



CLOUD-BASED REGISTRAR'S INFORMATION MANAGEMENT SYSTEM FOR AEMILIANUM COLLEGE INC.

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Abstract. This study is about the documents kept and processed at the Registrar's office. The proposed system is necessary because it helps in processing vital documents of students who enrolled in the college. The grades and other documents certifying the students' academic journey were stored in the office. It is important to every student so it is carefully filed by the Registrar. When it is necessary to request any student references, it is also carefully processed to provide the requests by students.

The Cloud-Based Registrar's Information Management System For Aemilianum College Inc. has two services. It is for providing services online and offline processing of documents requested by the client. It is a cloud-based repository of pertinent documents which was stored, updated, and can produce printed reports to provide a hard copy.

Key Words: Cloud-Based System, Information Management System, Registrar's Office, Registrar's Information Management System, Student's Information System

INTRODUCTION

Education is a legacy that will never be stolen. When it is in the hands of someone with good aspirations and goals in life, education is wealth not only for those who have achieved it but also for those around them. For parents, education is still the greatest gift and more than anything else in the world for their children. It is endeavored to be successfully imparted to the youth. Through this, parents can ensure that when there are challenges in life, they can successfully come up with a strategy to frame any situation that challenges them.

Yadav said, "Nelson Mandela has rightly said that 'Education is the most powerful weapon which you can use to change the world. "The majority also agreed with this statement. People with education can find a way to overcome any challenges in life. So, everyone is working hard to send their children to school. And guide them to reach their dreams to live a dignified with values, peaceful, and successful life.

Parents are not the only ones who care about the welfare of young people. There is also the help of the government to help young people to be useful not only to themselves, and their families but also to the community they belong to. Like if the

United States of America, education is primarily a State and local responsibility. It is States and communities, as well as public and private organizations of all kinds, that establish schools and colleges, develop curricula, and determine requirements for enrolment and graduation. The structure of education finance in America reflects this predominant State and local role.

In the country, the Department of Education (DepEd) is the government agency responsible for the management and governance of the Philippine Basic Education System. It oversees both the elementary and secondary school systems and provides students and young adults with the knowledge, skills, and values they need to grow into compassionate, self-sufficient, productive, and patriotic citizens. Its mission is to provide quality basic education that is accessible to all Filipinos and to prepare them for lifelong and productive citizenship. Its vision is to produce globally competitive Filipino citizens through quality basic education. The Commission on Higher Education is the Philippine government's agency in charge of promoting relevant and quality higher education, ensuring access to quality higher education, and guaranteeing and protecting academic freedom for continuing intellectual growth, advancement of learning and research, development of responsible and

effective leadership, education of high-level professionals, and enrichment of historical and cultural heritages.

The Registrar's Office of each school is the most visited by students - from admission, enrollment, academic records from day one to graduation, and to obtaining pertinent documents such as Transcript of Records (TOR), diploma, and others. Therefore, many transactions take place every day at the Registrar's office. Many student documents are taken care of, processed, and served to students who wish to request them.

Cloud-based Information Management Systems can help with the many documents handled within the office. If we look at it, it's hard to work in an office that doesn't just provide one or two people with your services. There are the teachers who submit students' grades, parents who request their students' documents, students who get their grades evaluated, and many other inquiries, requests, and follow-ups that the office receives. All clients expect easy and efficient service for them. We know that the Registrar and his colleagues in the office are just like everyone else who is not perfect, makes mistakes, and gets tired just like everyone else. Their work is not easy. They also deserve an automated system that can help with their daily operations and is a big help and comfort in the office.

All clients have their reasons why they need fast and efficient service. If you were in their place, what would be your reaction? Or let's reverse it, you are the one in the registrar's office? Everyone has a reason that requires the intervention of an effective automated system that can help them.

The automated system that the Registrar's Office needs is one that can store pertinent documents. Likewise, provide fast and efficient services to all client requests. It is also good to do this online so that the office can entertain queries and requests even if they are distant if there are internet connections and electricity services in the area. The transaction will be easy for both the client and the Registrar's office.

First, the Information Management System is for the Registrar's Office. There is a sense of gratification if you have a reliable, effective, efficient, and fast assistant in all transactions. It feels good if all the requests are on time. You can say you're fulfilled and satisfied that you delivered the expected service.

