Chapter 1 to 3
For

Research Analytics Approval and Archiving System

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Diploma in Information Communication Technology

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CHAPTER 1

THE PROBLEM AND ITS SETTING

1.1 INTRODUCTION

Nowadays, libraries make use of systematized processes of accessing and storing data wherein it is easier and accessible. Digital technologies have changed the way that every library material can be accessed, maintained, and preserved. There are methods of transferring files and documents such as archiving files and documents that are no longer in use to a different storage unit for long-term storage. Archived files are still essential to the organization as it is the tool for the future needs especially for future references and may be required to be kept for regulatory enforcement or for future references.

Research Analytics Approval and Archiving System is a search engine and a storage of all the university's full documents and researches, articles/ journal, and case studies. This also has forums for all the announcements and upcoming conferences and events. As the setting of this study, the researchers chose the Polytechnic University of the Philippines-Taguig. This university is located at General Santos Avenue in Taguig City. It is headed by the Branch Director, Dr. Marissa B. Ferrer and along with the branch officials. The said university is recognized for its academic excellence. As stated in the eight-point agenda, the PUP embedded a culture of research that looks forward to the innovations that the students might think of during the research period, especially during studies.

However, these researches after the final presentation, should be sent to the library for the management of the research copy. These projects were vey important including the Researches Management of accreditation, which pertains to the increasing level of recognition level of recognition for a certain organization.

1.2 Background of the Organization

1.2.1 Organization Structure

It also follows the Watry's Digital Preservation Theory and Application. This theory of preservation from one into the future can also send future descriptions of the environment that is being used for the management and read all the generated records. This theory is whether it describes the entire preservation of information context that is sufficiently well that the records can be migrated into an independent preservation environment without the loss of authenticity or integrity. It requires migrating not just the records, but also the characterizations of the preservation environment context.

Figure 1.1 Organizational Structure

1.3 Theoretical Framework

The theoretical framework follows Owen's published book entitled Theory and Craft Digital Preservation. This Theory synthesizes work on the history of preservation in a certain range of areas (archives, manuscripts, recorded sound etc.) and sets the history

in dialogue with work in new media studies, platform studies, and media archeology. The Theory and Craft of Digital Preservation achieves that difficult balance of being the text referenced for everyday work by practitioners, without prescribing or endorsing specific tools or processes, would quickly become outdated. This supports the study that each of the institutions should have institutional repositories for the researches and other written literature to be able to store and maintain the stored repositories.

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1.4 Conceptual Framework

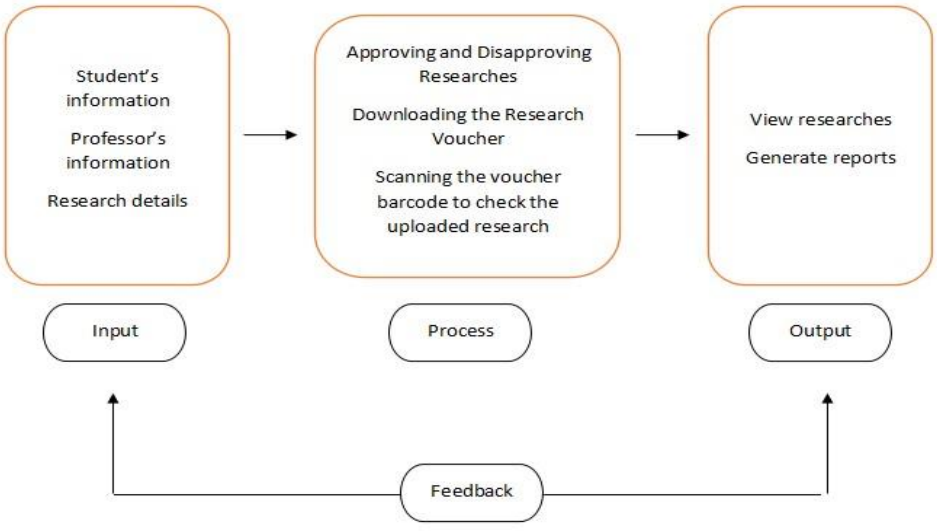


Figure 1.2 Conceptual Framework

The inputs focus on the main requirements in developing the system. It will serve as the basis for developing and improving the web application of Research Analytics, Approval and Archiving System. These inputs will be assessed and processed by the phases in the system development, which will be discussed in the next chapters for this research. The output will be the developed system itself comprising the web application.

1.5 Project Assumptions

Project Name:

Research Analytics and Approval and Archiving System

Project Definition:

It is an automated system that comprises stored, may he published and retrieved, university's research which is also includes capstone research project.

1.6.1 Project Objective

The project aims to revise the old version of the system entitled Online Repository of Thesis and Capstone Projects (ORTAC) into newly-developed system entitled Research Analytics and Approval and Archiving System. This project also aims to developed new added functions, features and modern UI of the system.

1.6.2 Goals and Objective

1.6.2.1 General Objective:

To help the university to store, retrieve and collect research projects by developing the old system project into newly-developed one.

