

# Development of a computer system for the documentary process in the management process at the Wissen LP academy

Luisa Paola Jorqueda Vasquez<sup>1</sup> [0000-0003-4725-9784], Luciana Victoria Jurado<sup>2</sup> [1111-2222-3333-4444], Jesus Lagos Morón<sup>3</sup> [0000-0002-0736-1808], Mario Reynaldo Medina Ramos<sup>4</sup> [0000-0002-5930-3618] and José Antonio Ogosi Auqui<sup>5</sup> [0000-0002-4708-610X]

<sup>1</sup> Universidad Privada San Juan Bautista, Ica, Peru, [luisa.jorqueda@upsjb.edu.pe](mailto:luisa.jorqueda@upsjb.edu.pe)

<sup>2</sup> Universidad Privada San Juan Bautista, Ica, Peru, [luciana.jurado@upsjb.edu.pe](mailto:luciana.jurado@upsjb.edu.pe)

<sup>3</sup> Universidad Privada San Juan Bautista, Ica, Peru, [jesus.lagos@upsjb.edu.pe](mailto:jesus.lagos@upsjb.edu.pe)

<sup>4</sup> Universidad Privada San Juan Bautista, Ica, Peru, [mario.medina@upsjb.edu.pe](mailto:mario.medina@upsjb.edu.pe)

<sup>5</sup> Universidad Privada San Juan Bautista, Lima, Peru, [jose.ogosi@upsjb.edu.pe](mailto:jose.ogosi@upsjb.edu.pe)

**Abstract.** Academic management is based on being able to facilitate and improve the different processes in the institutions, in order to have a successful process, but many of these do not have an adequate documentary procedure that accompanies it at the time of carrying out the present processes, that is why with these antecedents a computer system was raised and developed that allows us to improve the management process in the documentary process to At the time of this being required, the system that was developed helped to improve this process thus reducing the established response time of each query that was had with the client. For the development of the computer system, the RUP methodology was used, in addition to the use of MySQL for data storage and Visual Basic for the realization of the system. On this it was possible to observe the decrease in time in the response that was had with the client when looking for any type of procedure.

**Keywords:** Computer System, Academic Management, Documentary Processing.

## 1 Introduction

The following Scientific Article deals with the implementation of a computer system for the documentary process in the management process at the Wissenlp academy in the district of Ica; due to ineffective documentation procedures in this search area.

The implemented system will improve the processing of documents through the computer system, reduce the time of search and attention, and increase the number of files managed by the lack of services it performs due to the accumulation of queues, complemented by its actions without any control.

To develop this system it is necessary to face the problem of defining the requirements and characteristics that the proposed system must have, starting with the types of documents such as letters, requirements, memoranda, files, etc.

Know the function of the people who integrate this field by observing their activities to obtain better managerial information in the improvement of their management through the proposed system.

This system is implemented in order to improve its procedures in the public sector body due to the large number of users served; refer to concepts related to care and delay in registration, which are related to the image risk of the organization.

The advance of today's technology has changed dramatically, showing us how completely simplified document management improves workflow and thus allows entities to gain momentum for real change and improvement.

## **2 Definition of Terms**

### **2.1 Computer System**

It is understood by an automated system of storage, processing and retrieval of data, which takes advantage of the tools of computing and electronics to carry out its complex series of processes and operations.

### **2.2 Documentary procedure**

It is defined as a set of processes that allow organizations to have control of the physical location and current and past status of the documentation that arrives and is generated within them, in order to better manage their flows and diligence.

### **2.3 Management**

Is to assume and carry out the responsibilities on a process, this can be business or personal, which includes: Concern for the disposition of the resources and structures necessary for it to have a role in trade. The coordination of their activities and their peers.

### **2.4 Process**

It is a set of mutually related activities that when interacting together turn the input elements into results.

### **2.5 Academy**

The academy is a professional, artistic, technical or practical teaching establishment.

## **2.6 Development**

It means growth, increase, reinforcement, progress, development or evolution of something. Designates the action and effect of developing or developing.

