COLEGIO DE MONTALBAN
Kasiglahan Village San Jose.Rodriguez, Rizal
INSTITUTE OF COMPUTER STUDIES
Department of information Technology

STUDENTS INFORMATION RECORDS MANAGEMENT AND REQUEST SYSTEM

A Research presented to Mr. Paulo Valdez as fulfilling

The request in

System Software Design at Colegio

De Montalban

Researchers:

Bernal, Danniella Mae

Bitangga, Randell Jhon

Ilagan, Dexter

Pascual, Clariza

Romeo, Angelica

Romeo, Angelo

Mr. Paulo Valdez

System Software Adviser

July 2022

CHAPTER I
INTRODUCTION

Records are one of an organization's most valuable assets. As we are all aware, records help decision-making, demonstrate compliance, document student information, and, perhaps most importantly, allow us to do our tasks or activities. As a result, records must be handled correctly in a manner that maximizes their value while minimizing their cost. The technologically advanced generation of today is to blame for the fascination many people have with technology. Technology aids us in an array of ways, such as the system the project developer has created. The traditional method of providing and requesting your records from the school is very troublesome.

In 2012, the Philippines passed Republic Act No. 10173 or the Data Privacy Act of 2012 (DPA) *"to protect the fundamental human right to privacy of communication while ensuring free flow of information to promote innovation and growth [and] the [State's] inherent obligation to ensure that personal information in information and communications systems in government and in the private sector are secured and protected".* The privacy of each student's records that will be uploaded to the system created must be considered by the Project Developer. It intends to secure personal information, often these information has been processed online.

Colegio de Montalban is a tertiary institution that is still capturing and storing student record details locally, where hard and soft copies of files for each student are kept on office shelves and stored on their computers. If the registrar is looking for a specific student document it appears to be a tiresome and time-consuming process, and there is a risk that the computer's hard disk drive will become corrupted. In addition, some students are in a remote place, not in the vicinity of the school, or whose have left part of their essential papers at home, forcing them to return to school. These are the issues that the present system and students are dealing with. As a result of these disadvantages, the Students Information Records Management and Request System has been created to address the problems listed above.

PROJECT CONTEXT

Colegio de Montalban's registrar is in charge of maintaining students' information and gathering it during enrollment. This information includes each student's background information, courses are taken, attendance, lectures, grades, performance record, and any other information that the institution requires. The school has over 3,000 students enrolled in various courses. Colegio de Montalban's success is indeed reliant on the ability to collect accurate and timely data about its

operations, effectively manage this data, and use it to assess and guide its internal daily activities.

Technology is essential in today's world. It is a great help to students who take online classes, but one of the many issues students face is getting a hard copy of necessary files such as good moral certificate, a copy of the SSOG and so on. As a result, they take a long time to process when they are taken. It can take up to two days for it to be released. Students spending money for the fare when returning to school. They have to do something else because it takes a long time. Students' time is essential, particularly in college. One of the reasons why file retrieval takes so long is that their local storage stores so much data.

Students use the record system to upload and access their files. They can ask for their files. As a result, we will devise a system that will allow students to obtain a hard copy or soft copy of what they need, more quickly, and the less time it takes to the process. Because of the proposed system, the registrar staffs can locate a student's file faster.

PURPOSE AND DESCRIPTION

The system's objective is to aid students in reducing the amount of time and effort they put into it. The students of Colegio de Montalban are our primary development targets. Students can upload their data, and if they needs it, they must justify why they demand hard copy and soft copy

to secure student files. Only the registrar can determine whether a student's reason for requesting the file is valid. To secure the other student's data, you must enter the student number, and if it is entered incorrectly, the system will not be able to access the file.

OBJECTIVES:

The system is capable of capturing, validating, sorting, categorizing, calculating, summarizing, storing, and retrieving data. The Students Information Records Management System stores semester information, course information, department information, and all other information (such as students' background information, educational qualifications, personal details, and so on.)

SPECIFIC OBJECTIVES:

The project was specifically designed to:

- Log in as students and administrators to make necessary changes.
- Update student information records.
- Improves the efficiency with which student information is managed.
- Lastly, process and print the requested data.

