



# File Transfer and Document Approval Web Application

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**Abstract:** Documentation is widely considered to have greatest priority and comprises of records that may provide proof, evidence, or a record of something. The project's main concept focuses on online file transfer and documentation. By automating processes and reducing the time spent on those activities, the proposed application enables users to submit papers online and perform a wide range of other essential types of operations. It also offers users unique and secured logins. The file size is constrained to avoid crashes and accepts document formats like ppt, word, etc. Before being stored in the database, the file extensions are verified.

**Index Terms -** document, automatic, operations, secured, database, extension.

## I. INTRODUCTION

Documentation is any written or pictorial content that acts as a record or as official information. It might have notes or remarks on the texts, images, etc. All the processes involved in transferring data from sources to users are covered by the technique of documentation. Since there are various kinds and volumes of documents, handling methods are frequently effective. It can be used to inform, give guidance, educate them, and execute (or forbid) something. Documentation can be presented on paper, online, or on digital or analogue media, like CDs or audio tapes, as a form of knowledge management and organizing. Hard copies of documentation are those that are written on paper, and soft copies are those that are generated in computers or laptops.

Historical documents have been used for centuries to preserve significant historical information about a specific person, location, or occurrence. As a result, they could be utilized as primary sources, which are crucial components of the historical methodology. In general, anthropologists, historians, and archaeologists are more interested in documents that describe the daily routines of common folk, including how they ate, how they interacted with others in their families and social groups, and their states of mind. With the help of this information, they were able to try to understand and describe how society functioned at a particular time in history.

Personal letters, photographs, contracts, newspapers, and medical records are just a few of the modern-day documents that will likely be regarded as valuable historical items in the future. Due to the numerous limitations of hardcopies, consumers now prefer soft copies to them. One of these issues is a lack of storage space, as paper documents may take up a lot of space and a lot of paper is created every day. Additionally, the security of printed papers may be questioned since they are more vulnerable to loss, negligent handling, or destruction than digital data, which may be stored securely on hard drives or other electronic devices due to encryption. They could be vulnerable to danger since manual records are so readily destroyed, lost, or seized. A fire or another natural calamity might cause data loss. Document transportation may be problematic in a paper-based system that is unreliable, costly, and inefficient. Sending an email with an attachment is all it takes to share information when a digital document management system is in place. A document that has been printed on paper must be entirely rewritten if you want to make changes to it. If you want to make further changes, you must repeat this process. Making a copy of the original document will help you identify all the changes that have been made.

The associated costs are one of the biggest downsides of paper-based document management systems. One will require additional printers, photocopiers, stationery, and other office supplies in addition to tones of paper. These expenses add up over time and are often extremely expensive in many firms. When utilizing paper documents, collaboration is difficult. If several department heads are required to generate a single document, they will need to print off several copies, revise each one independently, distribute their copies among themselves, and then continue working on the final product. Digital document management systems provide rapid and simple user collaboration. They can keep track of each change that is made. Increasing your company's paper use will not help your business's green credentials and is bad for the environment. By investing in a digital document management solution, you will reduce the amount of paper used at work and increase productivity. Additionally, it provides a mechanism for companies to modify their entire strategy for managing and storing data.

We created the idea of online documentation management and file transfer to address all these issues. Numerous advantages exist for online documentation. The ability to share data rapidly and easily through an online workplace may be extremely beneficial to any company. Workflow may be significantly accelerated by digital data viewing, updating, and sharing. Employees can transmit, receive, and exchange data in a lot less time than they would if they were utilizing paper documents to perform the same task. Software for online document management substantially accelerates the sharing and collaborative process. It boosts the data's Productivity and Efficiency.

High-quality online document management tools, such as Huddle's Collaboration Software, provide many levels of security to safeguard your company's private information. Since backup procedures are in place to guard against server failures and power outages, your data is also secured in these situations. It is simpler to obtain data from both the past and the present since the "modern" way of keeping documents digitally and the "ancient" method of storing them in file cabinets cannot be contrasted. It goes without stating that having a central location where digital copies of papers may be kept is the ideal solution. The software's integrated search capability makes it simple to access any file without having to sift through potentially hundreds of folders. Emailing a client or other team members with the file is simple after it has been located. Online documentation makes the data adaptable and accessible from almost anywhere also while cutting costs both intrinsically and extrinsically.

