Requirements Specifications

File storing system

CASKET

1.Introduction

This documents describes the requirements specifications of the File storage system.

This documents includes the functional and non-functional requirements or the system.

The scenario and UML diagrams are created as a part of this document.

2.Purpose

An **online file storage system,** named ***CASKET*** is an internet hosting service specifically designed to host user files. It allows users to upload files that could then be accessed over the internet from a different computer, tablet, smartphones or other networked device, by the same user or possibly by other users, after a password or other authentication is provided.

This Personal file storage service is aimed for private individuals, offering a sort of "network storage" for personal backup, file access, or file distribution. Users can upload their files and share them publicly or keep them password-protected.

Document-sharing services allow users to share and collaborate on document files. This service is originally targeted for files such as PDF's, word processor documents, and spreadsheets. However many remote file storage services are now aimed at allowing users to share and synchronize all types of files across all the devices they use.

3.Scope

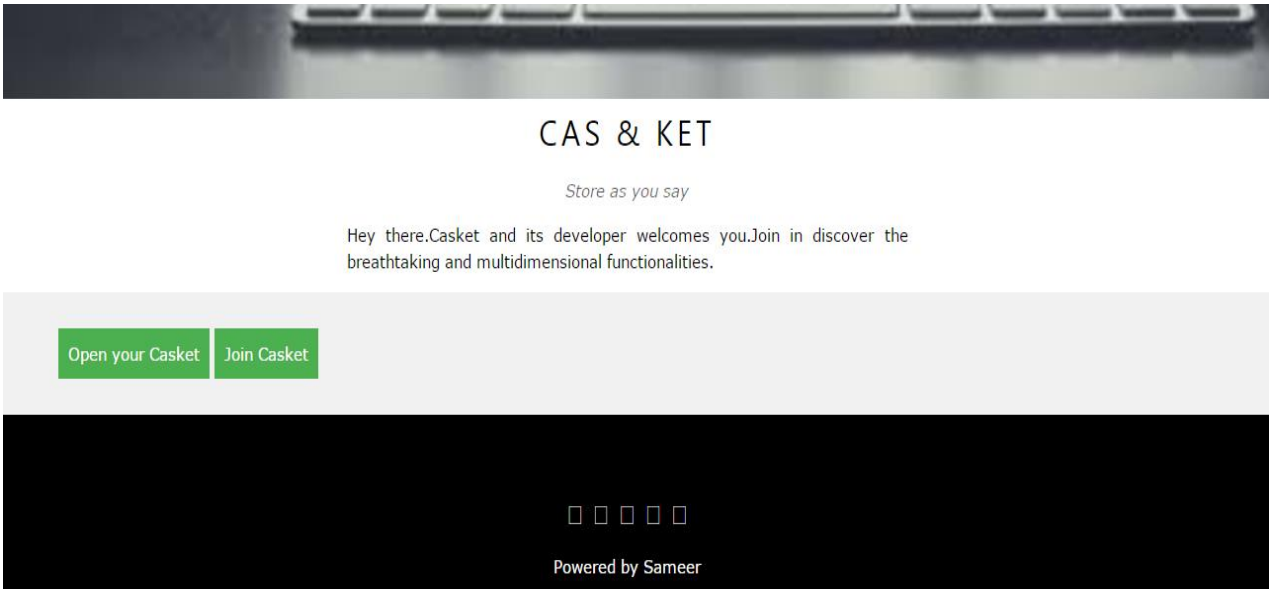
The scope of the user is as follows:

The user logs onto the site using personal username and password details. After authentication the user is directed to the page where he/she can upload files(text, pdf, images etc.).These files

are stored online and can be downloaded from any remote location around the globe. The system will help to systematically group files and work as a backup for the offline system.

4.Objective and the subjective criteria for the success of the project.

- Allow Internet users to easily upload one or more files from their hard drives (or from a remote location) onto the host's server free of charge. The files can be downloaded easily.
- Secure login for every individual user with security of the files stored.