SCOPE AND LIMITATIONS

This project is primarily for Colegio de Montalban. This educational institution offers many services to students, such as admitting new students and keeping student records for each department. This study only involved and bound registrar staff and students. This system is centered on the students' data.

- The system is available only for the registrar staffs and learners of Colegio de Montalban.

- The system can accumulate all the students' data.

- The system is intended to make the students' lives easy.

- The system facilitates easy access pf students' records.

- The system can retrieve the deleted data.

- The system can easily updates everyone's data.

- The system can allow downloading of information.

- The system has a tight security securing and privacy of the learners' information.

- The system allows uploading unlimited necessary data.

However, this study has several limitations. Because of the current COVID-19 pandemic, the project developer is unable to conduct an in-person interview to gather additional ideas for the proposed system.

- The system is not available for those who are not a student and staff of Colegio de Montalban.
- The system will not allow you to request data if you're reason is not valid.
- The system cannot work without an internet connection.
- The system cannot perform by itself, it involves performing tasks manually.
- The system which cannot support the system to be used on other operating system like Linux and Apple.

TECHNICAL BACKGROUND

FLOWCHART

To use the system, the user must have an account and have the option of logging in or creating an account. Before you submit, the system requests your username, password, student number, and Gmail account. The user must first enter their Course and Section in their account before downloading or requesting a file from the system.

The system allows the user to Download, Upload, and Request files. After selecting to do so, the user can download any submitted file on the system. The user must provide a legitimate reason for the request before it reaches the registrar's office. Once the request has been processed, the system will give the user an option to get their file via email or during a scheduled visit to the school.

DATA FLOW DIAGRAM

As soon as the students create an account and log in to the proposed system, they will be able to begin uploading some of their specific files. Once the uploading is complete, the requesting process can begin. The registrar has been authorized to begin processing a specific document requested by the student. Following the process, it can be e-mailed to the student or picked up by the student.

ENTITY RELATIONSHIP DIAGRAMS

A student can only register for the proposed system once. After completing the registration process, students can access their accounts as many times as they want. Students' accounts can have composite attributes such as the year, username, password, and e-mail, which they must submit to participate fully and access the students' page. Because

many students want to download their uploaded file, it can be downloaded with multivalued attributes (such as MP4, DOC, JPEG, and PDF).

Users can upload files using the entity relationship diagram's multivalued attribute. There are reasons for requesting specific information, and the registrar staff can decide whether or not to accept the user's reason. If the reason is accepted, many students will be able to obtain the requested document. There are numerous ways to obtain it in the acceptance mode.

DEFINITION OF TERMS

Account - the student account that is required for access. Each learner will benefit from having security from it.

Corrupted - a data or program file that has been altered accidentally by hardware or software failure.

Data Flow Diagram - is a graphical representation of the "flow" of data through an information system, modelling its process aspects.

Database - is basically a collection of information organized in such a way that a computer program can quickly select desired pieces of data.

Document - it is in a soft copy format that gives information about the requested or uploaded file of the student.

Download - is the transmission of a file or data from the database and can get to the proposed system.

Email - is one of the options of the students when requesting his/her file to the proposed system.

Entity Relations Diagram (ERD) - is a specialized graphic that illustrates the relationships between entities in a database.

Hard Copy - is a printed copy of information from requested file of a student from the proposed system.

Information – it refers to the students' documents that will be held by the system.

Invalid – it is defined as not correct. It refers to the student when enters an incorrect username or password into an account, access to that account is prohibited.

Password - it is a secret data made by the students, typically a string of characters, usually used to confirm a user's identity.

PDF – it is an abbreviation that stands for Portable Document Format. It is a file format that has captured all the elements of a printed document as an electronic image that you can view, navigate and print.

Records – here are the student files that the school uses to keep track of the identities of the students. Additionally, it will maintain the students' information's security.

Registrar – this is the organization that is responsible for the information of each student in schools. They are the one who accept the request from the students.

Request – this is how the students formally ask for requirements.

Soft Copy - is an electronic copy of some type of data which can be downloaded and uploaded to the proposed system.

System Development Life Cycle - is a conceptual model used in project management that describes the stages involved in an information system development project.