In a workplace, the cost of paper can easily build up, thus transitioning to digital files can result in significant savings. Similarly, it lowers the cost of paper while providing a greener option. Companies with yearly revenues between \$500k and \$1 million may save up to \$40k by switching to digital document management, according to RegisteredRep.com. Consider all of the money that can be saved by switching to digital printing: paper costs, ink/toner costs, storage costs (like filing cabinets), disposal costs for paper waste, printer maintenance, and neither the time of the staff spent sorting and acquiring additional paper and related supplies. It goes without saying that cutting down on paper consumption will benefit the business's bottom line. Besides keeping costs down, a paperless business is indeed environmentally friendly.

Online documentation and file transfer are crucial aspects of our project, "File transfer and document approval web application." We move files through one individual to another using it, and we also give the requester the choice of having their request approved or denied. The administration of files and documentation approval is the core concept behind this project. Heads Of departments, Deans, and the principal will be using this project, which has been primarily designed for the College Administration. The proposed application allows the user to electronically submit papers and utilize it to carry out a multitude of required types of tasks, automating procedures and cutting down on time spent on those activities. A dedicated mechanism on the principal portal enables users to either approve or deny the documents and, in the case of denial, to provide feedback. Heads Of departments and Dean's portals allow the user to check the current status of their paperwork.

## II. RELATED WORK

Hediyeh Baban et.al introduces the electronic documents that they covered in their paper. The study demonstrates how electronic systems make it possible for documents to be created and distributed quickly. Students and faculty expressed support for having a single repository for managing different papers in a number of polls that were performed. From a faculty member's point of view, it would speed up their information gathering and be very beneficial for their study; students would also benefit in the same way. Students may benefit from this by creating new opportunities for teamwork, coordination, and information exchange among individuals involved in construction projects. Its availability on the web makes it accessible from any location, which is a crucial factor to consider.

Stefania Leone et.al in their work, suggested a "pervasive document editing and managing system." The collaborative document processing has gained attention since it has been tackled in a variety of methods, including document versioning and collaborative editing, up until this point. For sophisticated collaboration scenarios across many devices, it employs real-time updating and database techniques. The most current papers are always made available to each user, and the system enables users to organize their work based on document information.

J. Sengol et.al proposed a system known as the "DMS, often known as document management system". A software programme called DMS automates, controls, and maintains records while also maintaining that the documents guarantee conformity with all regulatory agencies. DMS is specifically made for managing work instructions and other business areas subject to FDA and other international regulatory authorities' regulations. It offers a sizable number of solutions for safely handling a variety of corporate documents, particularly those pertaining to regulated situations. Using a variety of online capabilities, this software also replaces desktop applications with powerful internet apps.

Arnav Awasthi et.al in their study, discuss how HTML is being used as a front-end tool and how it will eventually become a worldwide web consortium that would control the front-end. In addition to other frameworks, Angular, which is widely used by developers, is discussed in this article. The article discusses a variety of frameworks that developers might utilize nowadays. All of the above frameworks will be examined from distinct angles. The advantages and disadvantages would be listed. The future of web development is the main topic of the overall paper.

Tim A. Majchrzak et.al proposed a system of cross platform independence in a mobile app. There are many benefits, with the primary one being that apps can use a single piece of code to run on numerous platforms. In the past, cross-platform independence research has not always been successful, but it consistently demonstrates improvement. Their work primarily focuses on the React Native, Ionic Framework, and Fuse frameworks. By carrying out real-time tasks, the task is to determine the optimum framework. The ultimate finding was that there is no clear winner because each framework has advantages and disadvantages depending on the situation.

Sanchit Aggarwal et.al introduces ReactJs as a well-liked JavaScript library. The construction of interactive user interfaces is made easier with ReactJs. It aids an MVC (Model View Controller) model's view perspective. This library is being used by well-known social media platforms like Facebook and Instagram to develop new features. Better user interfaces with quick and reliable web app development are ReactJs' standout features. This library is compatible with AngularJs and other Js libraries.

