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COLLEGE OF ENGINEERING, ARCHITECTURE AND TECHNOLOGY

Group number





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The Researchers





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RTU: Web Based Document Management System





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Chapter 1: Introduction





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Project Context

Technology has become a huge part of peoples' lives these days. It became an essential part of others as people use it everyday for their daily routines and even for their work.

The benefits of technology have become more clear and noticeable as it continues to develop. Because of that, developing a productive tool for an institution will provide a very positive outcome.

The Rizal Technological University, a non-profit public higher-education institution located in Mandaluyong City and Pasig City. According to UniRank, Rizal Technological University has an average of 30,000 – 35,000 total students and 28,000+ officially enrolled students according to the website of rtu.edu.ph, not including the faculty members.

As of the moment, Rizal Technological University's general problem is that the institution does not have a system to consolidate their files, and the number of documents and papers that have been passed and received from time to time are huge and will be almost impossible to keep track of. As most workers know, people who work traditionally are the most susceptible to losing and mixing up data.





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Project Context

However, the researchers proposed a solution for the problem that the institution faces, and it is “RTU: Web-based Document Management System”, which is intended to resolve the problems in managing documents.

Since the process of the system will be 7 | Page computerized, it will be more convenient and reliable compared to manual processes. Through the connection with technology, implementing a computerized document management system for a large institution like Rizal Technological University will make the document more manageable and organized. Implementing such a system in universities will assist the faculty workers to organize the documents that have been going in and out of the institutes' offices.





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Purpose and Description of the Project

The proposed system called “RTU: Web-based Document Management System” aims to provide a user-friendly, and accessible website for Rizal Technological University to mitigate the problem that the Institute currently faces

Upon knowing the problems that the Institute is facing, with the help of this project, the Rizal Technological University will be able to manage and track the documents that are flowing through the offices.

The website will assist the employees to work efficiently and effectively as they now can track and pass the documents without consuming a lot of time.

The general objective of the Document Management System is to allow the user/s to organize, manage, and track the documents and papers that have been received and passed by the office.





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Purpose and Description of the Project

According to Dr. Lea Nisperos of the Data Privacy Department of Rizal Technological University, most of the time, the documents that needed to be signed were always stuck from one office and it was taking a lot of time to spread from office to office.

Also sometimes, the employees were losing track of the document. Because of that, the researchers proposed a solution that will have a monthly report of the documents and the date when it goes in the system.

With that, the number of documents can be tracked and recorded without manually counting and recording it.

The system will have two(2) levels of security which is a user, for the employees and the functions that they can access are only limited, and an admin that can access all of the functions of the system.





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Purpose and Description of the Project

Creating an account is required to have a security assurance for the users, and creating an account can only be done by the Admin to assure the security of the system.

If a user forgets their password can go to the admin and ask to change their password. However, if an Admin forgets the password, there will be an email notification that will be sent to the admin's email account to avoid hacking.

Tracking the logs will also be implemented to track all of the users that are navigating the system, and if an admin notices any suspicious activity, an admin can delete an account to avoid losing the data that is being stored in the system.





Objective of the Project

In conducting this research, the proponents aim to develop and design a web-based document management system for Rizal Technological University. As a result, the following objective must be met:

- General Objective

- To develop a Web-based Document Management System that will help the institution handle the documents better
 - The development of the Document Management System for Rizal Technological University will help the employees tracking and managing the files that are entering their offices.





Objective of the Project

- Specific Objective

- To develop an automated monthly upload/download report

Since one of the problems that the institute faces is the tracking of the documents, developing a monthly report of the documents in the system will provide an easier way to track and monitor the number of documents that go in the system monthly. It will be located in the landing page of the system which is the dashboard.





Objective of the Project

- Specific Objective

- To develop a send file function for sending a document

Instead of going from one office to another to collect files, collecting and consolidating the documents will take less time and will be more convenient, accurate, and efficient as the process will be computerized.





Objective of the Project

- Specific Objective

- To develop an admin and user level type to keep the documents more secured

To protect the users as well as the documents, the user will have limited functions, while the admin can access all of the functions. One example is, only an admin can delete a document on the system to avoid data loss and accidental deletions of the user. There are many things an admin can manipulate in the system while the user can only upload, download, and send a file to another user.





Objective of the Project

- Specific Objective

- To develop a secured account creation and management

Security is the most important thing that the researchers prioritized since the data and information of the institution are important.

Account creation can only be made by the admin, and for the new account, an email for a user log-in info will be sent.





Objective of the Project

- Specific Objective

- To develop a secured account creation and management

After logging in, a new user will be required to change their password to reset the default password, and after that, if a user desires to change their password, they need to notify the admin to change it for them.





Objective of the Project

- Specific Objective
 - To develop a secured account creation and management
 - However, if an admin forgot their password, there will be a forgot password button and an email that contains a link will be sent to the admins' email account, and the email link will expire after ten(10) minutes. That way, the security of the RTU: DMS will be vastly improved.





