

# CUSTOMIZED RESEARCH REPOSITORY MANAGEMENT SYSTEM

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<b>Abstract</b>	<p>A management system is the manner by which an association deals with the between related pieces of its business so as to accomplish its goals. The use of manual processes is outdated since the advancement of computerized and automated systems has become prevalent. While a repository where multiple databases or files are located for distribution over a network can preserve publications of researches. This project focused on innovating a system and development of a manual management system in searching sample theses and research papers that was created by the students of a particular school. This system responded to the changing needs of future researchers for their learning. Research management system is a better solution that improved the manual management of gathering research samples. A questionnaire and evaluation form was conducted to identify areas for improvement of research endeavor. The evaluation form was participated with a total of 25 respondents represented by the students who are conducting research, research teachers and IT professionals. Based on the results of the following components: (a) Functionality with a score of 4.64 with a corresponding interpretation of “Excellent”, (b) Efficiency with a score 4.6 with a corresponding interpretation of “Excellent”, (c) Reliability with a score of 4.57 with a corresponding interpretation of “Excellent”, (d) Portability with a score of 4.6 with a corresponding interpretation of “Excellent” and (e) Supportability with a score of 4.55 with a corresponding interpretation of “Excellent”. The software project got an overall weighted mean of 4.59 with corresponding interpretation of “Excellent”. The developed design of the application was created successfully and the students who have research find our application helpful when conducting their study.</p>
<b>Keywords</b>	<p>Management System, Repository, Research Storage</p>

## INTRODUCTION

A management system is the manner by which an association deals with the between related pieces of its business so as to accomplish its goals. These objectives can identify with various themes, including item or administration quality, operational proficiency, ecological execution, well being and security in the work environment and some more. Service management is relevant to any association, for example, food, fabricating and even social insurance but the core idea remains the same to provide a central system for planning, advancement and conveyance of administrations either to the association itself or to outsiders.

The use of manual processes is outdated since the advancement of computerized and automated systems has become prevalent. The manual process of storing researches by hand in a filing cabinet can take up a lot of space, prone to damage, and being misplaced. While a repository where multiple databases or files are located for distribution over a network can preserve publications of researches. The repository system is accessible to the researchers. They will no longer struggle on what information they will gather since they already have easy access to the repository research management system. And with the use of it, students are allowed to search samples of research title, publication date, researchers involved, thesis, dissertation, research

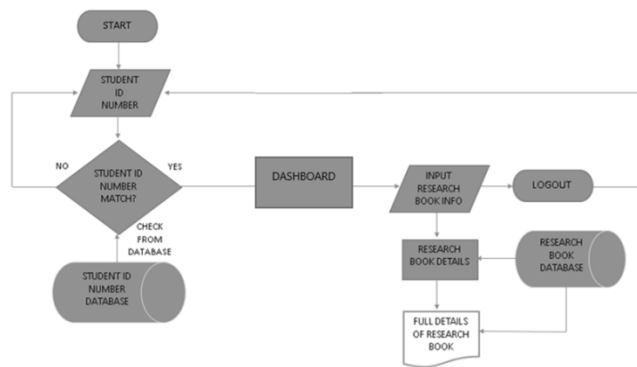
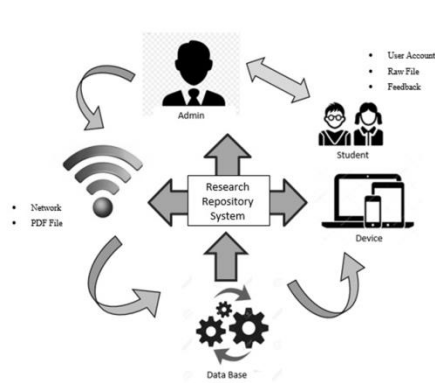
materials or research holdings.

The researchers developed this innovation for the creation and enhancement of advanced knowledge into new system, products, services and processes. This system responds to future researchers and company needs. Customized research repository management system is a better solution that improves the manual management of gathering and searching research samples.

**METHOD**

The paradigm of the study consisting of the administrator, end user and databases is shown in the figure 1. It shows the overall process of the system, the administrator is the overall in-charge in managing the research materials, in network the files will emerge and will go in the database that form the research repository system that can be seen in the device to be used by the student.

