

# REGISTRAR'S ONLINE DOCUMENT REQUEST AND APPROVAL SYSTEM (RODRAS)

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## ABSTRACT

The Registrar's Online Document Request and Approval System (RODRAS) introduces to the registrar of the Polytechnic University of the Philippines – Taguig Branch to manage, monitor, approve and deny request and update its website and information system. To digitize the manual transactions of the school registrar, the RODRAS were developed. RODRAS aims to have a fast transaction and accurate reports when the students and alumni are requesting.

With the functions of the system, it assured the fast and reliable transactions that need to be reached to the users. The researchers must improve on user-interface design, user-friendliness, and operational performance for parishioners/guests; adaptability, modifiability, maintainability, effectiveness, and efficiency of the web application.

## INTRODUCTION

A document is a paper that is written, printed, or electronically saved that includes information on a certain matter. This is served as a proof of identification that a person or a subject holds accountability with. Documents are crucial requirements in any transactions made by a person to have an official record. It is an information carrier that contains written or drawn information for a particular purpose (Lownerts 1998). One example here are school documents. These are issued by a public or private school from primary to college that may have personal information of the student that includes their signature, grades, and certification of records they have inside the school.

When applying for some opportunities, certified documents are one of the requirements needed. And to be able to obtain a certified true copy of documents, requesting of it from the affiliated organization or institution is necessary. In Polytechnic University of the Philippines - Taguig Branch (PUP – Taguig Branch), manual requests of documents are observed. However, in this way of processing requested documents may take a lot of time to process and may result to inaccuracy of reports.

To be able to address and give solutions to the problem, the researchers proposed a system that will be able to give more efficient and effective ways of requesting documents to the university

The proposed system will impact greatly to the following:

**Administrator (Registrar)** - This study will benefit its employees who manage the files and information of the students and alumni of PUP – Taguig Branch for it will make easier and efficient transactions in requesting documents and in generating of reports with better accuracy.

**Offices (PUP Taguig Offices)** – This study will benefit the offices who handles the sanctions of students to have accurate approval and disapproval of requests made.

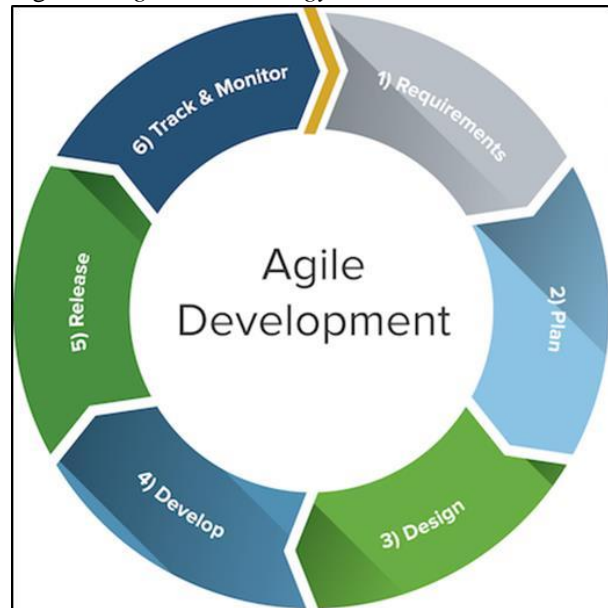
**Students and Alumni** - The study will benefit its students and alumni for they will not need to personally go to the registrar office to request documents.

**Future Researchers** - This study will serve as a reference for their research and capstone projects as their guide in creating effective projects. It will help them improve their research and ideas.

## METHODOLOGY

The researchers used the Agile Software Development Life Cycle or Agile SDLC Model to develop and create a foundation on the system.

Figure 1. *Agile Methodology*



### Requirements Phase

In the first phase, the researchers gathered data/information with regards to the problem of the Research Management such as the scope of the system, targets/objectives of the system, requirements in building the software needed in the organization specifically, in managing files and other rules for the system. We also identify the work and activities needed in order to complete the system.

### Planning Phase

This is one of the important phases in the system life cycle, the concept phase or pre-project planning. It is because this will be the basis of the whole process including that of sustainability of the project after completion. This is where projects are envisioned and prioritized.

In this phase, positions and assigned work to team members were identified and initial environments, timeline, and requirements were discussed. Some procedures like finding the possible tools to use in developing the system, what software life cycle method is appropriate for the system, and also the programming languages that they were going to use were identified as well.

## Design Phase

This phase required the knowledge on planning phase to be structured and discuss. It is the third phase of the SDLC, wherein the team standardizes the process flow in building the application. It is where the logical design of the system is formulated.