Second, the clients are satisfied. They are not going back and forth and are not wasting time. For the parents, the documents are their treasures. They are proud of it. They deserve to have it on time once requested in the registrar's office. Both the registrar and the student deserve satisfaction and fulfillment because of this Information Management System.

The researcher desires to be one of those individuals whose goal is to uphold education. It is her concept to design and develop the Registrar's Information Management System that would make a dream come true. It's nice to think that you were able to help a little, especially in the school you attend. The Registrar's Information Management System is for Aemilianum College Inc., the school that provided the opportunity to hone the skills that the researcher has. So, this system is for the respected and beloved College in the researcher's heart. The said college is the beneficiary of the researcher's system and is located near the heart of Sorsogon City. It is situated at Rizal Street, barangay Piot. ACI is the only college in the province offering a Master in Information Systems (MIT). Somascan Fathers and Brothers have run it for almost thirty-seven (37) years. With the virtues and charism of their patron saint - St. Jerome Emiliani, the researcher is favored to be able to

continue studying for the degree. Grateful as she is, the proposed system is her gift to the college.

Specific Objectives

Specifically, the study aimed to:

1. Develop a registrar's information management system that has cloud-based document repositories.
2. Provide a system for student admission
 - 2.1 initial evaluation and reception of student documents for enrollment purposes
 - 2.2 Form 137 (Permanent Record)
 - 2.3 Form 138 (Report Card)
 - 2.4 Transcript of Records (for transferees)
 - 2.5 Certificate of good moral character
 - 2.6 Philippine Statistic Authority (PSA)
 - 2.7 Birth Certificate
3. Provide a secured module for the following academic documents:
 - 3.1 Student's Transcript of Records
 - 3.2 Diploma
 - 3.3 Good Moral Certificate
 - 3.4 Honorable Dismissal
 - 3.5 Other pertinent certifications and documents
4. Provide modules for the generation of the following:
 - 4.1 Student's Transcript of Records
 - 4.2 Diploma
 - 4.3 Good Moral Certificate
 - 4.4 Honorable Dismissal
 - 4.5 Other pertinent certifications and documents
5. Provide notifications to the client through e-mail when the document/s requested are ready for pick-up.
6. Provide a module for the monthly transaction reports' generation.
7. To evaluate the Application of Multiple Technologies in Cloud-Based Voting System for Aemilianum College Inc. using the industry software quality model – the ISO 25010 evaluation tool in terms of:
 - 7.1 Functional suitability
 - 7.2 Performance efficiency
 - 7.3 Usability
 - 7.4 Reliability
 - 7.5 Security
 - 7.6 Maintainability
 - 7.7 Portability

Requirement Planning

The process aimed to recognize and solve the issues that the AIC College Registrar experienced with the use of the current method. The gathering of data and planning is the beginning of the said method. It did not require gathering detailed requirements gathering instead a broad idea description was enough. With this in mind, the researcher conducted a series of interviews with the College registrar before starting with the system development. The interview dictated the system's priorities and objectives. The College Registrar addressed the current procedure. As a result, the researcher was able to identify potential issues that could be addressed by designing Cloud-Based Registrar's Information Management System specifically for the Aemilianum College Inc. Registrar office that may serve College and Graduate School Department. In addition, the researcher was able to draw the study/s scope of coverage and limitations. Finally, the stakeholders were identified as they are the primary beneficiary of the study.

It had been understood that only ACI registrar personnel respond to all inquiries of new upcoming students and client requests for any pertinent records. The process began with filling up the form, which included the submission of requirements.