1.6.2.2 Specific Objectives:

The current ORTAC system was being done. The main objective this project is to develop the old system into newer version. By developing newer version of the system there are new functions and features that may developed. The following are the reasons why the current system should be developed into newer version of the system.

- Approval and disapprove of research upload
- Adding favorites from the search history

- Searching and viewing of the research, articles, journal and case studies
- Can view the analytics of the system
- Can add and view forum activities of the conferences/seminars and trainings
- Configuration and activation of user roles to the super admin

1.7 Statement of the Problem

Researches conducting a capstone project that must answer the following questions:

- How does the system help to ease the manual process of submission of researches to the users? Does the new developed system meet the satisfaction of the user and the client?
- How the system does monitors and generates reports and analytics of uploaded documents?
- How does the system efficient and effective in terms of:

  - Functional suitability;
  - Performance Efficiency;
  - Compatibility;
  - Usability;
  - Reliability;
  - Security;
  - Maintainability; and
  - Portability

1.8 Scope and Limitations of the Study

This project will focus on the development of the newly developed system. The researchers aim to develop old system into newer version which is the Research Analytics Approval and Archiving System that develop new functions

and features. It also includes the development of UI and UX of the system. The project also identifies the effectiveness and efficiency of the newly developed system. Lastly, the project will aim to know if the newly developed system will help the user and the client to ease the monitoring and storing all the researches within the university. This project will also use the ISO 25010 for the guidelines of the study in creating a quality software product.

1.9 Significance of the Study of the Study

For the ***users*****,** this study will help them to know and analyze the uploaded researches and capstone projects. Librarian will use this system to help them manage and handle all the theses and capstone projects and can generate and monitor all the repositories that are needed for the accreditation. This study will be helpful and give a possible solution in order to store all the researches and make tasks more efficient and effective.

For the ***researchers***, this study will help them expose their skills and strategies in order to study this system. It also helps them to improve their skills in academics and deal with the certain real-life situations when it comes to the corporate world. It helps them to have opportunity with the concepts using critical thinking.

For the ***future researchers***, this study will serve as their references for their future study and to improve their research. This study will serve as the literature review for the system and can help them to come up with better ideas.
It also serves as the guide in creating more effective research.

1.10 Definition of terms

Archive. A collection of all the stored researches.

Capstone Project. A type of research project taken for every I.T students.

System. A project that the I.T. students aim to develop as an academic requirements which uses different set of programming language.

Data. Facts and statistics that are collected for references needed for analysis and system.

Research. It is the systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions.

ISO 25010- This standard serves as the guideline of the study in creating a quality software product. The characteristics that consider in creating a quality software are the functionality Suitability, performance efficiency, compatibility, reliability, usability, security, maintainability and portability.

Chapter 2

Review of Related Literature and Studies

2.1 Review of Related Literature Studies

De La Salle Araneta University repository system was developed using Joomla 1.5.22, Apache, Mercury, Fileziila, Mysql, PHP, 7-zip and Adobe Photoshop. The existing system was manually operated and improved on 2015. The users need to go to the library and look for theses/dissertations section one by one basis to do their research. The goal of this study was to provide online information repositories of researches for De La Salle Araneta University. It was stated in the study that the system has a lot of salient featured such as, search keyword page, news and info page, and login phase. The proposed system was interpreted overall as “Very good”. It means that the system is highly acceptable and usable. It was evaluated by the respondents based in efficiency, functionality, reliability, and usability. Based on the conducted study, there is a significant difference between users’ and IT professionals’ evaluations because IT professionals already know how the system runs, and they also have knowledge regarding computer matters while users are generally not that familiar with such a system its components.

In this research, the researcher believes that there is an urgent need to develop from the online repository of theses and dissertation of the University of Cebu - Graduate School Library. This perceived that the researcher were challenged to investigate ways to improve the library system usage through the utilization of the proposed system.

Cope et al. (2010), during the Internet Librarian International Conference 2010 held in London, explained that the world of communication is moving on.

Libraries need to go where the users are going and aim in providing 24/7 access to services and resources.

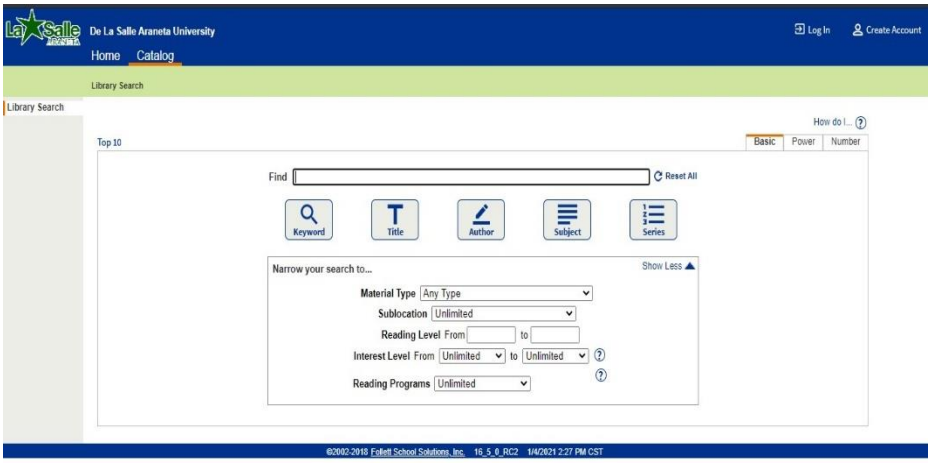


Figure 2.1 A screenshot from De La Salle Araneta University of Online Repository of Thesis and Dissertation home page.