Joseph Christian G. Noel et.al proposed a method called ThesisFS. A system for managing documents online called ThesisFS has a wide range of functions. The primary goal of ThesisFS is to gather and store diverse documents so that they may be retrieved by the user as needed. This idea was principally made clear because, despite lowering storage costs and rapid capacity growth, finding a place to store files remained a challenge. Along with administrative tools, ThesisFS also has automated indexing and tagging called Smart Indexing, intelligent document searching called Search Folders, and automated user-defined actions called Action Folders.

In their research, Beryl Plimmer et al. discussed how paperless documents lack some elements that are present in a typical paper-based system. According to the report, successful paperless systems must pay close attention to users' work surroundings, activities, and behaviors. The study focuses on the advantages that students can gain from using this software solution for paperless grading of student assignments without violating established best practices.

Besart Prebreza et.al in the paper, explain how security-related applications have grown in importance and demand. The article introduces a document management system that was created using the PHP and MySQL ecosystem's important frameworks, including Laravel. This application was primarily targeted at diploma students who were writing theses. According to this application, using this software rather than conventional methods has demonstrated substantial importance by making things simpler and more effective. One of the primary motivations for developing this application was to provide means of physical access, increase student and professor participation, and facilitate student-mentor contact.

Escalona, M.J. et.al introduces Requirements engineering as an approach. The study describes the rise in importance of this methodology over the last few years. It highlights how different parties are involved in website creation than traditional software development. It describes how many tasks, such as requirements elicitation and many others, can be used to guarantee the quality of the finished functional software. According to the study, the majority of techniques that have been suggested for creating Web applications give less attention to engineering needs and more weight to design. The major objective of this study is to show the effectiveness of requirement engineering in identifying and evaluating web needs.

### III. METHODOLOGY

Over a network or internet connection, the action of moving or transferring a file from one computer to another is referred as file transfer. The main activity in business is file transmission. Every day, businesses communicate data both internally and with their partners, suppliers, and clients. They must be able to transport data safely and effectively, whether they are sending digital videos for marketing campaigns or batch transactions to an outsourced payroll provider. File transfers are still the primary method of transferring digital information within organizations. In reality, file transfers are used for more than 50% of all system integration.

A document is a piece of written, printed, or electronic information used for instructions, communications, and records. Its purpose and suitable document type are determined by the document's purpose. A certain project type: Plans, procedures, contracts, specifications, reports, manuals, calculations, drawings, diagrams, lists, engineering documents, etc. are examples of documents. These are the common document categories that communicate information in common formats. A quality management work process for project document control and management is the document review and approval procedure. Before initiating any following works, the Document Evaluation and Approval Procedure describes the proper review or approval of project documents, including Document Distributions, Document Review and Approval Category, Cycle, and so forth. The article discusses a web application that is used to transmit files and to perform user actions. HTML, CSS, JAVA SCRIPT, and BOOTSTRAP are used for the front end of the web application. PHP and MySQL are used for the back end through the XAMPP Server. The usability and usage of the web application are improved using lightweight and user-friendly technology.

#### 3.1 Hyper Text Markup Language

HTML is used to create online pages and is integrated with other web technologies to build web apps that address real-time issues. The proposed model is built using html and other web technologies.

#### 3.2 Cascading Style Sheets

Cascading Style Sheets (CSS) is a language for creating style sheets that describe how a document written in a markup language like HTML or XML is presented (including XML dialects such as SVG, MathML or XHTML). Along with HTML and JavaScript, CSS is one of the foundational technologies of the World Wide Web. Separating text from aesthetics, such as layout, colours, and fonts, is what CSS aims to do.

#### 3.3 Javascript

Java Script is used to develop dynamic web pages and engage with users in order to improve the functionality of online applications. The model used a small amount of java scripts to alert the user about the actions performed.