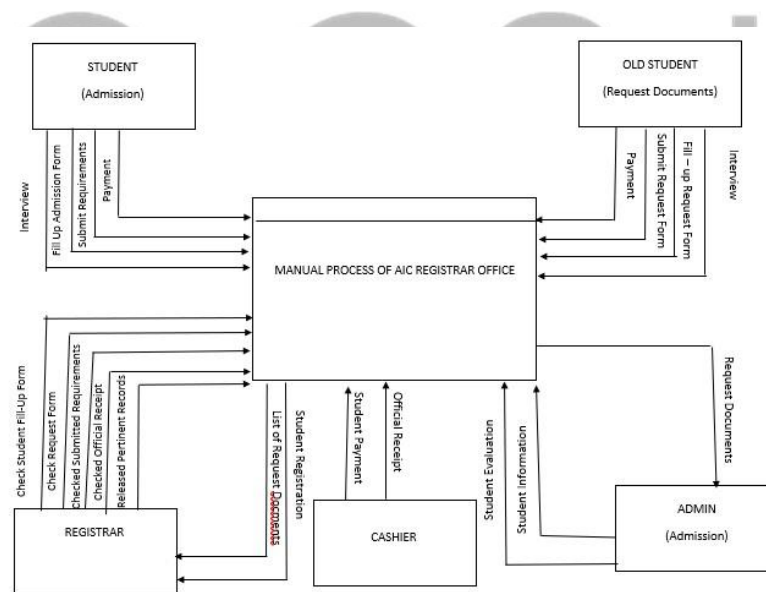


Figure 1 - Data Flow Diagram of the Existing System

Figure 4.1 showed the data flow diagram of the existing system. Illustrating how the current system in Aemilianum College Inc. Registrar operates.

The process of the existing system started with the Registrar, who is in charge of confirming all of the necessary requirements and gathering information for incoming

students and requests of all pertinent record for old students. New students may proceed to Registrar office to fill-up admission form and submit all the required documents. Requirement will be checked and validated by the Registrar before proceeding to the next procedure. Old students that will request for any pertinent record will fill up the request form.

User Design

The phase comprised a careful examination of the activities associated with the developed system. The requirements determined during the planning phase were used to create the system and software design. Following the study, the proponent was required to create a product or solution; accordingly, the system architecture was developed, and prototypes of important procedures were constructed and reviewed. System procedures were created, as well as prototype screen layouts.

