Republic of the Philippines

Laguna State Polytechnic University

Province of Laguna

**COLLEGE OF COMPUTER STUDIES**

# Title Proposal

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| **Proponent/Research er:** | **CSO5 – Rapsing, Reyes, Sarmiento** |
| **Project Title: Scholarship Management Information System for Scholarship and Financial Assistance Office in Laguna State Polytechnic University, Sta. Cruz Campus** | |
| **Introduction** | In the old days, businesses and institutions had to rely on paper-based systems to manage transactions and interact with their stakeholders. However, with the advancement of technology, we now have more efficient and effective ways to handle such processes. The modern era has brought us web applications that have revolutionized the way we operate, making transactions faster, more secure, and more convenient.  As we become more dependent on technology, web applications have become an essential part of our daily lives. People use it to access various services, from online shopping to social media. In this capstone project, we will be building a web app that will serve as a Scholarship Management Information System for the Scholarship and Financial Assistance Office.  Aside from providing convenience and accessibility, the proposed project aims to offer other benefits to both the office and its scholars. The system can track and manage scholarship applications, monitor academic performance, and disburse funds efficiently. It can also provide real-time updates and notifications to keep everyone informed.  Our proposed project is a web-based application that will streamline and simplify the scholarship management process. The project aims to enhance the quality of service provided by the Scholarship and Financial Assistance Office. We believe that this system will improve the overall experience of the scholars and increase the efficiency of the office's operations.  In summary, this project will provide a more effective and efficient way to manage scholarship programs. It will ensure that the Scholarship and Financial Assistance Office is operating at the highest level of efficiency while providing a high level of service to its scholars. |
| **Statement of the Problem** | The Scholarship and Financial Assistance Office of Laguna State Polytechnic University (LSPU) is an organization that focuses on providing financial assistance to students in need. The head of the office is Cheerobie Aranas, who oversees the operations and management of scholarship programs.  The main problem faced by the Scholarship and Financial Assistance Office is the lengthy process of billing. According to Ma'am Aranas, they have to manually input data from the portal for each student, which is a time- consuming process, especially since there are around 10,000 scholars in all LSPU branches. The current process involves using Excel and VLOOKUP to search for unique data like ID numbers, which are required by the Commission on Higher Education (CHED). However, since there are no ID  numbers, the office needs to input them manually for each scholar. |

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|  | Another minor problem related to the main issue is the difficulty in tracking and monitoring the academic performance of scholars. The current process involves manually checking the grades of each scholar, which can be time-consuming and prone to errors. And it can hinder the office's ability to identify scholars who are not meeting the academic requirements of their scholarship program.  It is crucial to solve these problems as they can lead to delays in scholarship disbursement, errors in billing, and difficulties in tracking and managing scholars. he risks include disgruntled scholars, decreased efficiency of the office's operations, and loss of trust in the office's ability to manage scholarship programs. Therefore, it is essential to develop a solution that can streamline the scholarship management process and improve the overall quality of service provided by the Scholarship and Financial Assistance Office. |
| **Objective of the Study** | The main goal of the study is to develop, test and evaluate the user’s convenience and acceptability of the Scholarship Management Information System for Scholarship and Financial Assistance Office. the scholarship management process of the Scholarship and Financial Assistance Office of the university, making it more efficient, accurate, and accessible.  Specifically, this study sought to find out the following:   1. To determine the process of developing the Scholarship Management Information System. 2. To design and develop system;    1. To make an automated system to easily find the records so that it is accurate, complete, accessible and usable.    2. To provides detailed information about the scholars.    3. To secure and safe student confidential record. 3. To test the functionalities of the developed system based on the major features of the developed system;    1. Document Verification    2. Searching and Tracking Student Information    3. Master List Record    4. Report Generation    5. Data management 4. To evaluate user acceptance and behavioral intention to use the system;    1. Quality Factors    2. Perceived Ease of Use    3. Perceived Usefulness    4. Experience    5. Attitude Towards Using    6. Behavioral Intention to Use |