In this phase, the team created diagrams that are needed to break down the functions needed for the transactions in the system. This also includes the formulation of the database, especially the normalized or the simplified one. Also, the architecture of the system was identified, which is the client-server architecture.

## Develop Phase

It is the fourth and the longest phase where the discussed plans and designs are put into action, including the quality assurance. In this phase, the actual implementation of the logical design is put into use and is placed into the system.

In this phase, the actual coding is done, and right after the implementation of all the planned designs of the system, the Quality Assurance Tester provided test cases to check if the functions were working smoothly. Another testing done is the alpha testing, wherein the testing is done by the other groups or peers. The last testing is the user acceptance testing wherein all of the users involved in the system were able to use the system according to what transactions they can do.

## Release Phase

This is the fifth phase of the development life cycle. This is where the system is ready for client use. The rework or fixing of some defects found during testing is done if there are some, and also the training of end users in using the system. This phase is where the software will be deployed and fully implemented to the end users.

## Track and Monitor Phase

In this phase, after the deployment of the software, the software will be monitored to if any problems come up and needs to be solved from time to time. At the very beginning, the main goal is to keep the system useful and productive after it has been deployed to the user community.

## RESULTS AND DISCUSSIONS

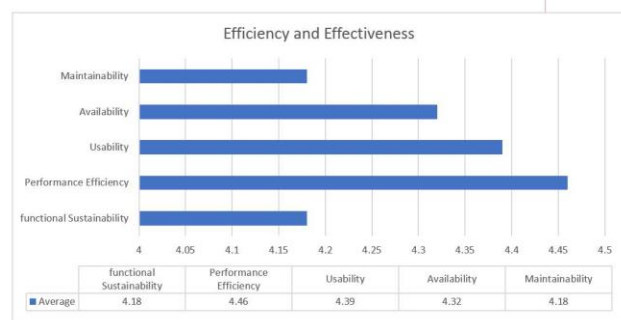
Prior to the Develop Phase of the SDLC that the team used, the system had undergone several tests to make sure that the functions were working correctly. The alpha was conducted to the university and a number of participants were surveyed, assessing the system based on the functions that the system has. As a result, the average point of the system can be seen in the given table below of the team's questionnaire:

Table 1: Likert Scale

Response Scale	Verbal Interpretation
4.20 - 5.00	Strongly Agree
3.40 – 4.19	Agree
2.60 – 3.39	Neutral
1.80 – 2.59	Disagree
1.00 – 1.79	Strongly Disagree

The procedure provided the users the ability to inspect the system in an operational environment in varying time periods. Users were presented similar sets of questions utilized to effectively evaluate each of the system components on such areas as functionality, usability, reliability, performance, and security. Interpreting the survey responses reflected results as follows.

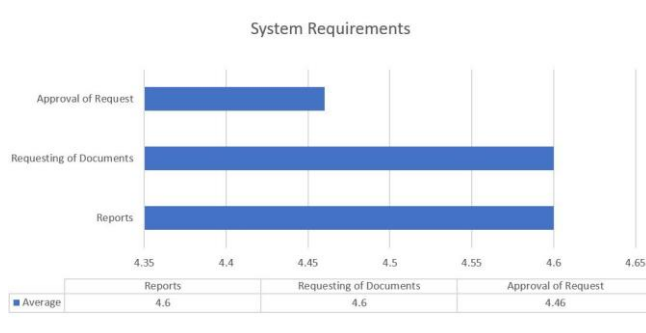
Figure 2. System Efficiency and Effectiveness



### Efficiency and Effectiveness of RODRAS

With the rate of 4.306, Slightly Agree; its buttons, modules and links are working just fine. The system is somewhat capable of providing functions that meet the stated functions when it is used.

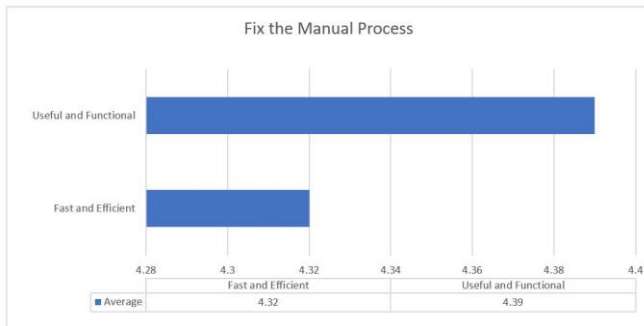
Figure 3. System Requirements



### System Requirements of RODRAS

With the rate of 4.553, Slightly Agree; the system's performance meets the client requirements.