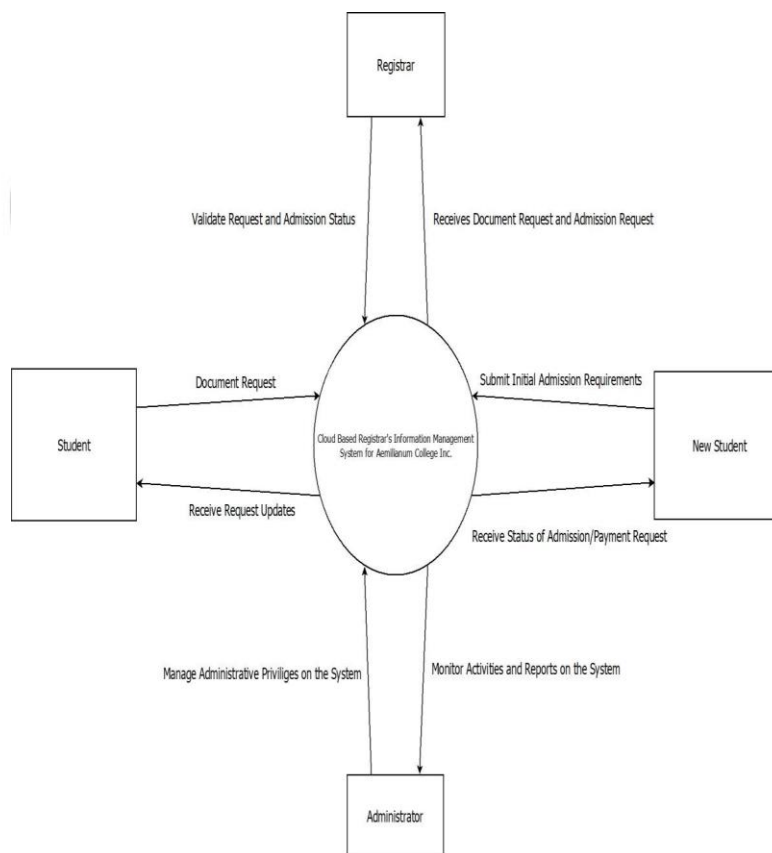


Figure 2 - Context Data Flow Diagram of the Developed System

The process of the developed Cloud – Based Registrar’s Information Management System for Aemilianum College Inc. began with the students, who fills out admission form and upload the requirements online in Aemilianum webpage. The system gives reference number and proceed code for students after submitting the admission form. This will be used to log in on his/her account they will just use their email account and password that the system send to his/her email. To check the status of his/her application they will just use the reference number. The registrar checks the submitted requirements and notifies the students for any deficiency/incomplete documents. Following confirmation, the student would be able to view his/her application profile status. If the status is approved, the system informs the student’s date of entrance exam. For old students who are my request for pertinent record, they would have fill out request forms. To complete the request, the system generates amount/fees per document request. The requesting student will know how much he/she will pay into the cashier. After submitting the form, system gives application number and pin to log in for his request. To login in his/her account the student must enter student ID and password. Registrar will check and verify the submitted request and requirements. After checking the Registrar update of the release schedule. The system digitalized all the pertinent record of all the students request and stores it in cloud –based. The old student will pays request fees upon the day of release schedule in school cashier.