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| **Scope and Limitation of the Study** | The proposed project for Scholarship Management Information System for Scholarship and Financial Assistance Office will focus on the development of a Scholarship Management Information System for the Scholarship and Financial Assistance Office of LSPU. The project will include the following scope:   1. The system will include a centralized database to store and manage scholarship information and academic records of scholars. 2. The system will have features for monitoring and evaluating the academic performance of scholars, including the ability to generate reports and analytics.   Limitations:  The study has the following limitations:   1. The system will not cover the entire operations of the Scholarship and Financial Assistance Office. 2. The system will not replace the need for manual verification and validation of scholarship requirements and application documents. 3. The system will not handle the distribution of scholarship funds, as this will still be done through the existing financial systems of the university. 4. The system will not provide access to the student portal or other systems used by the university for student records and management. |
| **Review of Literatures and Related Systems** | The researchers collected the information that are greatly related to the study. These related studies and literature are compiled in this section as a basis in the development of the system. Related studies and projects are listed below in thematic order:  **Theme 1: Scholarship Management Information system**  In this study Singh, H. P., & Singh, H. (2019), entitled ‘Big Data Technologies in Scholarship Management of Technical Education System’’ The Applications of Big Data management systems in technical education have been increasing in the last few years. Due to the easy availability of the mobile phones and other intelligent devices along with internet facilities students have started using mobile phones, Laptops to access online content and instructions, study materials and submission of necessary academic inputs to the institutions/universities etc. Student's online activities generate enormous amount of data, where used and unused data requires Big Data technologies and tools to process and make use of the large amounts of data involved. This study looks into the recent applications of Big Data technologies in scholarship management of technical education system and presents techniques on handling Educational Data Mining and Learning Analytics.  In the study of Setiyani, L., Tjandra, E., & Sumartini, T. (2020) entitled MODELING MANAGEMENT INFORMATION SYSTEM AT DISDIKPORA  KARAWANG SCHOLARSHIP” The purpose of this study is to propose to Disdikpora a scholarship management information system modeling to  improve the effectiveness and efficiency of the service and decision making. The methodology used is the Unified Modeling Language (UML) which is a |

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|  | set of structures and techniques for modeling Object-Oriented Programming (OOP). The result of this research is a scholarship management information system that can be used by the Disdikpora in the management of district-level college scholarships.  **Theme 2: Tracking system in Scholarship Management**  The previously stated literatures presented that citizen plays a significant role in an effective emergency crisis. At this point, the proponents would like to discuss about how tracking system contributed in an effective emergency reporting system.  Also, in the study written by Hidayat, M. R., Jaelani, I., & Komara, M. A. (2021) entitled “Web-Based Scholarship Management Information System Using Rapid Application Development (RAD) Model” The use of information systems in an organization has many advantages, just like the use of a website for institutions or companies is very helpful in conveying information, one of which is in administrative matters that can be applied using information system technology, namely for scholarship management. Scholarships can be interpreted as providing financial assistance to individuals, with the aim of being used for the continuity of the education taken. In the process of submission and approval in the selection of scholarship admissions that run in the field of student affairs at this time, it is still carried out manually both from the process of collecting files, selection to determining scholarship recipients is carried out manually by the head of the study program. Therefore, the field of Student Affairs at STT Wastukancana Purwakarta, requires an information system that can help the process of applying for and approving scholarships digitally carried out by students of each study program coordinated by the student affairs field. The system development method used is the Rapid Application Development (RAD) model consisting of the Requirements Planning, RAD Workshop Design, and Implementation stages. The results of this study produce a scholarship management information system that can solve problems in the scholarship admission selection process by being able to do it digitally from the process of informing the existence of scholarship opportunities, submission, selection to determining scholarship recipients.  Also, in the study of Secugal, K. A. S., Sermeno, J. P., & Mistio, N. E. (2021)) entitled “QR-Code tracking and SMS notification transaction interface for scholarship management system”, Information system (IS) is a product of information technology (IT) that supports various business functions utilizing advanced technology comprising hardware, software, people, network, and data. Scholarship management systems is one example of an information system that is designed to assist with the scholarship awarding process of any university. When designing such systems, it is important to consider the reusability of certain components instead of developing an entire software from scratch. In this article, a scholarship management system was developed integrating a quick response code (QR-Code) tracking and short message service (SMS) notification transaction interface. The results of this study showed a high rating from two perspective evaluators with regards to its system functionality, execution, generality as well as its reusability in its source code.  **Theme 3: Mobile Technology in Scholarship Management** |