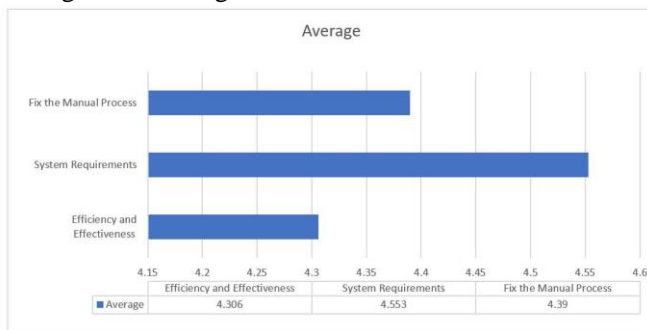
Figure 4. System Fixing the Manual Process



### Fix the Manual Process of RODRAS

With the rate of 4.39, Slightly Agree; The System fix the current Manual Process in the Registrar of PUP-Taguig.

Figure 5. Average



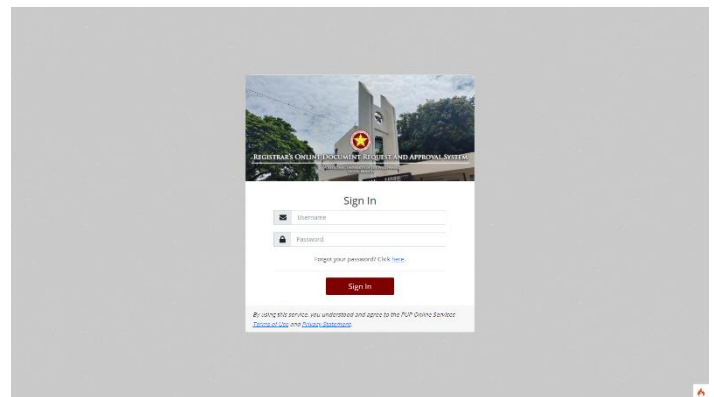
### Average of RODRAS

After calculating the averages for each category, the system's overall rating is calculated by multiplying the averages by the number of categories contained in the criteria. Hence, the final rating for the ISO is 4.416, which lies in "Strongly Agree" in the Likert Scale of the ISO.

### User Acceptance Testing

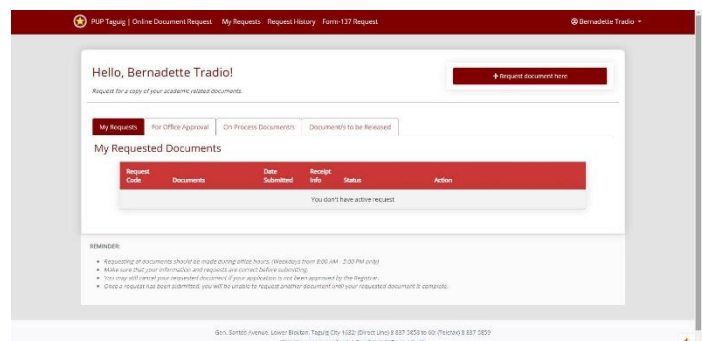
Aside from the ISO 25010 questionnaire, the researchers conducted a user acceptance testing with their client and with the other end-users which are the graduating students.

Figure 6. Login



**Login.** This is where the students, alumni, Admin, Super Admin will login their credentials.

Figure 7. Homepage (Student Side)



**Homepage.** This is the user interface of the students or alumni once they've been login in the system.

Figure 8. Information

**Request Document**

Use the information entered below submitting the request.

**User Information**

Name: RENEZETTE Y. LAMBA TIAO  
 Gender: Female  
 Status: Married  
 Date of Birth: 08/18  
 Birthdate: January 05, 1990  
 Email: renezette@pup.edu.ph  
 Contact: 09172452096

**Reasons for Requesting**

☒ Scholarship Requirement  
☐ Employment  
☐ RV Extension  
☐ Transfer to other school  
☐ Others

**List of Documents**

Document	Quantity	Processing Time (Days)	Price
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**Information.** Students or alumni can edit their information if there is something wrong on their info.