Scopes and Limitation

● Scopes

- Upload and Download File
 - This will allow the user to upload and download the documents on the database system.
- Admin Control
 - This will allow the admin user to control all the files such as view, edit, and delete throughout the system.





Scopes and Limitation

● Scopes

- User Control
 - This will allow the user to see and download the files on the system that are shared with them.
- Document Tracking
 - The system will have a file history when the file is uploaded. Also, a user can track the history of a file when the sent file is acknowledged or unopened.





Scopes and Limitation

● Scopes

- Folder Management

- This Feature will consolidate the uploaded documents to their designated folder and offices, which the administrator can manually retrieve or view the files via the server storage.

- Dashboard Report

- The system will report the number of files uploaded and downloaded by the users on the system. The system will also display the overall count of uploaded and downloaded files of the user within a month, and will be reset by the start of next month.





Scopes and Limitation

● Scopes

- Create Account
 - This will ensure the users that the system is only accessible by the personnels.
- View, Edit and Delete of Existing Account
 - The system allows view, edit, and delete of existing accounts in the system, and is accessible via the admin account only.





Scopes and Limitation

● Scopes

- Document Year Validation
 - The system automatically detects if a file is dated back to a former year. If the detection is triggered, the file will be relocated into an organized table and will be displayed as the same with all the files that got detected also.
- Yearly Logs Reset
 - The system will reset all logs such as user login session, download and upload log counts, in order to minimize the load handling process within the system.





Scopes and Limitation

● Scopes

- Login and Logout Session Tracker

This will allow the admin user to be able to track and view the login and logout session of all the registered users throughout the system.

- Send and Request function

- A user can send a file to another user or to all of the users in the system. A user can also request a file to another user when they need it.





Scopes and Limitation

● Scopes

- Private File Page

The User Has the ability to upload files on its own repository and that files are not being shared with other users towards the system.

- Real-time Notification Alert

- There will be a notification that will send alerts in real-time when a user sends a document to the user.





Scopes and Limitation

● Scopes

- Add Department Offices

The admin can add, or delete department offices when there are newly created offices in the RTU organization.

- Yearly consolidation of Files

- When the year ends, all of the documents that have been uploaded last year will be grouped together and the users can access those files if needed.





Scopes and Limitation

● Scopes

- Document Archiving

- The admin has the authority to archive documents rather than delete it permanently. This is to lessen human error inside the system and have the capability to restore files that are mistakenly archived. Also, the documents that were archived will not be visible inside the main managed file page whether at the admin side nor at the employee side. Although documents are archived, it will still be counted on the monthly report hence the existence of the file is still honored inside the system





Scopes and Limitation

● Scopes

- Responsive User Interface

The UI of the system is responsive to the different width and height of the pixel monitor, in order to achieve the necessary UX of the user.

- Forget Password via Email Confirmation for Admin

An admin account can recover the account if an admin user forgot the password of an existing account, an admin user can change the password via email verification to their registered email account.





Scopes and Limitation

● Scopes

- Email Notification for the New Account

The login credentials of the newly registered account will be sent to the email address of the user or admin account.

- First Log-in Password Reset

The first login of the newly created account will redirect to the set new password in order to change their default password.





Scopes and Limitation

● Scopes

- Auto Delete Forget Password Token

The forget password token requested by the user will be automatically deleted from the database once a user has already used it up to change their password, also this token automatically deleted after 10 minutes since the first request was initiated.





Scopes and Limitation

● Limitations

- Public Access

The system is only available to the employee personnel throughout the Rizal Technological System.

- No Logs Will Be Recorded for the Past Years

The logs such as login session, upload and download logs will be automatically reset yearly in order to minimize the load handling of the system, therefore there will be no logs recorded after the yearly reset kicks in.





Scopes and Limitation

● Limitations

- Automation Counter of Uploaded/Downloaded Files for the Past Years

The recorded automation of upload and downloaded files will be only within the months of the current year the system is functioning, therefore there will be no logs of automation counters within the upload and download files of the user for the past years and months in order to minimize the load handling of the system.





Scopes and Limitation

● Limitations

- Permanent Deletion of files on Monthly Report

The recorded data for monthly reports depends on the files inside the system, therefore the files that are uploaded and downloaded should be existing inside the system and should not be permanently deleted to make sure that the system has full transparency of data and precise automation of records.

- Forgot Password for User Only access

User only access who desires to change password must notify the Admin User in order to change passwords.





Scopes and Limitation

● Limitations

- Can only upload 5 files at a time
Maximum number of files a user can upload is only five(5).
- Can only upload document files
The only files that can be uploaded are the one with the extension name of pdf, docx, doc, pptx, txt, odt, xlsx, xlx.
- User to Admin and User to Multi-user send function
A user cannot send a document to multiple users and to admin, however a user can send a file to only one(1) user or all users.