Figure 1. Conceptual Framework of the study Figure 2. Student Log-in and Dashboard Module

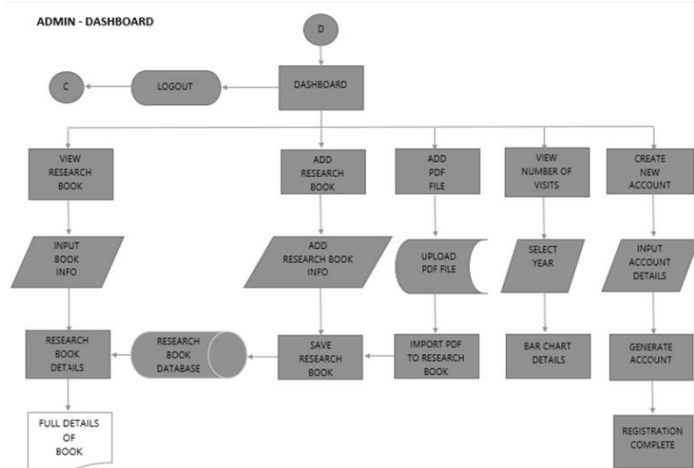
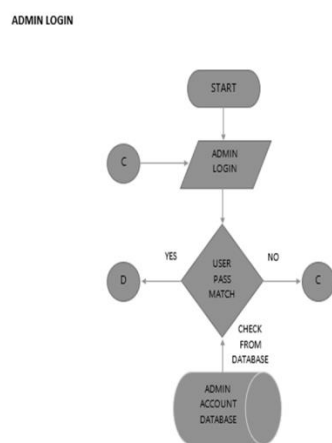


The project team used the process flowchart to illustrate the flow of the system. The figure 2 shows the System flow chart of the study. It shows the student log-in module. The student will put his/her student ID number. When his student ID did not match in the student ID number database, the student will return in the student log-in form. If the student ID number match, he/she can enter in the student search and selection form to input research book info and see the research book details hat is in the research book database.

The Admin Log-in Module (Figure 3) illustrate the flow of the system in the admin log-in wherein the admin will login using his/her username and password. When his/her account match the accounts in the admin database, he/she can enter the admin dashboard.

Figure 3. Admin Log-in Module

Figure 4. Admin Dashboard Module



The Admin Dashboard Module (Figure 4) illustrate the flow of the system in the admin

dashboard wherein the admin can view the research books, add research book, add pdf file, view the number of visits of students in the website and can create an account to a new admin. When the admin logout his/her account he/she will be returned in the admin log-in form.

A descriptive design was used by the project team to interpret and to describe how the existing system works, the problems encountered and how to solve or lessen them. This would serve as a guide for the project team in analyzing the study to come up with a good result of the proposed system.

To formulate the composition of the proposed system, better understanding of the flow of the existing system is needed. The following data gathering tools and techniques were used: observation, questionnaire and evaluation form.

The project team used the different types of analytical tools such as Conceptual Framework and Phase Development Model of the developed system.

### **SYSTEM DEVELOPMENT**

The software development process is a general term portraying the larger procedure of developing a software product. Developing the application takes time and process. The following shows the procedure:

#### ***Phase 1: Software Planning***

In this stage the developer analyze the software that he used in making the website. The programmer found and looks for the software that assisted him. In making the design and looks, the programmer chooses to use CSS Boot Strap and JavaScript. With making the database which will make the function of the system, the programmer chose to use MySQL.

#### ***Phase 2: Creating a project using JavaScript***

JavaScript is a programming language that adds interactivity to a website. In the second method the developer started by using a function called query Selector to grab a reference to a heading, and store it in a variable.

#### ***Phase 3: Applying Design***

The developer added the design features of the website to make it pleasing to the eye. The design, colors, background images are also applied. The developer used Bootstrap, a free and open-source front-end framework for structuring sites and web applications that contains HTML-and CSS-based plan formats for typography, structures, catches, route and other interface segments, just as discretionary JavaScript augmentations.

#### ***Phase 4: Creating the Database***

In the fourth procedure the developer created the database. By using the MySQL, the developer set up the data base that made the main function of the website. Applying the works from developing the website recognize the data input.