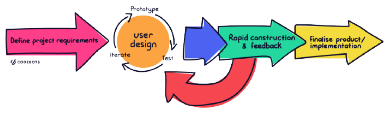
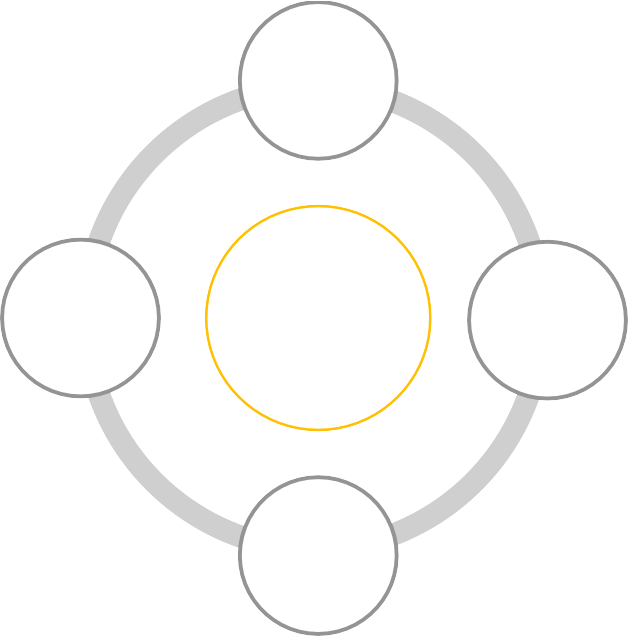
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|  | The previously stated literatures presented that citizens and technology are significant tool in an effective emergency crisis. In this section, the proponents would also like to present the gathered literature that shows the significance of Mobile Technology in Scholarship Management  According to the study “APPly: A Design of an Online Tertiary Level Scholarship Application Management System” by Blancaflor, E., Caseńas, P.  A. I., Rocamora, L. J. H., Rosete, J. I. Y., & Rey, W. (2022, October) The study utilizes the descriptive quantitative method wherein the data is statistically treated using descriptive statistics. The respondents consisted of 15 applicants and three scholarship administrators. The results showed that the web-based management system, APPly, received an overall PSSUQ score of 1.35 for the applicant-user and 1.46 for the administrator-user. The users rated the system’s usefulness at 1.27 and 1.33, respectively. The application was met positively by both use cases and was satisfied with its ease and the efficiency it offers for their tasks. Therefore, it is concluded that APPly is a functional scholarship management system as it satisfies the parameters set by the researchers. The study can be further improved by adding an SMS notification system, connecting the application to a centralized file and fund management system to simplify the scholarship transaction processes, and integrating it to be available for mobile use and into the university’s existing system.  Likewise, Tasrif, E., Saputra, H. K., Kurniadi, D., Hidayat, H., & Mubai, A. (2021) stated in his study entitled “Designing Website-Based Scholarship Management Application for Teaching of Analytical Hierarchy Process (AHP) in Decision Support Systems (DSS) Subjects” The purpose of this paper is to designing website-based scholarship management application for teaching of analytical hierarchy process (ahp) in decision support systems (dss) subjects. Scholarship management using AHP is choosing the right criteria is very important. This system uses 5 criteria, namely academic value, academic achievement, non-academic achievement, parents 'income, and parents' dependents, as a basis for producing decision-supporting information. The scholarship management system is embodied in a website-based computer application. Utilizing this application provides more assistance to donors, so that the results of this learning are not only proven in theory but also in practice in real conditions. In addition, the Website-Based Scholarship Management Application can be run on a mobile basis and can be accessed wherever and whenever they are.  **Related Project:**  The use of information technology has become a necessity and at the same time a must in this 4th millennium era. Companies that do not try to use technology that suits their needs will be crushed. The Indonesian government has also required the use of appropriate information technology. The results showed that information technology governance has a significant positive effect on company performance, the application of corporate governance has  no significant effect on company performance, and company size has a significant effect on company performance. |