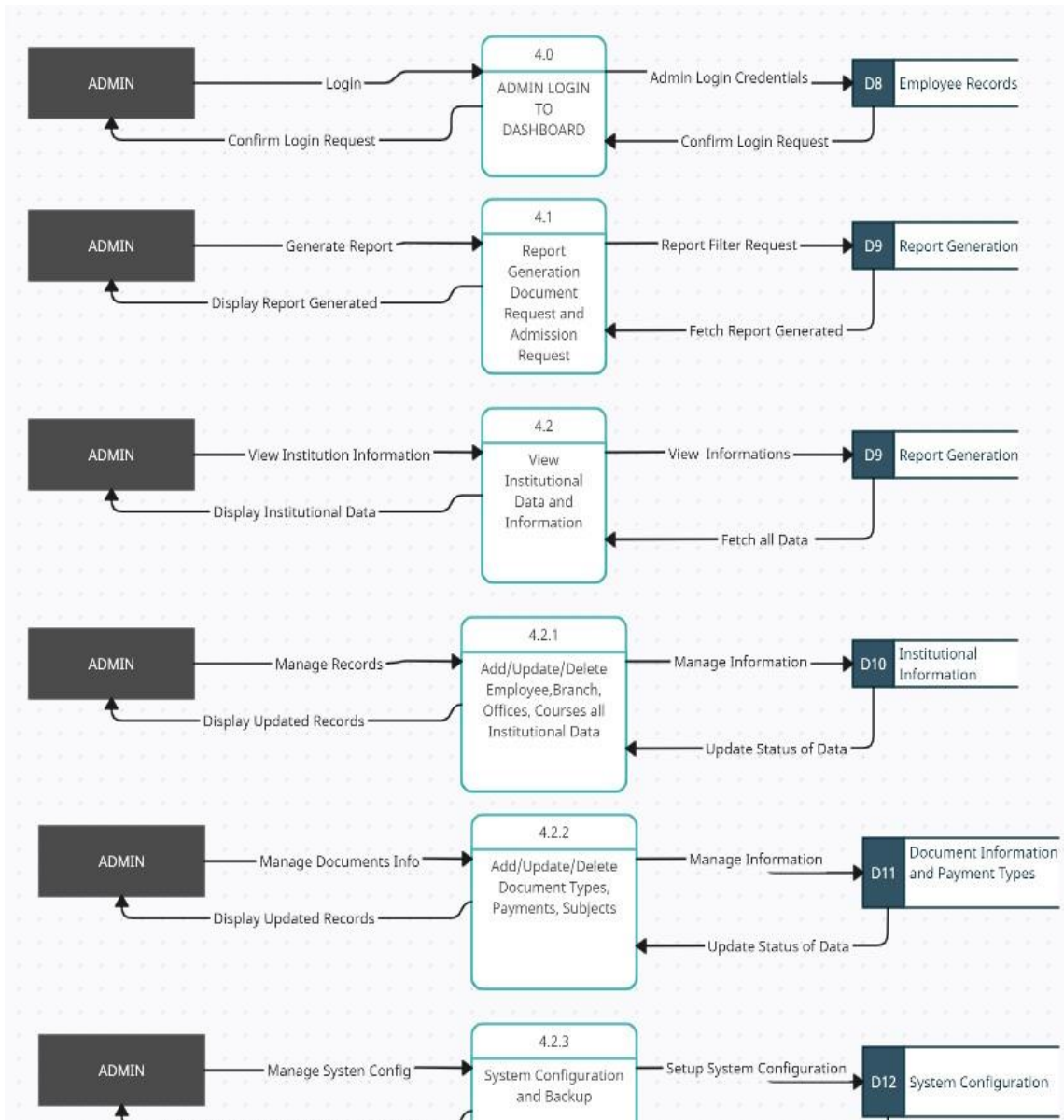


Figure 3 - Data Flow Diagram Level 1 of Admin Form

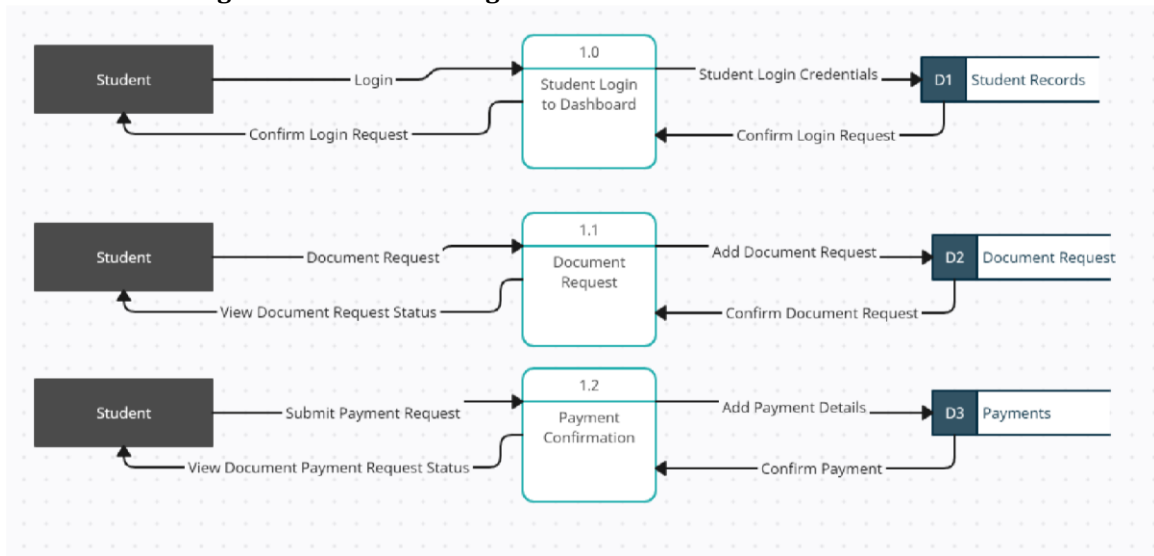


Figure 4 - Data Flow Diagram Level 1 of Old Student Document Request