#### ***Phase 5: Testing Operation and Maintenance***

In the fifth procedure, developer tested his work and look for problems that appeared. If a problem was found, the developer took action and re-code the program and strive to fix it. There are two test that were done, Alpha and Beta.

#### ***Phases 6: Software Implementation***

This is the process where the software is already tested, debugged, documented and tested. The objective of the phase is to deliver the working product of the developer.

### **HARDWARE AND SOFTWARE REQUIREMENTS**

For a better condition of a program to run faster, the hardware and software must meet the requirements specification of a computer. The software can run in the lower specification but the speed is sacrifice. It is better to choose the right specification for the better quality of the system. Software requirements include Windows 8 or higher browser/VPN and the software

used which is MySQL, Java Script and CSS Bootstrap in developing the system while the hardware requirement is Computer.

**EVALUATION PROCEDURE**

To evaluate the system and hardware satisfaction of the proposed system, the proponents will be using evaluation form with a criterion using scale of 1 to 5, where 1 indicates Poor and 5, Excellent. In addition (25) respondents will undergo sampling procedure with the aid of evaluation form. The respondents will include (25) persons where (9) are Teachers, (2) IT Professionals and the other (14) are students. The system was done by the proponents in order for the evaluators to figure out what are the functions and features of the system and to introduce how to use and manipulate the software. The system was tested by demonstrating each module.

**RESULTS AND DISCUSSION**

**Description of the System**

In the Computerized Management System, it consists three main modules, these are, Student login Module, Admin login Module, and Admin dashboard module.

The first one is the Student Login Module providing a username to impose security and enter in the system. A user can only access the module and enter the system once the student ID number matched

The second is the Admin Login Module providing a secured username and password to impose security. A user can only access the module and enter the system once the username and sword matched

The third one, is Admin Dashboard, managing all the research books by viewing the research books, adding a research book, adding a pdf file, viewing the number of visits of students in the website and creating an account to new admin.

**System Capabilities and Limitation**

This project focused on innovating a system and development of a manual management system in searching sample theses and research papers that was created by the students of a particular school. This can help in enhancing the processes or transactions through a more organized and faster system. Researchers have an access to the systems to manage research grants. Admins also have an access to the system for data archiving, retrieving and restoring that must be retained due to operational or regulatory requirements, and possibly old and new database records. However, the Research Repository Management System does not cover the textbooks, journals, newspaper and other unpublished material. The system cannot able to neither solve technical problems nor suggest solution.

*Table 1. Mean Scores of the respondents*

INDICATORS	Mean	Interpretation
<b>A. Functionality</b>		
1. Ease of operation	4.68	Excellent
2. Provision for comfort and convenience	4.52	Excellent
3. User-friendliness	4.72	Excellent
	<b>4.64</b>	Excellent
<b>B. Efficiency</b>		
1. Time respond quickly	4.6	Excellent
2. Utilize system resources	4.6	Excellent
	<b>4.6</b>	Excellent
<b>C. Reliability</b>		

1. Conformance to desired result	4.64	Excellent
2. Absence of failures	4.52	Excellent
3. Accuracy in performance	4.56	Excellent
	<b>4.57</b>	Excellent
<b>D. Portability</b>		
1. Performs according to specifications	4.72	Excellent
2. Provision for security requirements	4.56	Excellent
3. Completeness of the system	4.52	Excellent
	<b>4.6</b>	Excellent
<b>E. Supportability</b>		
1. Software update	4.56	Excellent
2. Graceful degradation	4.48	Excellent
3. Event Logging	4.6	Excellent
	<b>4.55</b>	Excellent
<b>Overall</b>	<b>4.59</b>	Excellent

The table 1 shows the mean scores of the respondents. Functionality resulted to the overall mean of 4.62 which indicates Excellent. Efficiency with an overall mean of 4.6 interpreted as Excellent. Reliability with an overall mean of 4.57 interpreted as Excellent, Portability with 4.6 interpreted as Excellent. Supportability with 4.55 interpreted as Excellent. From the result shown, the Overall System Evaluation is 4.59 interpreted as Excellent.

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