5.Functional Requirements

(a) **Login**

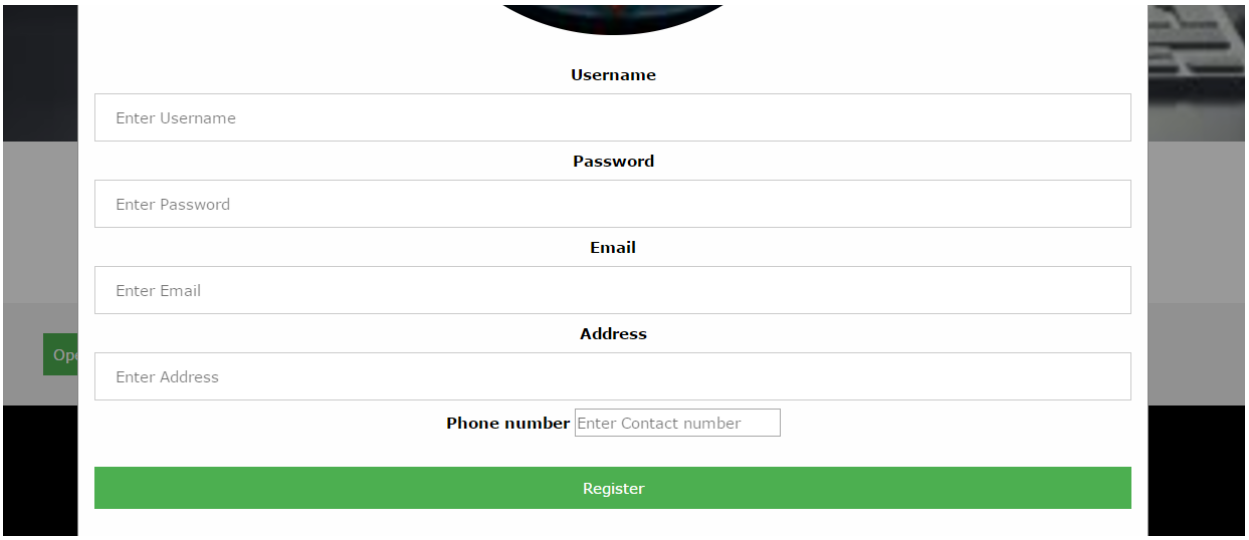
A portal based system where each user will have his/her own username and password.

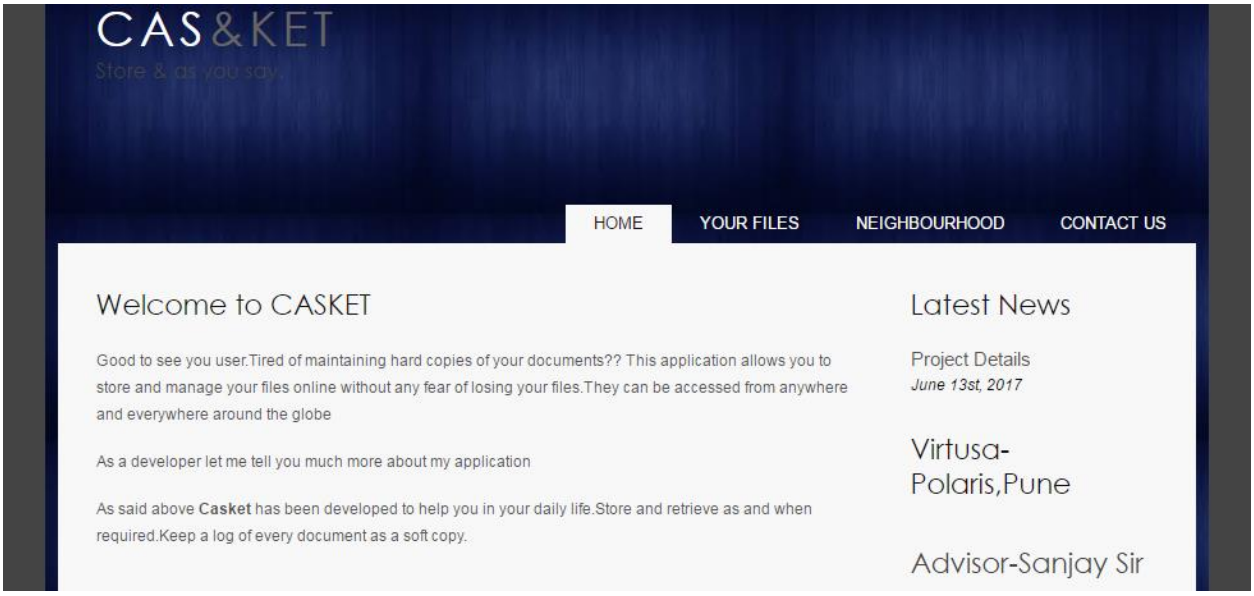
- A new user can "Sign in" as new member of the system.