Upload – this is how students organize their records so that the school has a copy as well. Moreover, it is a strategy to make it simpler for them to comprehend precisely what the students are asking for.

User – it represents a student who uses an account.

CHAPTER II

REVIEW OR RELATED SYSTEMS

LOCAL RELATED SYSTEMS

According to Jose Rizal Memorial State University-Katipunan (2020), on their system Automated Student Record System For The Guidance Office, record keeping is focused on achieving cost-effectiveness and efficiency in the creation, maintenance, use, and disposal of educational institution records throughout their entire life cycle, as well as making the information they contain accessible to support school business administration of Jose Rizal Memorial State University-Kati. The primary goal of this document, which is linked to the project developers' record-keeping system, is to ensure economically and convenience in the production, servicing consumption, and deletion of information for the academic system.

As stated by Legazpi (2019), the Students Record System is designed to accurately accept, process, and generate student reports, grades, and transcripts. The system also intended to improve user services, provide meaningful, consistent, and timely data and information, and promote efficiency by converting paper processes to electronic forms.

According to Javier (2017), the emergence of computer-based information systems has significantly changed the world. Both large and small systems have adopted the new methodology by use of personal computers to fulfill several roles in the production of information. Thus, computerizing the documentation of student records to enable easier manipulation of the input process and output will bring us to this existing new world of information system.

FOREIGN RELATED SYSTEMS

Guiling, S., Et al., (2017) stated that in order to ensure the security of data transmission a new type of student information management system is designed to implement student information identification and management based on fingerprint identification. Therefore, safe and efficient student information management, convenient identification to obtain the required service, and safe and reliable information transmission have become an important task for the student information management.

As stated by Fritz (2021), Student Database System deals with all kind of student details by tracking all the details of a student from the day one to the end of his or her course which can be used for all reporting purpose, tracking of attendance, progress in the course, completed semesters years, coming semester year curriculum details, exam details,

project or any other assignment details, final exam result; and all these are purposed for future references when interpreting an organization performance.

According to the study of KanayoKizito U., & Nwabueze E.E. (2019), stated due to the problems associated with student academic record management which include improper course registration, late release of students' result, reconciliation of students' result, malpractices at various students clearing units, inaccuracy due to manual and tedious calculation and record retrieval difficulties in the institution, system need to develop a portal that would incorporate online registration, profile creation, students' final clearance and payment, transcript processing, checking of admission status, degree certificates and checking of results, thus it is expected to reduce paperwork and automate the record generation process in the tertiary institution (Web Based Students' Record Management System for Tertiary Institutions).

SYNTHESIS OF REVIEW RELATED SYSTEMS

It is worthwhile and beneficial to create a robust student database. A data management system for the institution to store the large amount of data generated. SIRMRS, the proposed system, should be able to withstand the test of time because student records should be kept. The

related systems discovered while reviewing existing literature on student information management systems proved extremely beneficial in the development of the proposed system. When completed, the project will provide a more efficient way to store and organize data than a spreadsheet. It will also serve as a centralized facility, which will make the registrar's job easier.

CHAPTER III

SYSTEM ANALYSIS AND DESIGN

OPERATIONAL FRAMEWORK

System development is methodical process that includes stages such as making plans, analyzation, layout, deployment and upkeep.

In the first phase, Requirement analysis is that all the developer and analyst requirements are collected and approved before the beginning of the project. All necessary data is collected and no further student nor registrar interference is required.

In the second phase, System design is that developer relies on project requirements to develop project specifications, including project plan.

In the third phase, Implementation is that with the inputs from the system design, all the previous planning is put into action.

In the fourth phase, Testing is that entire system is tested to identify any faults and failures, fix and polish the end-product.

In the fifth phase, Deployment is that fully functional system is released over to the student and registrar as well.

