 2

[**5.Other Non-functional Requirements**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.3whwml4)

**5.1** [**Performance Requirements**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.2bn6wsx)

**5.2** [**Safety Requirements**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.pjq5697bvuhk)

**5.3** [**Security Requirements**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.e1gyczuxpt71)

**5.4**[**Software Quality Attributes**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.1oaf0sdl34hp)

[**Maintainability**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.naosgg61dp)

**Adaptability**

**Usability**

**Availability**

[**Reliability/Availability**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.4drun0izpe87)

**5.5**[**Business Rules**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.6lzw0yahubgx)

[**Team Members**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.sl2ob2g6tl5m)

[**Division of work**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.9lcmrm7nsvr3)

**6**.[**Other Requirements**](https://docs.google.com/document/d/1DoDkgrgNDFHowbtZfIA6bG0wekYjhFAKj2Asag5W8_0/edit#heading=h.m5mw43f6mhrs)

**1. Introduction**

**Purpose**

The main theme of this document is to construct the required factors for the design and development of a secured file sharing application.This document is referred by designers, testers, programmers and others during the development and maintenance of the software. The user will provide the basis for acceptance testing to the document. Like the inference of the document giving the current requirement s of the project by team of project. Careful review and understanding of SRS by different stakeholders of the project including the end user will ensure that the requirements outlined are correct and complete and subsequently the software developed will provide the desired level of functionality and consistency.

**Document Convention:**

We have used calibri, where the Header size is 14 which is BOLD, Sub-heading size is 14 and the remaining text size is 14.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 dot

**Intended Audience and Reading Suggestions**

Our intended audience can be anyone who are ready to use and mainly its Moto is to influence the students . This document must be created by the development team, documentation writers, admin and our users may consider or study the document to know about the project and to understand the requirements and can also suggest some suggestions if needed. Developers need to know about the SRS to continue with.

**Product Scope**

This application creates a system of file sharing in which the one who creates the file is, by default, its owner. The creator can control the public accessibility of the file or folder. Files will be stored in Microsoft Azure storage services. The creator can also set an access level for regulating permissions. The storage steps guide the users and enterprises with various capabilities of how to share the data. This app help the user how to share files with more protection and to the protect and people based on our state of the art Network Lock and Geo-Lock.This app does not allow the data to be stored 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 allow the user who doesn’t have the owner’s permission.

**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**

With this app we help the software to handle the data with privacy.

* The project is mainly based on how we share data between users without letting various clients sharing this with more security.
* How to stop the users from accessing/controlling  the files.
* Owner can apply the lock of his choice.

**Product Functions:**

* Login is not required .
* User data is stored in the database.
* The list of keys are displayed after authentication.
* User can add any type of files which he wants to share with others.
* This is one to many file sharing so, User can select any no. of users to share file with them.
* All the files which are shared by the clients are viewed with their names and type of data file they share and date. User can select all files or a single file at once to copy files in his local memory.
* User can reset his password after the file transfer also.

**User Classes and Characteristics:**

* All the user Files are stored in azure storage services as told earlier, REST API’s take care of sharing the file and flow of the data.
* All the history of access keys and the user is stored in the database.
* Now the owner can insert the files for sharing and apply any of the lock according to the requirements.
* The owner also can download files from this app to his local memory area.

**Operating Environment**

We don’t require any specific type of operating environment for processor, HDD, RAM. But the operating system should be of windows 8.1-10.0, android 4.4.-6. it is not supported for linux and IOS operating systems.

**Design and Implementation Constraints:**

* Server capacity is to calculate how many users can access or can share at once. If the no of users it causes the traffic in network and making the server works in a low state. The requirements at the designing time of that users may keep their shared data in  Server’s memory for a long time, so the user should require sufficient memory in this case.
* The cloud storage provides free space of 15 gb.
* Even though the private setting can be managed easily, we should be careful that it does not expose our face or profile to unknown user.
* All videos and image files that are shared using this app can be stored via Google Drive which must be downloaded each time they are accessed ie… results in time consuming.
* The current version of the application does not support Linux editions,IOS.

**User Documentation:**

* The document must have required solutions to teach the users how to use and

Configure in the system.

* The documentation given with should be clear cut supportive to act as the first line of support for any type of problem.
* The documentation must also include details regarding

The knowledge of set-up

Configuration

Maintenance

On-going management

Error recovery procedures.