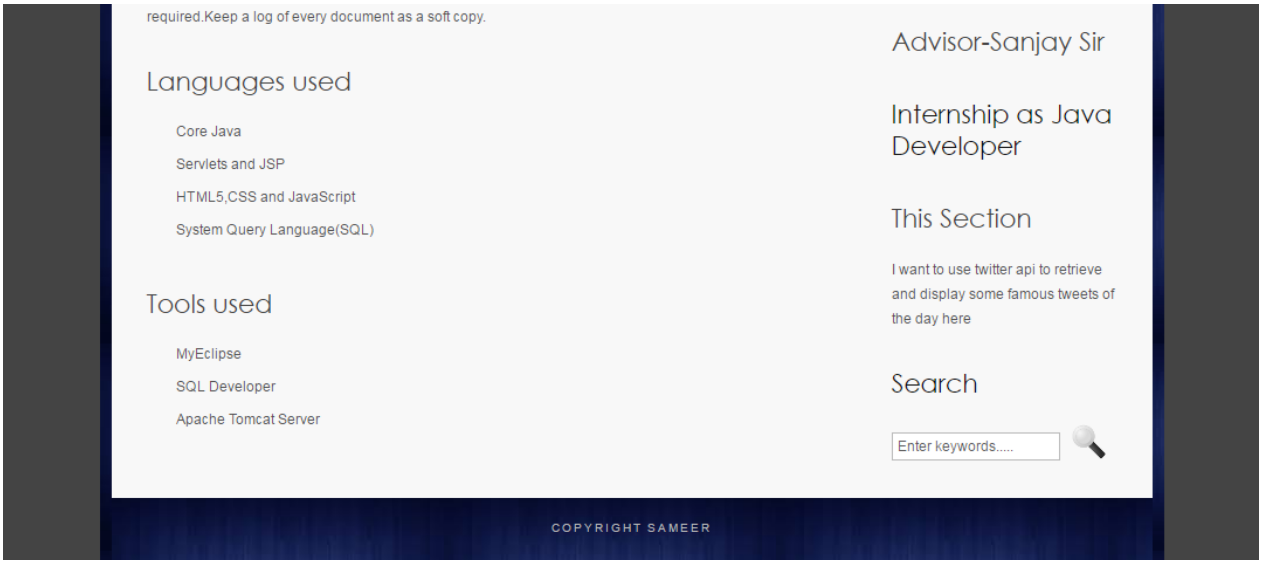
1. The confirmation of the new "Sign in" will be received on the email address provided by the user.

- Already existing users can login. They would be directed to home page of the system only after authentication.

1. If any of the credentials do not match with the data in the database, the system will abort the login and display an "Incorrect Credentials" message.



