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File Sharing System using Django-REST

Shivani Kshirsagar¹, Vallari Bhuse², Srushti Mulage³, Shifa Shaikh⁴, Parth Undale⁵,
Jayshri Sachdev

Diploma Student, Department of Computer Engineering, AG Patil Polytechnic Institute, Solapur, Maharashtra, India¹

Diploma Student, Department of Computer Engineering, AG Patil Polytechnic Institute, Solapur, Maharashtra, India²

Diploma Student, Department of Computer Engineering, AG Patil Polytechnic Institute, Solapur, Maharashtra, India³

Diploma Student, Department of Computer Engineering, AG Patil Polytechnic Institute, Solapur, Maharashtra, India⁴

Diploma Student, Department of Computer Engineering, AG Patil Polytechnic Institute, Solapur, Maharashtra, India⁵

Lecturer, Department of Computer Engineering, AG Patil Polytechnic Institute, Solapur, Maharashtra, India⁶

ABSTRACT: File sharing has become an essential aspect of modern communication and collaboration, as it enables users to share information quickly and easily, irrespective of their location or time zone. The Internet has made it possible for people to download and upload large amounts of information and send it anywhere in the world at a very low cost, very quickly and very securely. Through our project we are trying to design an application for the same but will be distributed at no monetary cost to the end user. It provides a service which lets other peers who have the url download files in its public directory.

KEYWORDS: File Sharing, API Integration, Csrftoken, Django REST Framework, Security

I. INTRODUCTION

In recent years, file sharing has become an essential component of how we work and collaborate, allowing individuals and organizations to easily share files with colleagues, clients, and partners. Both uploading and downloading are essential processes for file sharing, as they enable users to transfer files between devices and locations. These websites provide a convenient and easy way for users to share files with others, regardless of their location, and without having to rely on physical storage devices like USB drives or CDs.

File sharing websites can be particularly useful for remote teams, collaborators, or individuals who need to share files with others in different locations. Instead of relying on physical storage devices, users can simply upload files to the website and share a link with others, allowing them to access the files from anywhere with an internet connection. In addition to facilitating file sharing, some file sharing websites may also offer collaboration tools, such as the ability to edit or comment on shared files in real-time. This can help improve productivity and streamline workflows for teams working on joint projects. Overall, the purpose of a file sharing website is to provide a convenient, efficient, and secure way for users to share files with others, regardless of their location or the type of device they are using.

As file sharing becomes easier and more commonplace, users will demand greater access. When you no longer need to login into an email account to share documents, and can instead transfer bits of files over time with a simple website. This means that people can transfer bits of files over time from anywhere with a single application, allowing them to take advantage of the convenience offered by this technology while ensuring security at all times. As such, it is clear that one way in which file sharing has encouraged innovation is through its ability to offer anytime-anywhere access.

II. RELATED WORK

In the past, file sharing was often done through peer-to-peer (P2P) networks or through email attachments. However, these methods were often slow, unreliable, and insecure. Additionally, P2P file sharing often raised legal concerns related to copyright infringement and piracy.



File sharing websites address many of these issues by providing a centralized platform for users to share files with others. These websites offer features such as cloud storage, collaboration tools, and secure sharing links, making it easier for users to work together and share files in a secure and efficient manner.

File sharing websites have become particularly important in the age of remote work and virtual collaboration. With more people working from home and collaborating with teams around the world, file sharing websites have become an essential tool for sharing and collaborating on files. Overall, file sharing websites have become an important part of the digital landscape, providing a convenient and efficient way for users to share and collaborate on files in a secure and reliable manner.

While there are many file sharing websites available online, not all of them offer the same level of accessibility and affordability as a free file sharing website. By offering a completely free service, our file sharing website stands out from the competition, making it more accessible to individuals and organizations with limited budgets or financial resources. This allows users to share and access files without any barriers or restrictions, which can be particularly beneficial for those who need to transfer large files or collaborate with others remotely.

With our website, users can enjoy a seamless and user-friendly experience without having to worry about the cost, making it a more attractive option for those looking for a free and reliable file sharing solution.

III. METHODOLOGY

Swift Share is intended for individuals, organizations, educational institutes, and businesses that need to share files for various reasons quickly and safely. It offers a convenient way to share large files, including documents, images, videos, and audio files. With the ability to share files quickly and easily, businesses can collaborate more effectively, while educators can share resources with students more efficiently.