In the sixth phase, Maintenance is that system require improvements and updates. Enhance the system some better versions and deliver these changes.
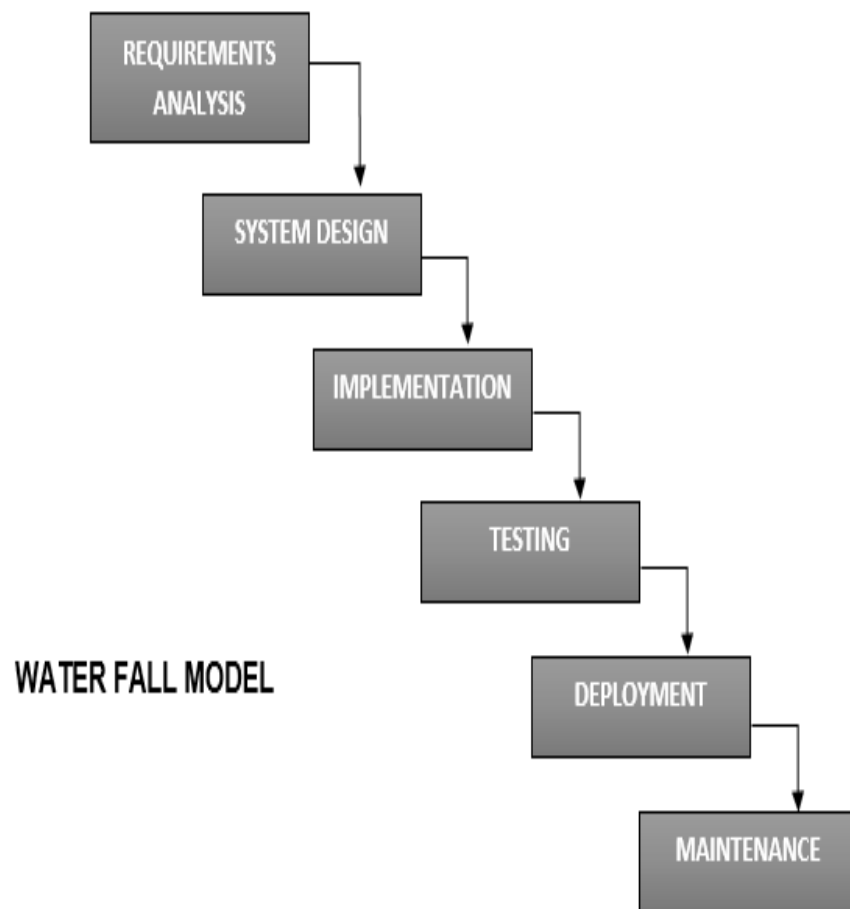
REQUIREMENTS ANALYSIS

SYSTEM DESIGN

IMPLEMENTATION

TESTING

WATER FALL MODEL

DEPLOYMENT

MAINTENANCE

Figure 1

An Operational Framework showing the Development of Students Information Records Management and Request System

REQUIREMENTS SPECIFICATION

The Students Information Records Management and Request System are made up of several devices and applications, including Visual Basic.NET, the programming language used to create the system, and XAMMP for the system's database. As the system built on a computer run by the Windows 10 as the operating system of the said device. Visual Basic Studio an object-oriented programming application used for the system. For connecting the database to Visual Studio, the project developer use MySQL as the reference. This system is on a physical appearance of a website.

CONCEPTUAL FRAMEWORK

INPUT

Here are the system specifications that would be considered necessary for the system to function. It includes the research conducted by the project developer to determine what should be included and what the system required. It also involves testing and observation, which will enable the filtration of the project developers' information.

PROCESS

Things that will enable the system to contain the process should be improved and developed. This includes planning how to access the system, conducting an analysis to determine the best course of action, and developing the system's structure. There is also development, testing and debugging to ensure that the Students Information Records System works as an intended.