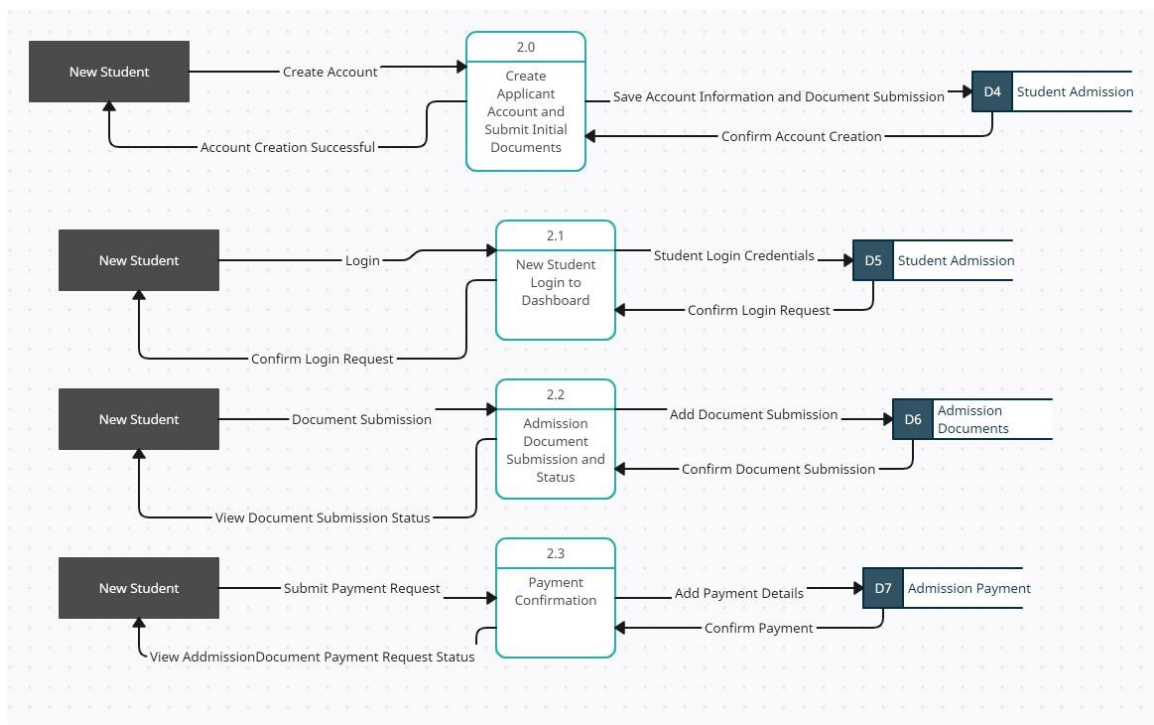


Figure 5 - Data Flow Diagram Level 1 of New Student Admission

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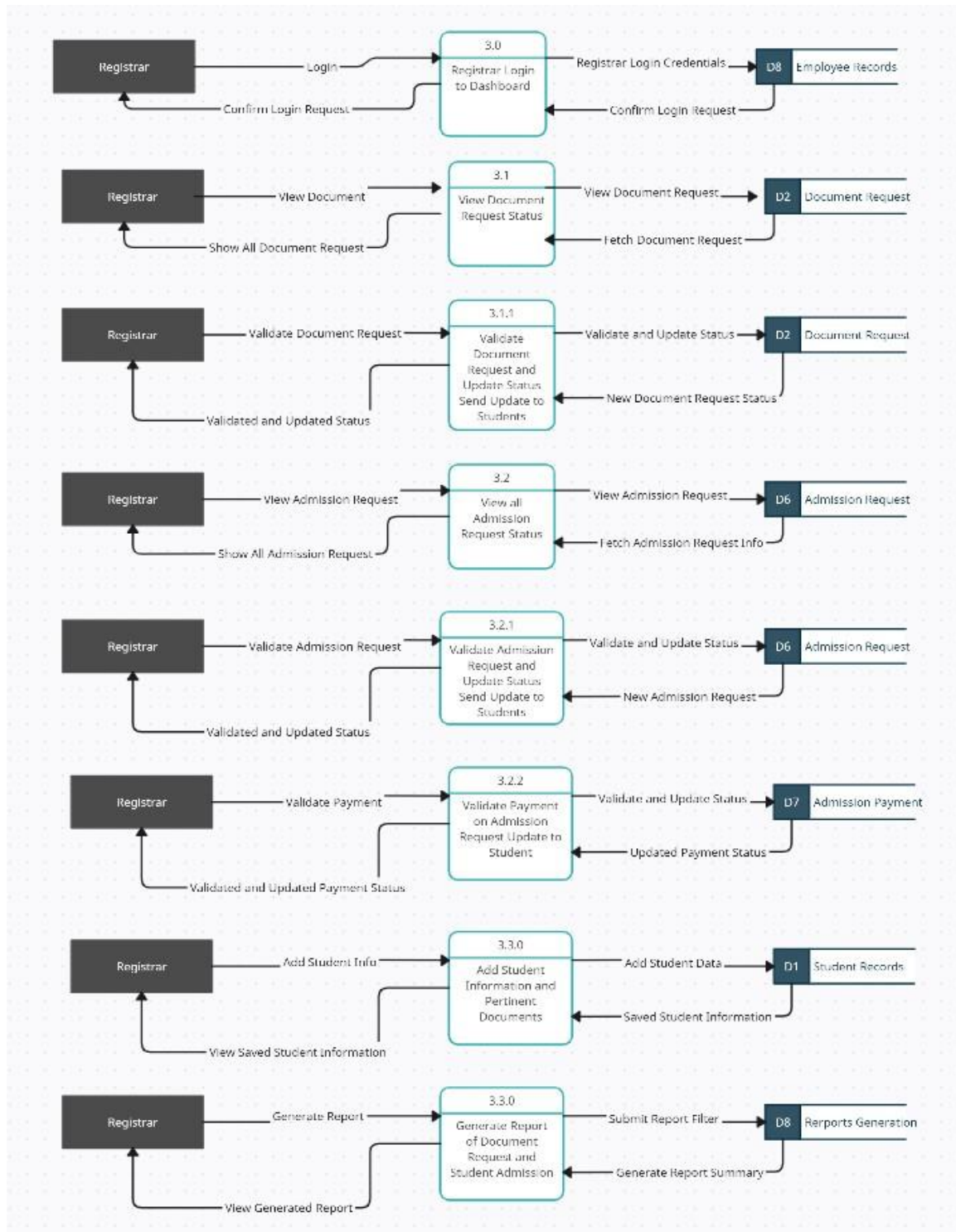