The methodology of Swift Share is centered around the use of modern technologies to create a secure and reliable file sharing platform. The project utilizes Python Django Rest Framework, HTML/CSS for frontend development, and Postman for testing purposes. These technologies are used in conjunction with one another to ensure that users can securely share files with others without worrying about any potential security risks or data breaches.

To begin the process of creating this platform, an API using Python Django Rest Framework was created which was responsible for handling all requests related to uploading files as well as providing download links after successful authentication checks had been made on both sides (sender & receiver). This API also included CSRF token-based security measures which were essential in ensuring that only authorized users could access these shared links. Additionally, a web interface was developed using HTML/CSS so that users could easily upload their desired files onto our platform and then generate secure download links.

Finally, Postman was employed during the testing phase to further verify all aspects of functionality from end-to-end before making it available publicly through various online channels such as social media platforms or email services etcetera . All together this methodology has enabled us to create a robust yet user friendly file sharing experience where anyone can quickly send large amounts of data between two parties without having to worry about any potential privacy issues or other forms of cybercrime associated with traditional methods such as FTP transfers,P2P systems etcetera .

Swift Share has been crafted to focus on providing a simple,efficient, and secure file sharing system that is accessible to all users, regardless of their technical knowledge or operating system. The website's design and functionality were developed to be intuitive and user friendly with clear navigation and minimal technical jargon. It is OS independent, making it accessible to users on different platforms. One of the key features of this project is its ability to be OS independent, which means that it can be accessed from any device or operating system, without any compatibility issues.This is particularly important for users who work on different platforms or devices and need a seamless file-sharing solution that is easy to use.

FilePond also supports several advanced features that make it a powerful tool for file management. For example, it supports batch uploads, which enables users to upload multiple files at once. It also supports file cropping, resizing, and image optimization, which can help to reduce the size of uploaded files and improve website performance.

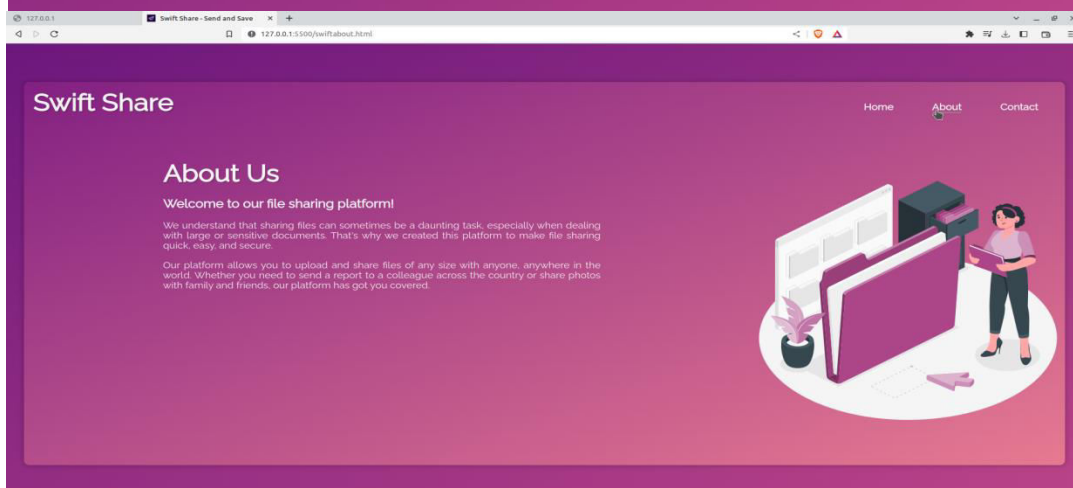
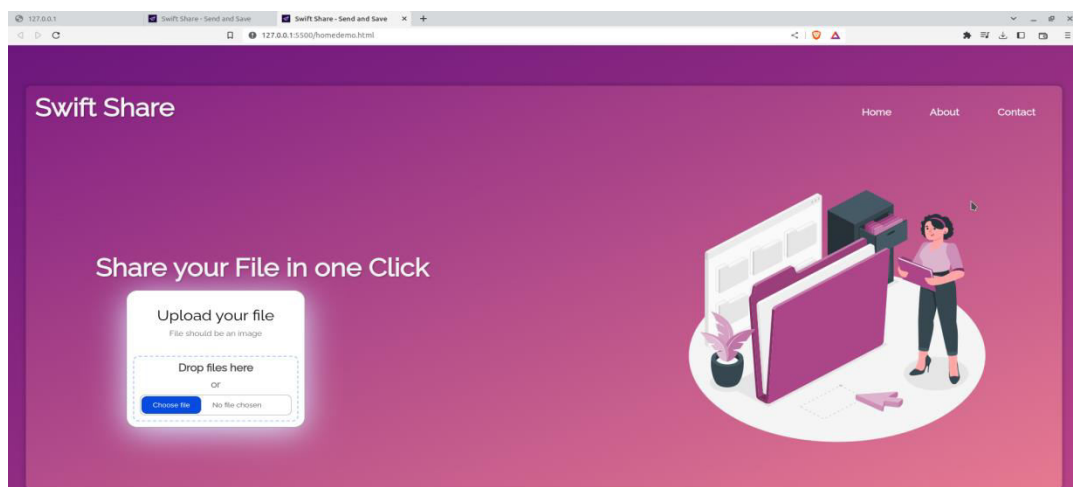
The website is designed to be web-based, which means that it can be accessed from any web browser, such as Chrome, Firefox, Safari, or Edge, without the need to download any software. This makes it extremely convenient, as users can