## **3 Methodology**

The software development methodology that will be used in this project will be RUP (Rational Unified Process), since it gives us a different approach to being the one that helps us improve productivity as a group, it also ensures an effective development of the software within the time established for said project, in addition to the costs and is the one that can best be adapted to any project.

### **3.1 Prototype Development**

For the development of this document processing system we are using PHP and JavaScript. This system will have multiple functions.

The first of these will be New Procedure, where a form will appear in which we will add the different data of the document.

Then it will give us a follow-up number for later and in the section of consultation procedure we can keep informed about our document.

There will also be a section to print a ticket, where you will provide us with the information, a QR code which will be attached to the tracking number. In the Login section we will have several users such as Administrator, Parts Desk, Human Resources. Each user will have exclusive functions corresponding to their work.

The Administrator user will be provided with the total management of the system, in addition you will be able to observe the different drop-down menus that are Users, Areas, Type of Document, Procedures, Employees. The parts table user will have the function of deriving, observing the follow-up and finalizing the documents. Finally, the Human Resources user will have the task of accepting, deriving or rejecting the procedure.

### **3.2 Mocking Bot**

It is a mobile app and/or program prototyping tool designed to help quickly prototype mobile or web apps, and be able to share and discuss them with other team members in a timely manner.

As a tool focused on prototyping mobile or web apps, in addition to cloud storage and real-time previews on your mobile device or system, Mocking Bot also offers a variety of gestures, page flip effects, and themes.

### 3.3 Architectural Design

**PHP:** is a general-purpose programming language that is especially adapted to web development. It was initially created by Danish-Canadian programmer Rasmus Lerdorf in 1994. Currently, the php reference implementation is produced by The PHP Group.

**XAMPP:** is a free software package, consisting mainly of the MySQL database management system, the Apache web server and the interpreters for PHP and Perl scripting languages. The nombre is actually an acronym: X, Apache, MariaDB/MySQL, PHP, Perl.

**MySql:** is a relational database management system developed under dual license: General Public License/Commercial License by Oracle Corporation and is considered as the database.

**RUP:** The Unified Rational Process or RUP is a software development process developed by the company Rational Software, currently owned by IBM. Model Design.

### 3.4 Prototypes

**Fig. 1.** Main interface

**Fig. 2.** Enter the information of the document to be made

CONSULTAR TRÁMITE

RASTREAR TRÁMITE

N° de Documento:

Año del Documento:

- 2022
- 2021
- 2020
- 2019
- 2018
- 2017
- 2016
- 2015

**Fig. 3.** Follow-up of the procedure

RASTREAR TRÁMITE

INFORMACIÓN DE TRÁMITE

DATOS DEL REMITENTE		DATOS DEL DOCUMENTO	
DNI	33333333	TIPO DOCUMENTO	ORDEN DE COORDINACIÓN
NOMBRES - APELLIDOS	ROMERO JAMRO ALARCON AVILA	NRO DOCUMENTO	000017
DIRECCIÓN	XXXXXXXX	ASUNTO	555
EMAIL	SOFTNETSOLUTIONS@GMAIL.COM		
REPRESENTACIÓN	A NOMBRE PROPIO		

**Fig. 4.** Track procedure

WISSEN-LP INICIO

BIENVENIDOS AL SISTEMA

N° de Documentos:

10 PENDIENTES 5 ACEPTADOS 2 RECHAZADOS

- 👤 Usuarios
- 🏠 Áreas
- 📄 Tipo de Documento
- 🔍 Trámites
- 👥 Empleados

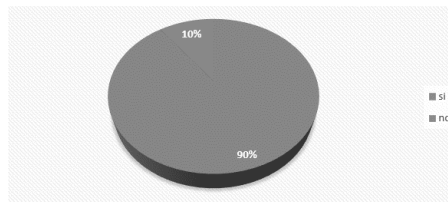
**Fig. 5.** System Startup



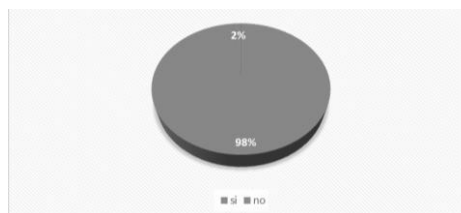
**Fig. 6.** User maintenance

## 4 Results

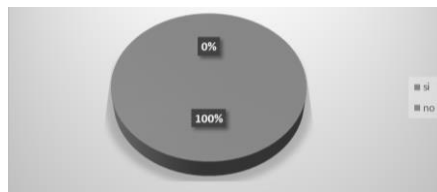
After finishing the implementation of the system, it is of vital importance to be able to check the satisfaction of the client with respect to its implementation, that is why in the company 59 responses were collected from the workers and based on thisgraphs were made to be able to complement the interpretation of the results obtained.