Figure 9. Form 137

**Form 137 Request**

Generate Form-137 Request

School:

Request: ☒ 1st ☐ 2nd ☐ 3rd ☐ 4th

**Form 137.** In this section, student may get an form 137 request. All they need to do is to put their former school.

Figure 10. Request History

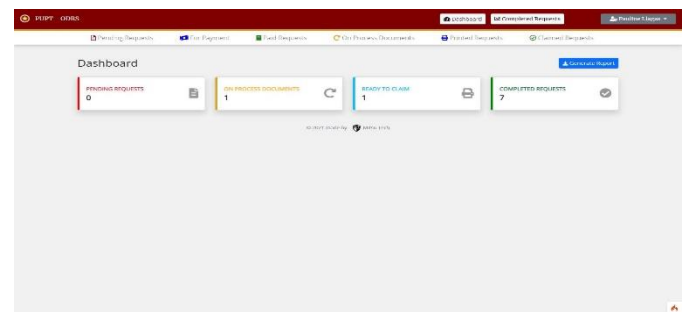
**Request History**

Code	Document Requested	Reason	Date Requested	Date Completed	Action
You don't have active request					

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 Website: [www.pup.edu.ph](http://www.pup.edu.ph) | Email: [help@pup.edu.ph](mailto:help@pup.edu.ph)  
**"THE COUNTRY'S 1ST POLYTECHNIC UP"**

**Request History.** This is where the students and alumni can see all the previous transaction that has been made.

Figure 11. Dashboard (Admin)



**Dashboard.** This is where the admin can see all the process of the request made by the students or alumni.

Figure 12. Maintenance (Super Admin)

**SUPERADMIN**

Register's Online Document Request and Approval System

**User Management**

#	Name	Role	Email	Actions
#	Jerome Jandison	Supervisor	jerome.jandison@gmail.com	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
#	Pauline Lopez	Admin	PaulineLopez@gmail.com	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
#	James Manalo	Office	James@gmail.com	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
#	Nerissa Magente	Office	Erma@gmail.com	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

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**Maintenance.** In this account, the super admin can maintain the system.

## Conclusions

The system is very useful and may help the Registrar's Office expedite transaction at ease. Based on the findings of the research, the following conclusions are drawn.

1. The functional sustainability, performance efficiency, usability, availability, and maintainability of the system is highly efficient and effective. The system will help the office to process the requests at ease.
2. The client's system requirements are met in terms of generating accurate reports, requesting of documents that is requested by the students and alumni, and approving of the requests made.
3. The manual process of Registrar's current transaction will be more effective and efficient when the system is implemented.

## Recommendations

Based on the findings, some characteristics under ISO 25010 has low ratings. Mainly functional sustainability and maintainability of the system needs to be improved. The researchers recommend for the future researchers of this system to enhance the user interface of the system and maintain the entire system

## References

Alsuhibany, S., Alhumud, G., & Almudaifer, S. (2020). A Novel Barcode Generation and Verification System for Fraud Prevention. *COMPUSOFT: An International Journal of Advanced Computer Technology*, 9(7), 3777-3784. Retrieved from <https://ijact.joae.org/index.php/ijact/article/view/1177>.

Amno, H., Ali, R., Rahim N. H. A., Zainol Z., Nashir W. M., Jais N. H. A., & Zin H. (2020). Request Book and Article System (RBAS): Tools, Techniques and Outcomes. *LibPro 2020: Library and Information Professional Seminar "Innovative Information Management: Towards a*

*Reading Nation"*, 103. Retrieved from <http://ir.uitm.edu.my/id/eprint/14654/1/eProceeding%20LIBPRO2020.pdf#page=108>.

Bhakta, V., Mehta, N. (2019). Computer Implemented System for Request Management within an Organization. Retrieved from <https://patentimages.storage.googleapis.com/96/2e/55/88014f036d0183/US20190303823A1.pdf>.

Buenaflor L. (2017). ISO 9126 Software Quality Characteristics. Retrieved from <https://medium.com/@leanardbuenaflor/iso-9126-software-quality-characteristics-a25a26e7d046>.

Damle, A., Bangera, M., Tripathi, S., & Meena, M. (2020). Analysis of Barcode Scanning and Management. *SAMRIDDHI: A Journal of Physical Sciences, Engineering and Technology*, 12(SUP 1), 90-95. <https://doi.org/>.

Girardeau, D., Dezelon, K., Etchison, P., Bergman, W., & Faulks, S. (2020). Patient Request System and Method. Retrieved from <https://patentimages.storage.googleapis.com/cb/b5/5d/766b0541c33be9/US20200365264A1.pdf>.

Lee, K. J. (2006, May). The web-based graphic service request system for facility management of apartments. *ResearchGate*. Retrieved from [https://www.researchgate.net/publication/26900949\\_The\\_web-based\\_graphic\\_service\\_request\\_system\\_for\\_facility\\_management\\_of\\_apartments](https://www.researchgate.net/publication/26900949_The_web-based_graphic_service_request_system_for_facility_management_of_apartments)