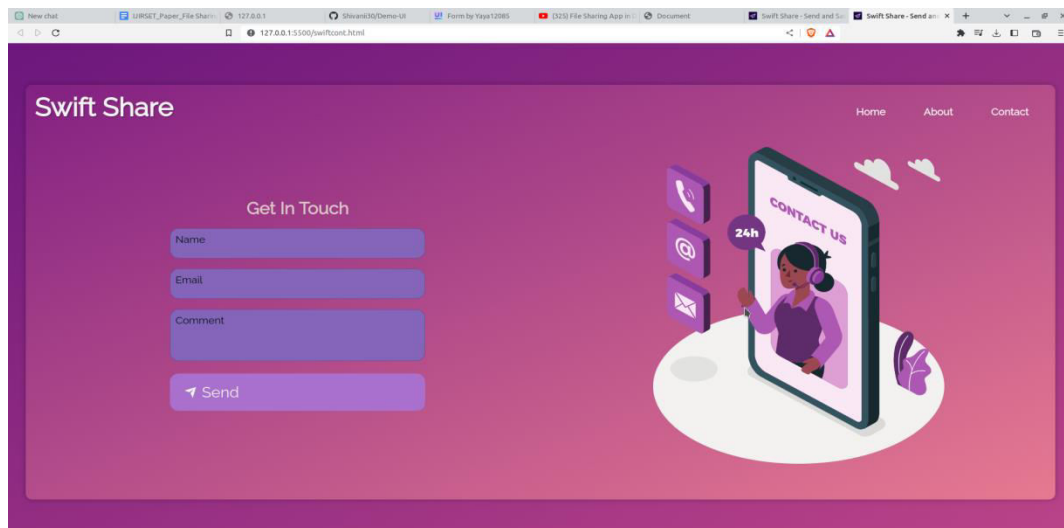


access it from anywhere, at any time, without the need to install any additional applications or plugins. This also means that users can share files with others who are not using the same operating system, as long as they have access to the internet and a web browser.

IV. EXPERIMENTAL RESULTS

Figures show the results of Swift Share. Figs. 2, 3, 4 (a) shows the upload section Users can drag and drop files onto the upload area, and the library automatically handles the file upload process, including file validation, progress tracking, and error handling.





V. CONCLUSION

In conclusion, the development and implementation of a file sharing website using Django REST framework and CSRF token can offer a number of benefits, including efficient transfer of files between individuals and businesses, cost savings compared to traditional physical storage and transfer methods, and increased accessibility to shared files across devices and locations. By incorporating modern technologies such as the Django REST framework, it is possible to create a secure and user-friendly file sharing website that is easily customizable and scalable to meet the needs of diverse users. Additionally, the use of CSRF token as a security feature can help protect against unauthorized access and modification of user data, ensuring the integrity of the website and the safety of user information. However, it is important to consider the legal and ethical implications of file sharing, such as copyright infringement and privacy concerns, and implement measures to address these issues. Overall, a well-designed file sharing website using Django REST framework and CSRF token can be a valuable tool in today's digital world information exchange while minimizing logistical barriers.

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