**Fig. 7.** Are you satisfied with the implementation of the system?



**Fig. 8.** Does this system streamline the processes requested in the company?



**Fig. 9.** Does the system reduce waiting time for the customer?

Figure 7 shows that 90% of respondents are satisfied with the implementation of the system. On the other hand, in Figure 8, it is shown that 98% agree that the system streamlines the processes requested by the company. And in turn, in Figure 9, it indicates that 100% of employees agree that the system reduces the waiting time to the customer.

## References

1. J. F. Asenjo Mestanza, "Web system for the improvement of document management in SERPAR," 2020. [Online]. Available: <https://repositorio.ucv.edu.pe/handle/20.500.12692/59874>.
2. K. Ramirez Berrospi, "DESARROLLO DE UN SISTEMA WEB DE GESTIÓN DOCUMENTALIA EN LA MUNICIPALIDAD PROVINCIAL DE PACHITEA.," 2019. [Online]. Available: <http://repositorio.udh.edu.pe/handle/123456789/2083>.
3. D. V. Herrera Sanchez, "Proposal of a document management system based on Workflow technology for the management of the documentary processing process in a private university in the region.," 2019. [Online]. Available: <https://tesis.usat.edu.pe/handle/20.500.12423/2198>.
4. M. A. Blanco Espinoza, "Implementation of a web system for document management in the cloud of the company INTECSA IND. in the city of Lima.,» 2021. [Online]. Available: <https://repositorio.utp.edu.pe/handle/20.500.12867/4431>.
5. R. Maguiña Oquelis, "Analysis and design of a documentary management system for a law firm.," 2017. [Online]. Available: <https://pirhua.udep.edu.pe/handle/11042/3066>.
6. M. E.M. Espinoza Perez, "Web system for the documentary management of the Municipality of Carmen de la Legua-Reynoso.," 2018. [Online]. Available: <https://repositorio.ucv.edu.pe/handle/20.500.12692/19188>.
7. Q. & A.M. Inga, "Web system for document management in the Master Group Advertising Company.," 2018. [Online]. Available: [https://alicia.concytec.gob.pe/vufind/Record/UCVV\\_013dbd6996c0bd8712bd6f54507c56cc](https://alicia.concytec.gob.pe/vufind/Record/UCVV_013dbd6996c0bd8712bd6f54507c56cc).
8. K. A. Condezo Apestequi, "Web system for documentary management in the internal clients of Banco de la Nación.," 2016. [Online]. Available: [https://alicia.concytec.gob.pe/vufind/Record/UCVV\\_5fdc8e2021dc0317988ea9969e197e3d/Description](https://alicia.concytec.gob.pe/vufind/Record/UCVV_5fdc8e2021dc0317988ea9969e197e3d/Description).
9. A. J. Yaya Maza, "Web system for traceability and access in document management in the Municipality of Santa Rosa.," 2020. [Online]. Available: <https://renati.sunedu.gob.pe/handle/sunedu/2961515>.
10. A. & E. G. Solis, "IMPLEMENTATION OF A WEB SYSTEM TO IMPROVE DOCUMENT MANAGEMENT PROCESSES FOR THE CIRCULO MILITAR-JESUS MARIA ASSOCIATION," 2016. [Online]. Available: [https://alicia.concytec.gob.pe/vufind/Record/UCVV\\_edde4601f7eafb15bd889f1afaa2a363](https://alicia.concytec.gob.pe/vufind/Record/UCVV_edde4601f7eafb15bd889f1afaa2a363).
11. A. D. & D. S. J. L. Ayala Paz, "Implementation of the digital signature in a Web System of documentary management to improve the system of the Regional Government of Lambayeque.," 2016. [Online]. Available: <https://repositorio.uss.edu.pe/bitstream/handle/20.500.12802/229/Ayala%20Paz%20Anani%20%20-%20Damián%20Saavedra%20José.pdf?sequence=1>.
12. E.C. Vargas, J. Agramonte Quispe, J. P. Huertas Lopez, P. Calcina Ccori, J. Neyra Araoz and J. Bautista Palomino, "CYBERDOC: SISTEMA DE TRÁMITE DOCUMENTARIO,"