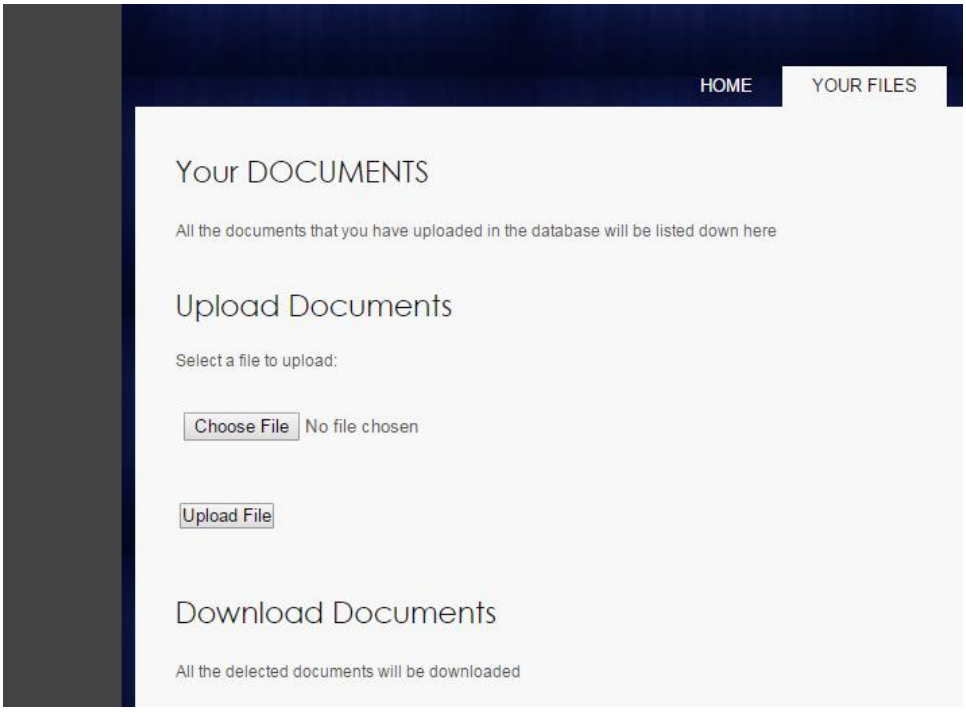




(b) **Upload**

After authentication the user reaches the homepage where a functionality of uploading the file is provided by the system. This enables the user to upload any format of a file on the online system.

- Text documents, PDF's, spreadsheets.
- Images files (JPEG,PNG,TIFF, GIF, BMP, PPM, PGM, PBM, and PNM.)



(c) **View**

After uploading the files the user can view all the files that he/she has uploaded to the server.

- Functionality to sort the files according to date, size.
- Functionality to mark favorites and view them separately.

Search bar to enable searching of a particular file from the database.

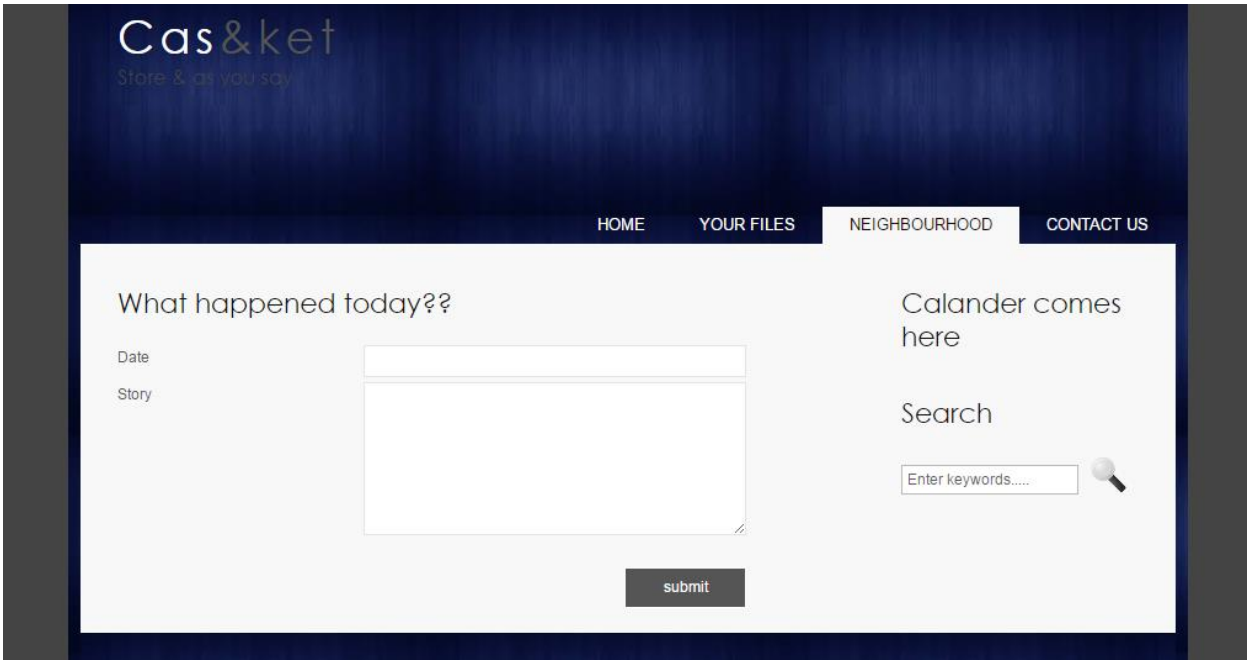
(d) **Download**

The files can be downloaded and stored to their personal hard drives with the help of URL provided by the system.