**Assumptions and Dependencies:**

* This is not cross platform software.
* This depends on Azure cloud services for storing and accessing the files.
* As mentioned above the user get started with 15 GB free cloud storage space,

          So,If the user runs out of space hehas to

Either empty some space.

Additional storage space is offered on purchase.

As key generated will be expired after 30 days for security purposes.So,If the user want to share the file after 30-days he had to generate another key to have the accessibility.

**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.
* list of 4 options user have with which the user locks the 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.
* 30 types of files are supported by Microsoft Azure.
* File of any size can be used unless it exceeds the storage limit.

**Software Interfaces**

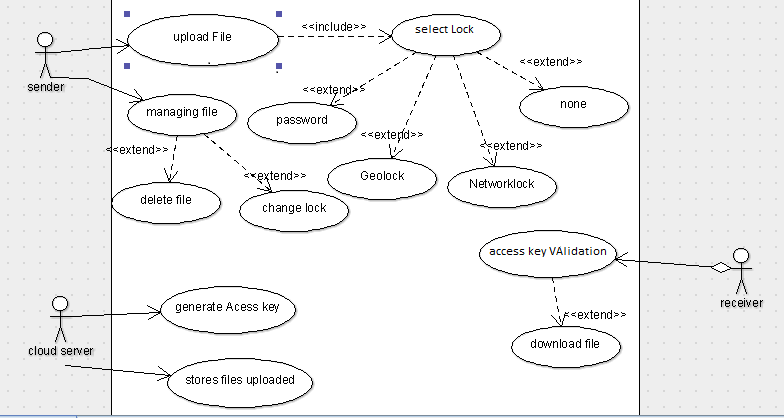
After getting access to the file the user can download from the azure.If the owner applies Geo-lock for access the application requests GPS location service to provide access.

If the owner applies Network lock the application verifies the ip address for providing 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 encrypted.

**Communications Interfaces**

* The User needs to login with his microsoft account for using the application.
* File Service uses SMB protocol on th cloud to support storing and access of data.
* **SMB :** Server Message Block, one version of which was also known as CIFS:Common Internet File System. Which operates as an application-layer network protocol that is used for providing shared access to files, printers, and serial ports and miscellaneous communications between nodes on a network, authenticated inter-process communication mechanism.

**4. System Features**

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* **Geo-Lock** is a form of password to control how it can be accessed where the access to client is restricted taking the user's geographical location as main thing. In a geo-lock, the user's location can be calculated by usingGPS techniques, by considering the result of this it is determine whether the system should approve or deny access to that particular client.
* **Network Lock** is a technique to control the access of the files based on specific networks.
* **Password Lock** is used to restrict the file with password, So unlike Geo-Lock and Network Lock, it can be done by sharing the password unlike tracking the gps and network.

Requirement Id Function

R0 file encrypt and upload

R1 type of 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 user wants to share a file he can done this only through the Microsoft account, he can select the required file to be uploaded with respective lock. The key is must be saved in the list.
* The receiver has to give the valid key in order to get access in password lock.

4.1.3 **Functional Requirements**

* This application can be accessed with only through Microsoft account. In case of Geo lock Gps is required. If Exception handling and recovery ie.. if there is an error connecting to internet the file uploading/downloading must be in resume rather than cancelling it.
* The key has to be expired within a month after it is created .

**5.Other Nonfunctional Requirements**

**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. Because of the data which is shared not only visible/accessible for specific users but it is available for all the users that are currently connected to the network. In such system no security or privacy achieved because the shared data freely flows in the network so, private data may access by any user and can be modified by another user.Same is the geolock

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 process which time consuming and difficult than this one.

**Safety Requirements**

**S**afety requirement for this software is based on authentication, i.e. Login Name and Password. If user is valid then it can login while if user is invalid then is not access any service of System. In case user is New Client separate registration of that user may be done to make him authorized for login. A file must be visible and specific users

**Security Requirements**

Security is the main criteria for the proposed system.Since illegal access may corrupt the database. 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 authentication required for the user to login.
  + 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 automatically after 2 days of uploading.
* **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 the significant changes can be made for better use of program interface in the latter stages.

* **Portability:**

This app can be run in both smartphones and personal computers.

* **Reliability/Availability:**

The availability of the system is a key requirement by nature. The candidate architecture/design must give the capabilities for failover. Targeted availability is continuous and is 24x7.

**Business Rules:**

* **Team Members:**

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

* **Division of work:**

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

**Other Requirements**

* Reliability is very important.
* This app has to overcome the geo spoofing techniques
* Owner should know how to access the lock even after sharing the file to have privacy.