System Requirement Specification

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Project Name: File Sharing System

Introduction

File sharing is the practice of distributing or providing access to digital media, such as computer programs, multimedia (audio, images, and video), documents or electronic books. Online File Sharing is the way of sharing files among different users across the internet. A common form of sharing files over the internet is for a user to upload files to a website and allow other users to download them from the website. This project is developed for files and folder sharing. It is one type of web application that is used to share files and folders worldwide.

This project is a File Sharing System. In this system, a user has no need to use the third-party software to share their files and folders globally. They just register in the site and share their files and folder worldwide. Users of an online file-sharing website can use features like upload, download, share, search and so on. In general, this document prioritizes in writing the schema of the file sharing system that holds in this project and then analyzes the tools in details that are available in the web application. Therefore, there are lots of abstractions to represent the objects and their behavior on the system in a more convenient way.

This document is intended for any individual user, developer, tester or documentation writer that needs to understand the basic system architecture and its specifications. Here are the potential uses for each one of the reader types:

- **Developer**: The developer who wants to read, change, modify or add new requirements into the existing program, must first consult this document and update the requirements with an appropriate manner so as to not destroy the actual meaning of them and pass the information correctly to the next phases of the development process.
- **User**: The user of this program reviews the diagrams and the specifications presented in this document and determines if the software has all the suitable requirements and if the software developer has implemented all of them.
- **Tester**: The tester needs this document to validate that the initial requirements of this programs actually correspond to the executable program correctly.

This program file sharing system offers a complete and easy way to share different types of file and folder through the internet. Its main objective is to set up a file sharing environment that allows users to upload files and share the link of the respective file to other users. The user who has the link can download that file from the internet.

Overall Description

User Classes and Characteristics

For conventional reason we name each of the user classes-actors with this format.

Physical Actors:

User:
- The user is the one that registers in the website with his personal details and a unique username and password.
- After registration user can log in the site with his username and password.
- After login user can edit his/her profile as well as share his/her files or folders for other users and he/she can download files of other users.
- A user can also prevent his/her files and folders from other users from downloading.

Admin:
- Admin is the person who is responsible to control all the users.
- Admin can access all the user accounts and able to change their username and password as well as profile details.
- If the admin wants, he/she can drop or block a user to access the resources of the website.
- Admin can also create or delete a user in the website.
- Admin can reactivate the blocked accounts or recover deleted account.

Guest:
- Guest is the user who is not registered to the site.
- He is just a visitor to the site.
- He can also become a member of the site if he/she wants.

Operating Environment

This program will operate in the following operating environment:
- Apple Mac OS X
- Linux/Unix
- Microsoft Windows

Functional Requirement

Steps:

Since the project was done for educational purposes, there was no size limit given to users to upload or download files. The main features of the website are:

- **User Registration**
  New users can register to upload files and create their own file system. The user management was easily integrated into the website. Users have their own profile page to update their profile. Other than these users have got the option to change their password.

- **User Login**
  A user can sign in with registered email and password to their own profile and also can sign out.

- **Upload Files**
  This part is the heart of the project where the user can upload a file. The user does the upload in a step by step manner. When the user uploads a file, he/she will be given a progress bar indicator to show what the status of the upload is. A user can upload any kind of files like image, document, video, pdf file and so on.

- **Share Files**
  After finishing the uploading process, a user can choose to share the file by a generated link. A user who has the link, only he/she is able to see the file while searching or downloading.

- **Search**
  There is a search bar on the website. A user can search by the name of the file which is shared with him on the search bar.

- **Trash**
  A user can delete files from his profile. The removed file will move to the trash folder.

Priority:

- High Priority – Upload files, Share file
- Medium Priority – User registration, User sign in/ sign out
- Low Priority – Delete, Search

Nonfunctional Requirements:

Performance

When a file is stored in the file system and direct access to the file is given, the time needed to download the file would surely be lesser than the time needed to download a file that is stored in the database. If files that are being stored are usually small, then the system performs well. When searching a file, if the file is stored, the search would be faster since one query can be used to search the file name.

Security

User's password is encrypted so that others cannot recognize the password to access his profile. Files stored in the database in this system. That's why the data is secured and safe and there is no risk to lose any file.

Software Quality Attributes

Availability: Checking that the system always has something to function and always pop up error messages in case of upload or download failure. In that case, the error messages appear when something goes wrong to explain availability problems.

Usability: Checking that the system is easy to handle. Selecting more files at once to share is not possible in this system.

Functionality: The system provides the right tools for uploading files and sharing those files.

Environment Restrictions

Programming Language:

- HTML
- PHP
- MySQL
- CSS
- JavaScript