(e) **Neighborhood**

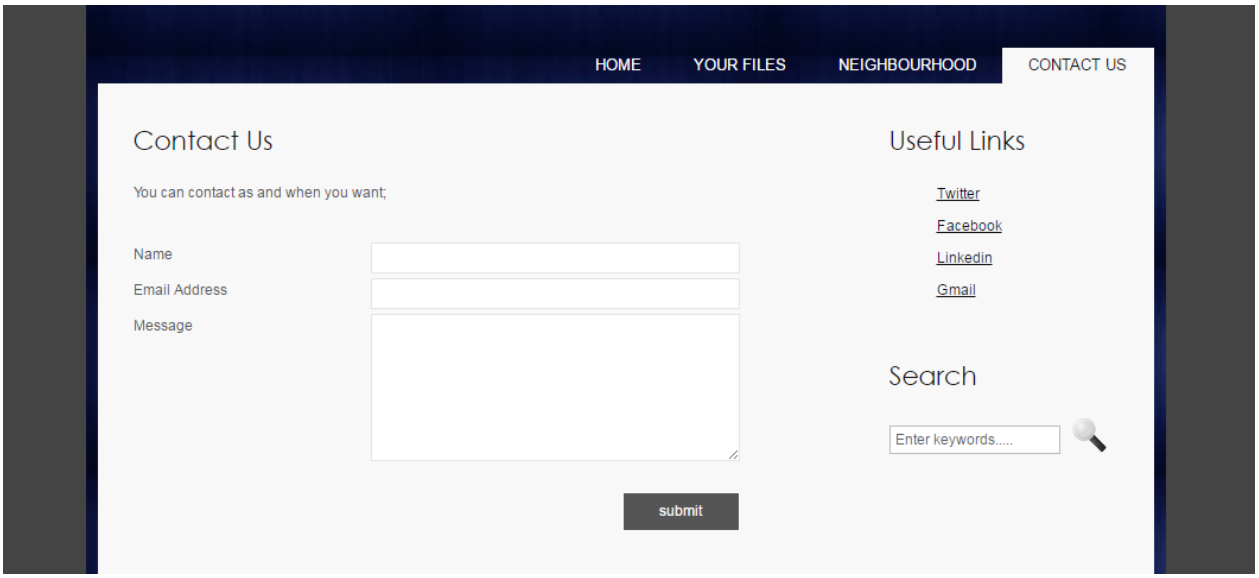
Every user will have a functionality to change his/her profile settings as and when required.

Writeups section if the user wants to keep any notes.



(f) **Sync Support**

The system will provide support to redirect your account to the Gmail account and transfer files.



(g) **Logout**

Functionality to logout after the usage of the system.

5.Non-Functional Requirements

- ✓ **Usability**

Casket will be easier to access using clear words, menus and drop down lists. User friendly front-end with highlighted features.

- ✓ **Reliability**

Fully reliable and secure as all the files(data) will be stored in the database in an encrypted form. As the system is portal based, no unknow user can access any other users data.

- ✓ **Performance**

The system will provide fast process depending on the internet connection of the client system.

✓ **Supportability**

This system will be compatible and will support all the modern technological devices like computers, smart phones, tablets etc.

✓ **Interface**

Can be accessed via any browser software. For e.g.: Internet Explorer 5 or higher, Mozilla Firefox ,Netscape Navigator 4.7 or higher, Google chrome, Safari, Opera etc.

✓ **Legal**

The system has no subscription of membership fees. It will be appreciated to report discrepancies and to not misuse the functionalities provided by the system.

6.EXTERNAL INTERFACE REQUIREMENTS

6.1 USER INTERFACES

- Front-end software: Java version
- Back-end software: SQL+

6.2 HARDWARE INTERFACES

- Windows XP.
- Browser which supports CGI, HTML & JavaScript,CSS5.

6.3 SOFTWARE INTERFACES

Software used	**description**
Operating system	We have chosen Windows XP operating system for its best support.
Database	To save the file records, we have chosen Oracle SQL+ database.
Java **Bean and DAO**	To implement the project we have chosen Java language for its more interactive support.
External API's	APi's of Twitter, BBC news, Google Calendar, Gmail used to make the application more user- friendly.