OUTPUT

This is associated with the system's installation and ongoing maintenance. In addition to preparation, evaluating, constructing, programming, running tests and bug fixing. It also arranges those contents to simply follow the flow of the process that might have an impact on making this part ideal. For the development of the system, project developers include research, testing and observation as system requirements on which the process will be based. After all, the Students Information Records Management and Request System is designed to fully implement the system.
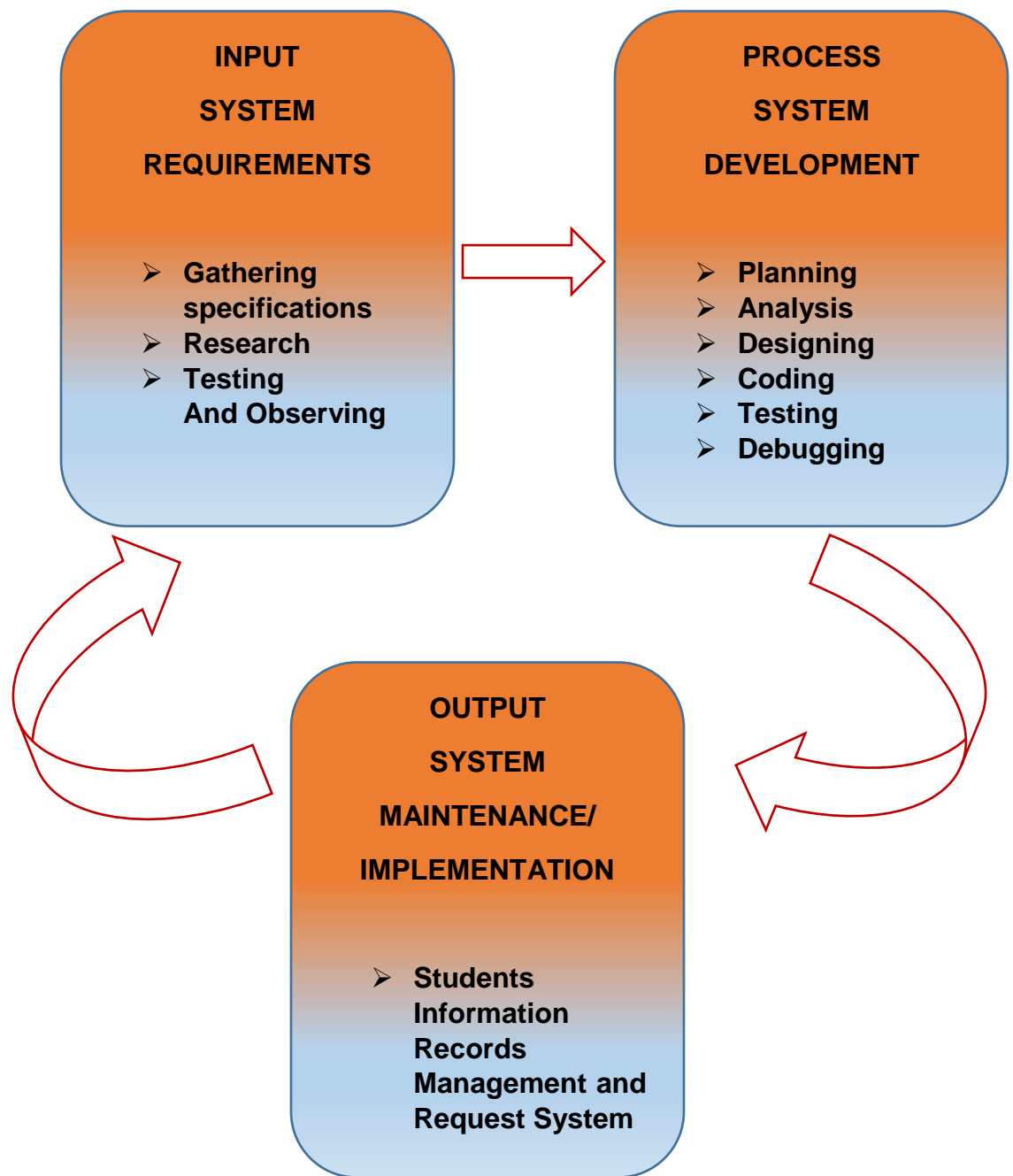
INPUT

SYSTEM

REQUIREMENTS

- ➢ Gathering specifications
- ➢ Research
- ➢ Testing And Observing

PROCESS

SYSTEM

DEVELOPMENT

- ➢ Planning
- ➢ Analysis
- ➢ Designing
- ➢ Coding
- ➢ Testing
- ➢ Debugging

OUTPUT

SYSTEM

MAINTENANCE/

IMPLEMENTATION

- ➢ Students Information Records Management and Request System

Figure 2

A Conceptual Framework showing the development of Students

Information Management and Request System