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|  | **Figure 1.** The Impact of Artificial Intelligence on Accounting for Society 5.0  The scholarship management system is embodied in a website-based computer application. Utilizing this application provides more assistance to donors, so that the results of this learning are not only proven in theory but also in practice in real conditions. In addition, the Website-Based Scholarship Management Application can be run on a mobile basis and can be accessed wherever and whenever they are.    **Figure 2**. Designing Website-Based Scholarship Management Application for Teaching of Analytical Hierarchy Process (AHP) in Decision Support  Systems (DSS) Subjects |
| **Conceptual Framework** |  |

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|  | Initialization  **Scholarship**  **Management**  Ac User ce **Information System** Rapid  ceptan **for Scholarship and** Application  Testing Development  **Financial Assistance**  **Office**  System Testing  **Figure 3**. Conceptual Framework of Design and Development of a Web-based Emergency Reporting System for Barangay of San Isidro, Luisiana, Laguna  The conceptual framework of the study illustrates how the research will be conducted. The framework reflects the research objectives and activities to be conducted. | | | | | |
| **SWOT ANALYSIS** |  | **Strengths** | **Weaknesses** | **Opportunities** | **Threats** |  |
| * Automates the scholarshi p managem ent process, increasing efficiency and accuracy. * Provides features for monitoring and evaluating the academic performan ce of scholars, enabling   the office | * May not cover all scholars hip program s or   types of financial assistanc e offered by the universit y, limiting its scope and impact. | * Improves the university's reputation as a provider of quality education and support services for students, enhancing its competitivene ss in the higher education market. * Provides opportuniti es for collaborati on and partnershi ps with other universitie   s and | * Security risks, such as data breaches or unauthoriz ed access to scholarshi p informatio n, can compromi se the system's integrity and reputation   .   * Resistance from traditional paper-   based |  |



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|  |  | to identify scholars who are not meeting academic requireme nts and provide appropriat e support and interventio  n. |  | organizatio ns in the developme nt of similar systems. | systems and manual processes. |  |
| **References** | Blancaflor, E., Caseńas, P. A. I., Rocamora, L. J. H., Rosete, J. I. Y., & Rey, W. (2022, October). APPly: A Design of an Online Tertiary Level Scholarship Application Management System. In *2022 International Communication Engineering and Cloud Computing Conference (CECCC)* (pp. 74-78). IEEE.  <https://ieeexplore.ieee.org/abstract/document/10069218>  Hidayat, M. R., Jaelani, I., & Komara, M. A. (2021). Web-Based Scholarship Management Information System Using Rapid Application Development (RAD) Model. *RISTEC: Research in Information Systems and Technology*, *2*(2), 41-50. <https://journal.institutpendidikan.ac.id/index.php/ristec/article/view/1947>  Secugal, K. A. S., Sermeno, J. P., & Mistio, N. E. (2021). QR-Code tracking and SMS notification transaction interface for scholarship management system. *International Journal of Applied Science and Engineering*, *18*(4), 1-8. <https://gigvvy.com/journals/ijase/articles/ijase-202106-18-4-004>  Setiyani, L., Tjandra, E., & Sumartini, T. (2020). MODELING MANAGEMENT INFORMATION SYSTEM AT DISDIKPORA KARAWANG SCHOLARSHIP. In *Call for Papers–2nd International Seminar on Accounting for Society 5.0 “The Impact of Artificial Intelligence in Accounting for Society 5.0”* (p. 129). [https://dirdosen.budiluhur.ac.id/0315057904/Prosiding%20Pamulang\_compressed.pdf#page](https://dirdosen.budiluhur.ac.id/0315057904/Prosiding%20Pamulang_compressed.pdf#page%3D137)  [=137](https://dirdosen.budiluhur.ac.id/0315057904/Prosiding%20Pamulang_compressed.pdf#page%3D137)  Singh, H. P., & Singh, H. (2019). Big data technologies in scholarship management of technical education system. *Int. J. Emerg. Technol. Innov. Res*, *6*(6), 492-496.  Tasrif, E., Saputra, H. K., Kurniadi, D., Hidayat, H., & Mubai, A. (2021). Designing Website- Based Scholarship Management Application for Teaching of Analytical Hierarchy Process (AHP) in Decision Support Systems (DSS) Subjects. *Int. J. Interact. Mob. Technol.*, *15*(9), 179- 191.  <https://pdfs.semanticscholar.org/bffc/dd0a91bbd97b82c0508429f35f587abcc6ef.pdf> | | | | | |

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