6.4 COMMUNICATION INTERFACES

This project supports all types of web browsers.

7. OTHER NONFUNCTIONAL REQUIREMENTS

7.1 PERFORMANCE REQUIREMENTS

The steps involved to perform the implementation of documents data-base are as listed below.

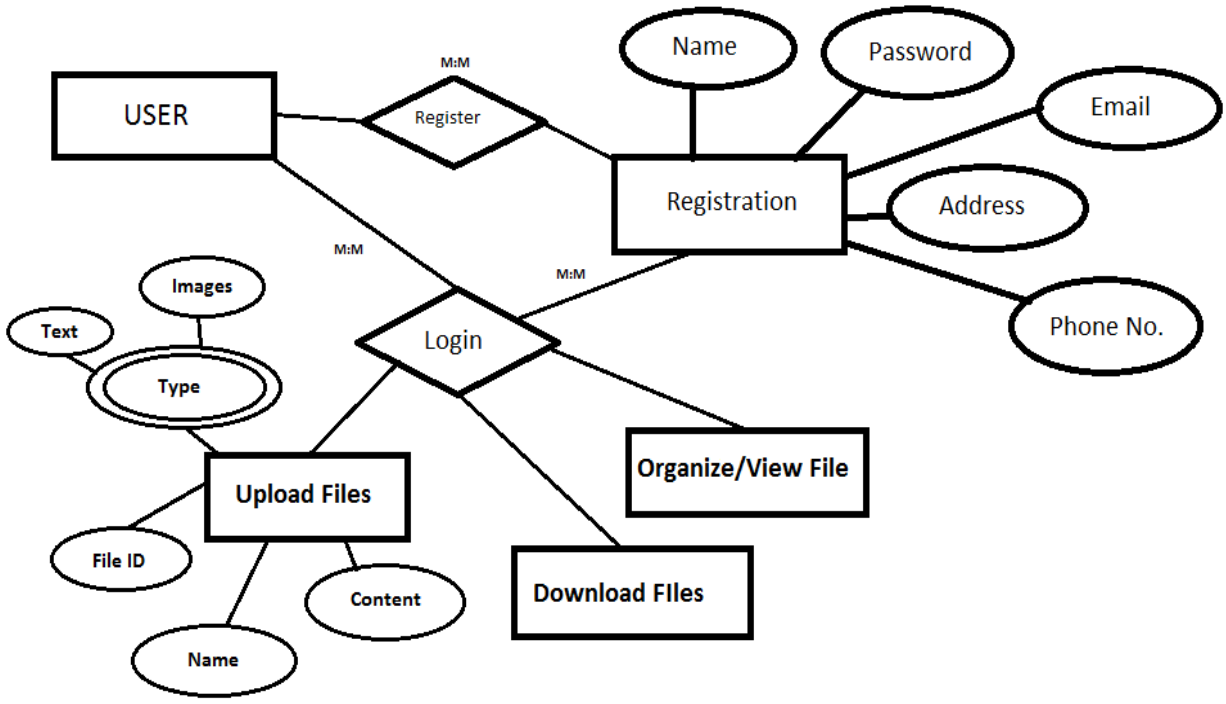
A)E-R DIAGRAM

E-R Diagram constitute a technique for representing the logical structure of a database in a pictorial manner. This analysis is then used to organize data as a relation, normalizing relation and finally obtaining a relation database.