2016. [Online]. Available: <https://socios.spc.org.pe/ecuadros/papers/CONEGOV2006.pdf>.
13. J. Bastidas Parraga, "Development and implementation of the documentary processing system in the provincial municipality of Huancayo for the attention offices," 2016. [Online]. Available: <https://repositorio.uncp.edu.pe/handle/20.500.12894/3889>.
  14. P. Rios, "Sistema de trámite documentalario único en una universidad pública del Perú," 2020. [Online]. Available: <https://dialnet.unirioja.es/servlet/articulo?codigo=8087964>.
  15. R. E. Enriquez, "Document processing system and the satisfaction of users in the property tax area of the District Municipality of San Sebastián.", 2019. [Online]. Available: <https://repositorio.ucv.edu.pe/handle/20.500.12692/44175>.
  16. O. Ascayor Leon, "Sistema de trámite documentalario para el mejora de la Gestión Administrativa en la Universidad Nacional Hermilio Valdizán de Huánuco.", 2021. [Online]. Available: <https://repositorio.unheval.edu.pe/handle/20.500.13080/6742>.
  17. J. J. Meza Vergara and S. P. Figueroa Montoya, "The quality of the documentary processing system (Sigedoc) in Sanipes influences user satisfaction.", 2021. [Online]. Available: <https://repositorio.usil.edu.pe/items/ee6ae169-e9e2-484b-80f6-c207d54299cf>.
  18. M. A. Berrios Fernandez, "Association of the quality of the documentary processing system with the satisfaction of the users of the administrative offices: Ricardo Palma University Case.", 2018. [Online]. Available: <http://repositorio.urp.edu.pe/handle/URP/1497>.
  19. R. Jacobi Lorenzo, "Automation of processes applying Business Process Management and free software in the documentary processing system of the District Municipality of Pazos," 2018. [Online]. Available: <https://repositorio.uncp.edu.pe/handle/20.500.12894/5105>.
  20. D. E. Pereda Morales, "Documentary processing system with SMS notification to improve the management of administrative files in the District Municipality of Sinsicap.", 2020. [Online]. Available: <https://repositorio.ucv.edu.pe/handle/20.500.12692/60882>.
  21. R. S. Yrupailla Díaz, "Implementation of a documentary processing system for the Purchasing Agency of the Armed Forces," 2019. [Online]. Available: <https://repositorio.utp.edu.pe/handle/20.500.12867/1858>.
  22. D. X. Pachas Garcia and L. A. Molleapaza Mamani, "Implementation of a web system to improve the documentary processing process in a public company in the city of Lima," 2019. [Online]. Available: <https://repositorio.utp.edu.pe/handle/20.500.12867/2403>.
  23. L. A. Muro Salazar, "Implementation of a Control and Monitoring Module to Improve the Management of the Documentary Process in the District Municipality of Cayaltí.", 2018. [Online]. Available: <https://core.ac.uk/download/pdf/225577782.pdf>.
  24. N. G. Burga Vasquez, "Design of a computer system for the documentary process in the company JR Repuestos Perú Import S.A.C.," 2019. [Online]. Available: <https://repositorio.ucv.edu.pe/handle/20.500.12692/46450>.
  25. Available: <https://repositorio.ucv.edu.pe/handle/20.500.12692/46450>.
  26. J. F. Lopez Orencio, "Proposal for the implementation of a web system of documentary trámite for the charitable society of Chimbote – Chimbote.", 2020. [Online]. Available: <http://repositorio.uladech.edu.pe/handle/20.500.13032/26427>.