#### 3.4 Bootstrap

Bootstrap is an open-source tool that can be used with other web technologies like HTML, CSS, and JavaScript to create responsive web pages. The websites of today are appropriate for all screen sizes and browsers (IE, Firefox, and Chrome) (Desktop, Tablets, Phablets, and Phones). Even though the project finally became open source, all credits must go to Twitter employees Mark Otto and Jacob Thornton, who created Bootstrap. We can quickly change the styling of any web page using this framework, including

the font style, text color, background color, flex, grid system, etc. The most often used versions are Bootstrap 4 and 5. There are several alternative CSS frameworks, like Tailwind CSS, Bulma, and Foundation, however the process is quicker and simpler for web development. It produces web pages that are platform agnostic. It makes Web pages that are responsive. It further creates mobile-friendly web pages.

### 3.4 Hypertext Processor

PHP is an open source, interpreted, object-oriented programming language which can be used on the a server. Web development works nicely with PHP. Consequently, it is utilized to create web apps. Since PHP is an interpreted language, compilation is not necessary. PHP is faster than scripting languages like ASP and JSP. PHP is a server-side programming language that is employed to manage the dynamic content of the website. HTML allows for the embedding of PHP. An object-oriented language is PHP. An open-source programming language is PHP. PHP is a straightforward and basic language. The proposed model is purely based on PHP for creating and storing information in the databases and performing actions based on the user role.

### 3.5 MySQL

MySQL is a relational database management system that is based on Structured Query Language, a common language for storing and retrieving data from databases. MySQL is open-source software that is free to use as long as it adheres to the GNU licence. It has the backing of Oracle Company. The queries include those for building and removing tables as well as those for adding, updating, deleting, and selecting records. A database is a program that keeps a well-organized group of records. The user may control and access it very effortlessly. It enables us to rapidly discover the essential data by arranging data into tables, rows, columns, and indexes. For carrying out database tasks including creating, maintaining, accessing, and finding the data it keeps, each database has a unique API. There are several databases accessible today, including SQL Server, Sybase, Oracle, MongoDB, and PostgreSQL. We will mostly be concentrating on MySQL in this part.

It is often used in combination with PHP scripts to construct reliable and dynamic server-side or web-based business applications. It was created, promoted, and maintained by the Swedish corporation MySQL AB. The C and C++ programming languages were used to create it. My Ess Que Eil, not My Sequel, is how MySQL should be pronounced. You are free to select how to pronounce it. MySQL is used by both big and little companies. MySQL supports many different operating systems, such as Windows, Linux, MacOS, etc., with the help of the languages C, C++, and Java. The proposed model used MariaDB which is the default database.