Conceptual Framework

INPUT

User Requirement

Problem Identification

Review of related literature, studies, and systems.

Planning / Preparation

PROCESS

Agile Methodology:

- Requirement Analysis
- System Design
- System Development
- Testing
- Review

OUTPUT

RTU: Web-based Document Management System





Conceptual Framework

The input-process model, also referred to as the IPO model, is applied to present the conceptual framework.

In the input phase, wherein the researchers will observe the challenges that the enterprise faces. This phase also includes reviewing the related literature, studies, and system, in which the researchers analyze the specifications for a system that will enable users to upload and download files, control access to documents, follow their progress, consolidate data, and submit reports.

This is followed by the planning that is included in the Process phase, this phase includes the analysis of the system requirement and the design stages of the process.





Conceptual Framework

The researchers will now begin to create a web-based document management system based on the observations made in the first phase. This includes the system's design, which considers user requirements to determine how the system should look and the creation of the system's logic.

These skills will then be put to use by researchers and programmers to enhance the system's usability and interactivity. This process includes the development of the system architecture and a plan for putting the system into action. After that is the demonstration to the client. The researchers will then demonstrate how the system works, as well as the flow on how it works and the functions of the features that are included in the system.

Testing of the system which includes reviewing the analysis of the system evaluation takes place. Here, the researchers will improve the system depending on the additional needs of the client. It also incorporates the changes in feature flow based on the requirements.





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Conceptual Framework

Lastly, is the output which is the implementation of the Web-based Document Management System that is refined and ready to use. The system will be maintained by the management and administration.





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Chapter 3

Technical Background





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Technicality of the Project

The researchers have used a web-based system program wherein the users can access it without any difficulties. The RTU: Web-based Document Management System is a web application for campus's faculty personnels to track, manage, and organize the documents that are going in and out of their respective offices. These are some of the technical terms that are being used by the researchers in the project; Sublime Text, VS Code - Compiler, Server-client side - HTML, CSS, PHP, AJAX Database - XAMPP, Apache, MySQL, Functionality - Web Application, PhpMyAdmin. Other terminologies that are stated above are also being used by the researchers for the project.





Details of the Technologies to be used

AJAX - a set of web development techniques that uses various web technologies on the client-side to create asynchronous web applications.

Apache - Apache HTTP Server is a free- and open-source cross-platform web server software.

Bootstrap 5 - Used for the design and user interface of the project.

CSS - Stands for Cascading Style Sheets, used to add style to a web page by dictating how a site is displayed on a browser.





Details of the Technologies to be used

HTML - Stands for HyperText Markup Language, it is one of the most widely used building blocks of the Web. It is commonly used to publish online documents with headings, text, tables, lists, photos, etc.

JavaScript - A text-based programming language used both on the client-side and server-side that allows you to make web pages interactive.

Jquery - Is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers.

MySQL - An open source database management system. It is used to add, access, and process data that is registering on the system.





Details of the Technologies to be used

PHP - Stands for Hypertext PreProcessor, it is the most widely used open source and general purpose server side scripting language used mainly in web development to create dynamic websites and applications.

PhpMyAdmin - A free software tool written in PHP that is intended to handle the administration of a MySQL or MariaDB database server.

Sublime Text - A cross-platform source code editor. It natively supports many programming languages and markup languages.





Details of the Technologies to be used

VS Code - Also known as Visual Studio Code, is a source-code editor made by Microsoft with the Electron Framework. It is a streamlined code editor with support for development operations like debugging, task running, and version control.

XAMPP - A free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages.

000WebHost - Is a free website hosting solution that provides an array of valuable features, including a website builder, WordPress support, and no ads.





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How the Project will work

The project will work when the software and hardware requirements are fulfilled. Since the project is a Web-based system, a user would be required to have a computer and a web browser in order for the system to work. After that, to ensure the users' security, the project requires creating an Admin/User Account. There are two(2) types of users, the admin and the user. Admin and User have different levels with Admin being superior.

If a user has a new account, after logging into the system, the user will be redirected to a new password page in order to change their default password into the user's desired password, that way it will furtherly improve the system's security. After all of that, there will be a Homepage that will be the first thing a user will see after they log-in, the Homepage also serves as an Automated Monthly Report and it reports the total upload and download of the documents on the system.





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How the Project will work

Admin

This type of user basically has access to all of the functions of the system. An admin user can download and delete documents in folders, an admin user can also add another admin and user account. Aside from that, an admin user can also View, Edit, and Delete an admin and user account, and lastly an admin user can also view the login sessions of all admin and users.





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How the Project will work

User

A user has limited access to the system. A user can only download the documents from the folders. Also, a user does not have an Add Employee Account, View Account, and View Login Session tab. However, both admin and user have a Dashboard tab to see the graph of total upload and upload documents on the system.





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System/ Application/ Prototype





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