Figure 6 - Data Flow Diagram Level 1 of Registrar Form

Construction

The user interface was created during the prototyping cycles that resulted in the functioning prototype. Several findings were found during this prototyping, which required the modification of the user design interface for more effective, efficient, user friendly, and comprehensible interface. As a result, the last revisions were carried out with a horizontal strategy, with the goal of implementing needed functionality and security storage of all the files.



Figure 7 - Cloud-based Registrar's Information Management System Home page

Evaluation

The only way to know if an application works properly after deployment is to test it. It enabled the implementation of regression testing whenever new functions or logic were released. The phase also included bug fixing and retesting. The different modules that comprised the system were tested for implementation, ensuring that all of the required components were present, and were presented to the respondents, where the outcome is satisfactory.

Cutover

After modification, improvement and testing for several times, the developed Cloud-Based Registrar's Information Management System for Aemilianum College Inc. was deployed and uploaded to the Cloud. The researcher make sure that the developed system will serve its purpose once it will be installed and be utilized by the beneficiaries. She is also expecting that the College will use the system and that's for her a rewarding moment.

Summary of Findings

The following findings were obtained from the study:

1. The developed system has cloud-based document repositories.
2. The proposed system has features for student admission which received Form 137 (Permanent Record), Form 138 (Report Card), Transcript of Record (for transferees), Certificate of Good Moral Character, and Birth Certificate (PSA) for initial evaluation.
3. There were modules for the processing of pertinent documents requested by the clients.
4. There were modules used for pertinent document generation.
5. The notifications to the client through e-mail were provided in the system.
6. Provided a system for monthly transaction reports' generation.
7. The system was evaluated by ten (10) IT Experts, and ten (10) end users/beneficiaries. The result was pointing toward the attainment of the objectives of the developed system.

Conclusion

Based on the findings of this study the following conclusions were formulated:

1. The developed system has a cloud-based document repositories which can be used for storing, updating, and retrieving pertinent documents of students' credentials.
2. The proposed system can received and processed student's documents for admission for initial evaluation.
3. The system was fast and efficient in processing pertinent documents requested by the clients as perceived by the evaluators.
4. The notification could generate pertinent documents for the clients.
5. The system could promptly provide notifications through e-mail for the pickup schedules of claiming requested documents.
6. Generation of monthly transaction reports was successfully integrated in the system.
7. The system was made ready for use as perceived by the evaluators which certainly passed the evaluation using the industry accepted model set by ISO 25010.

Recommendations

Based on the conclusions, the following recommendations are hereby, offered:

1. The system's cloud-based repositories may be utilized for storing, updating, and retrieving pertinent documents of the students.
2. The system may be utilized for admission processes by the College Registrar.
3. Modules in the system which may be used for the processing of requested pertinent documents in the Registrar's Office.
4. The notifications though e-mail could be useful for prompting the clients in picking-up their requests in the Registrar's Office.
5. Notifications to clients through e-mail may be utilized for prompting claiming requests schedule.
6. The system may be utilized in generating monthly transaction reports.

7. The developed system is ready for installation and efficient use in the Registrar's Office.

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