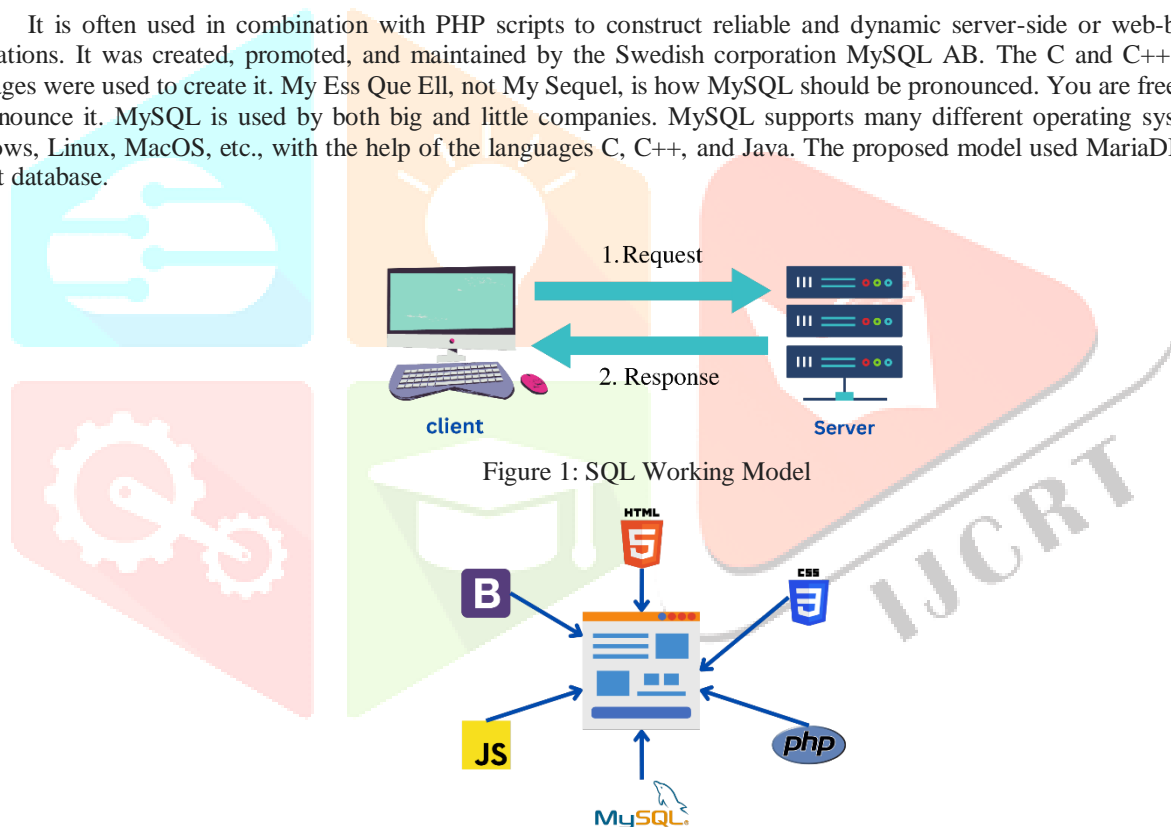


Figure 2: Technologies Integrated

### 3.6 Working Of Web Application

The website is utilized to advance a specific company, increasing productivity and efficiency while lowering waiting times and making online applications simple to use and comprehend. The principals, deans, hods, and an administrator are the project's four major key roles. Depending on the role, the application performs a variety of functions. Adding and deleting users from the online application is under the administrator's control. He manages all needs and is the foundational element of the web application's operation. The admin's duties include deleting, adding, and viewing members. All members are uniquely identified by an id that is encrypted and stored in the database, increasing the security of logins. The principal is responsible for taking action on the request, such as passing it to the appropriate deans or other members and obtaining files from deans and hods. When requesting and uploading documents using the online application, all formats are supported. The document's size is limited to prevent crashes, and uploaded files are validated with the extension using PHP to ensure that there are no viruses in the document and that important data is not compromised.



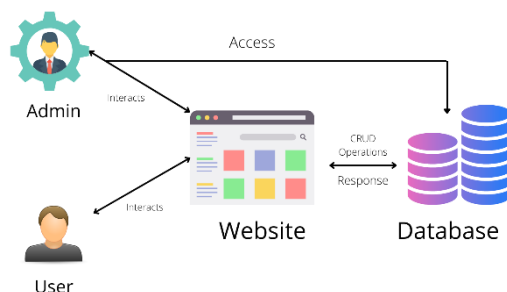


Figure 3: Architecture Diagram

When other users send a request, the data is saved in the tables with a unique id, which is then retrieved from the database and provided to the principal. The database and each portal are promptly updated by the principal's activity and reflect it. To let the senders, know why a file was approved, the user can add comments to it. It is a two-way kind of communication.

When necessary, the hods can upload papers and make requests to the appropriate other users. It performs a variety of tasks, including obtaining files from principals, uploading the necessary papers to deans and hods, and asking deans for approval—a process that involves indirect contact between hods and deans. When the suggested proposal is approved by the principle, the hods will next send a request to the deans. The decision to transmit the request or to reject it rests with the principal. Additionally, Hods has the power to submit any material that deans or principals want. The database maintains all the information linked to the communication between the users, which might be useful in the future, therefore logs are made from that conversation. Deans, the fourth job, only has a few responsibilities, like asking other users for files and seeking permission for requests for requested files. The deans have the power to annotate the requested material.