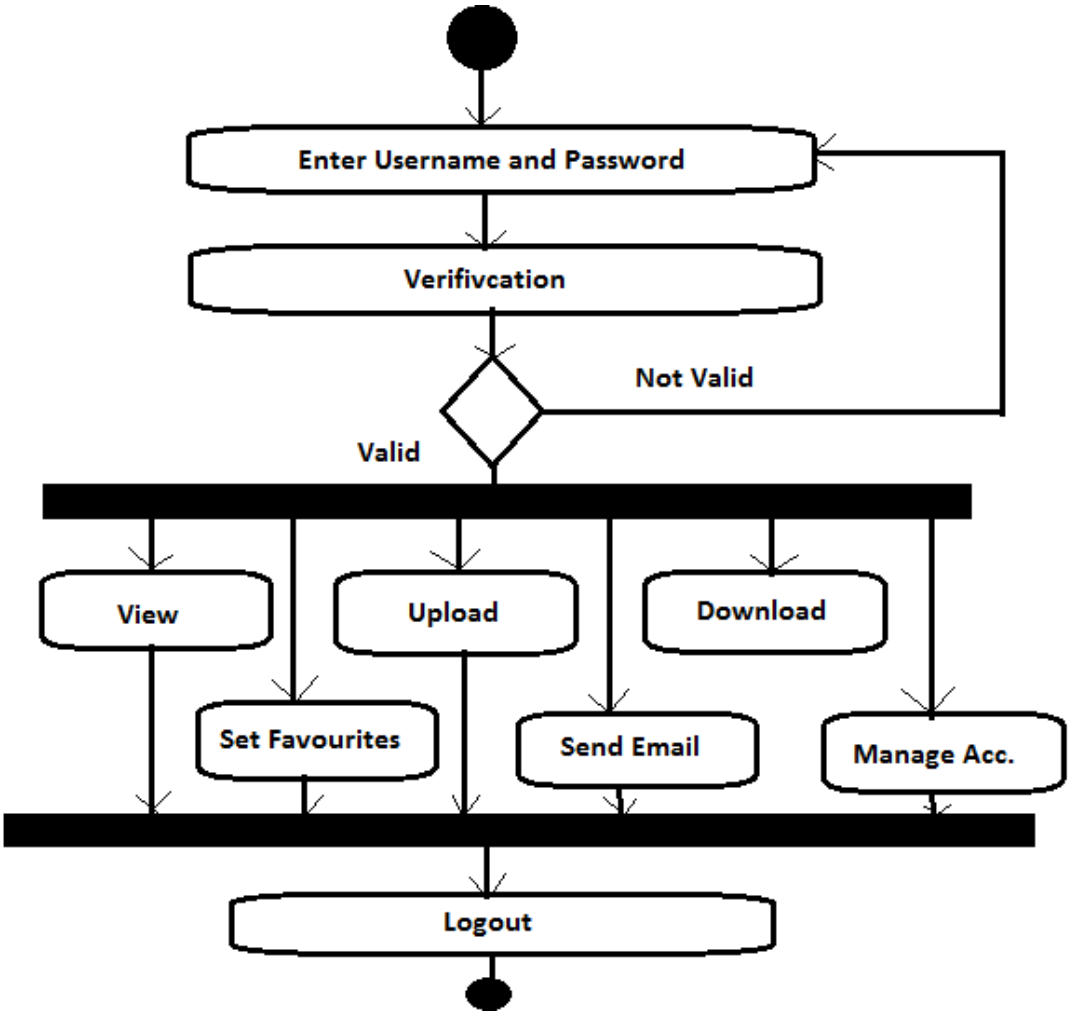
ENTITIES : Which specify distinct real-world items in an application(Users, Files)

PROPERTIES/ATTRIBUTES : Which specify properties of an entity and relationships.

RELATIONSHIPS : Which connect entities and represent meaningful dependencies between them(Upload, download, organize, view)



Activity Diagram



B) NORMALIZATION :

The basic objective of normalization is to be reduce redundancy which means that information is to be stored only once. Storing information several times leads to wastage of storage space and increase in the total size of the data stored.

If a Database is not properly designed it can gives rise to modification anomalies. Modification anomalies arise when data is added to, changed or deleted from a database table. Similarly, in traditional databases as well as improperly designed relational databases, data redundancy can be a problem. These can be eliminated by normalizing a database.

Normalization is the process of breaking down a table into smaller tables. So that each table deals with a single theme. There are three different kinds of modifications of anomalies and formulated

the first, second and third normal forms (3NF) is considered sufficient for most practical purposes. It should be considered only after a thorough analysis and complete understanding of its implications.

7.2 SAFETY REQUIREMENTS

If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage (typically tape) and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.

7.3 SECURITY REQUIREMENTS

To enable proper security within the database, we have implemented two methods.

- Encryption

The files are converted into a non-readable format using the authentication key and the AES encryption algorithm

- Decryption

The encrypted files can be again retrieved back into their original formal by the decryption algorithm before being downloaded.

SPECIAL THANKS

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