The request for a file is made indirectly, from deans to hod's. The principal receives the request first, approves it, and either sends it on to the appropriate hosts or uploads the material directly. The data is saved in databases, which have appropriate tables for storing the data. All passwords are encrypted, ensuring the security of logins. The uploaded file size is restricted to prevent program crashes, which can occur on purpose. The documents are validated at the server level to guarantee that they are free of worms, and the extensions are validated when the document is being uploaded. The data is obtained using unique ids for each document and user, which allows the entire program to function properly.

#### IV. RESULTS AND DISCUSSION

The writers of this paper are designing and implementing a "file transfer and document approval online application" that will be accessible to a group of higher university officials who have been given login credentials. Each participant would have their own interface, with features dependent on their position within the university. The HOD and Dean interfaces will have the ability to upload documents and send them to the principal or another member of the organization. They can then check to see if the principal has accepted or disapproved their document, as well as any comments the principal may have made. The principal will have a user interface that enables document verification. If he chooses, the principal may add any comments in the designated area. The administrator can manage the application's whole database from a separate console.

Another important aspect of this application is that it is designed so that when a HOD or Dean wishes to send a document to another Dean or HOD, it first goes to the principal and, upon receiving his approval, is forwarded to the recipient. A recent study reveals that the deployment of this software has had positive outcomes once it has been used by the organization's members. Several of the organization's staff have mentioned how this software has made their work much simpler and more effective. The principal has acknowledged how this program has aided him in efficiently organizing a variety of documents and completing his tasks. In conclusion, the study demonstrates that this web application, as opposed to the conventional paper-based technique, has a favorable impact on the organization.

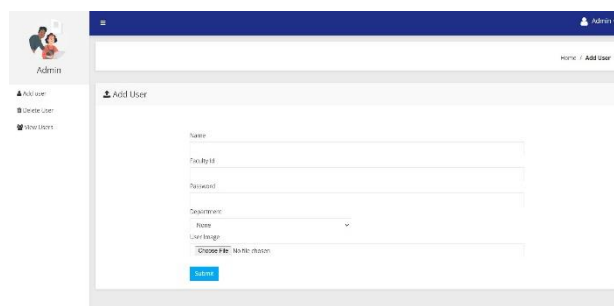


Figure 4: Admin Dashboard

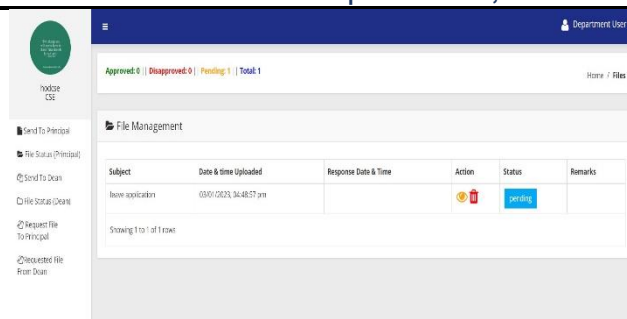


Figure 5: User Dashboard

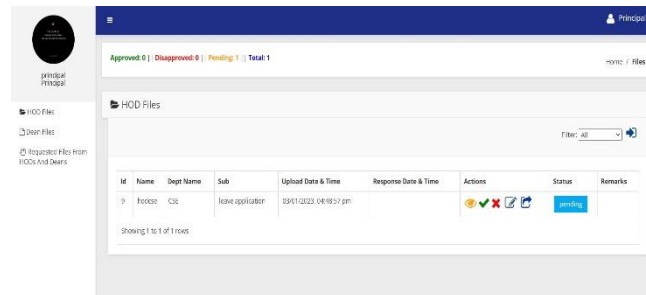


Figure 6: Principal Dashboard

#### IV. FUTURE WORK

The current model can incorporate a variety of functions in the days to come. Bots can be created based on the common questions that consumers ask most frequently using AI technologies. Using several authentication methods, such as multi-factor authentication (MFA), token-based authentication, or even biometric authentication, the security of the website can be strengthened. People have a tendency to forget their passwords frequently as a result of managing numerous accounts across various platforms. Therefore, by obtaining a link to update their passwords, users of this module can change their passwords using their email addresses or even their phone numbers. Faculty members can obtain logins to do their tasks using this portal instead of on paper, which will save time and improve efficiency.

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