UP Mindanao Manuscript E-Library and Repository System (UPMERS was produced for storing produced several scholarly works made by students, such as thesis or special problem manuscripts. This was established in order to solve the main problem that the students might encounter in storing digital copies of their thesis and special problem manuscripts to their departments. This is also because printed and electronics copies were stored in optical discs that can be easily misplaced and are difficult to track when borrowed. UPMERS is a web-based information system that provides administrators a tool for monitoring and managing records of manuscripts by graduates of the University.

Mesa (2017) cited that thesis and special problems (SP) are the intellectual output of research in a university. They reflect all the research skills that the students have in the university and how they applied the knowledge that they have learned in the institution. Theses are intellectual assets that the academic institution should recognize and manage (Levi, 2012). UP Mindanao students send both hardbound

and digital versions of their thesis and Special Problem manuscripts to their respective departments, similar to traditional residential universities in the Philippines. Each department has its own manual storage system for these records. Some of the printed copies of manuscripts are stored in the libraries by the different departments and colleges. According to Khanipoor (1999), submitted manuscripts have remarkable roles in the reputation and credibility of the libraries. University students and other stakeholders have access to past studies through libraries to obtain information for research-related initiatives. The aim of this study was to establish a web-based information system to provide administrators with a mechanism for tracking and managing the records of manuscripts submitted by university graduates.

The method, coined as an e-library and repository system (UPMERS) by UP Mindanao Manuscript, makes the database storage of digital copies. It is a web framework for archiving that can be accessed by teachers, scholars, and all of the university's stakeholders. You can retrieve names, abstracts, and even the entire thesis or special problem manuscripts in different file formats using framework. Access to a particular manuscript is compatible with its page on Intellectual Property Rights, which determines whether the content of a manuscript should be made accessible to the general public or to unique users only. In addition, this study tests the acceptance of users using the Technology Acceptance Model.

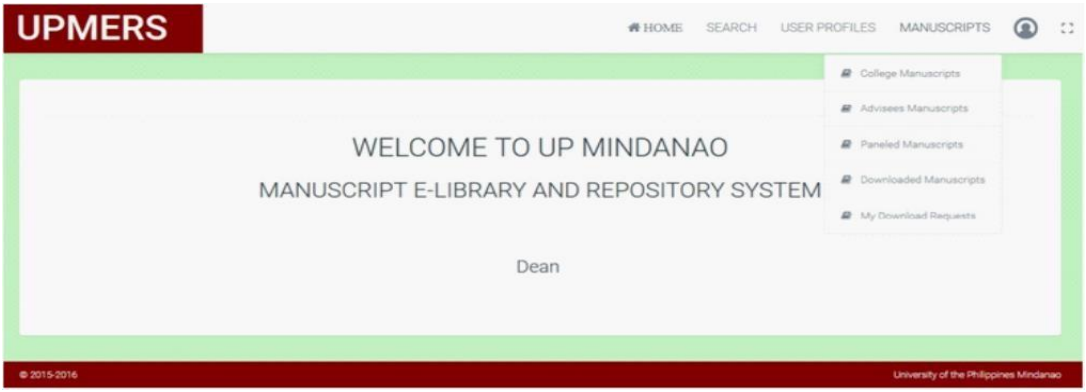


Figure 2.2. Screenshot from UPMERS Home page.

Students from the Department of Science in Information Technology, Southern Philippines Agri-Business and Marine and Aquatic School of Technology stated that hard copies of school capstone projects were very important but because of having hard access to storing soft copies, students were struggling in accessing references from the past projects. Lalisan and Sobejana (2019) accepted the study that challenged to manage the research and capstone projects output available through open access that is increasingly mandated by the funders and universities in many countries. The Information Technology students from SPAMAST were making a capstone project for managing and maintaining the research and capstone project system.

SPAMAST software aims to provide a research and capstone references for students, faculty and staff of SPAMAST (Lalisan and Sobejana, 2019). It can browse and store data references electronically. The article indicates that students or researchers can use the repository to become familiar with research approaches and writing styles. The system focuses on solving issue regarding the submission of researches and capstone projects where in some instance, went missing after borrowed. The system will be the new model for storing research output of given institution. The article describes institutional repository as the digital archive created by the faculty, student and research staff of an institution which also accessible for user outside the institution. The study resulted in providing electronic repository for

registered user, research and capstone project for retrieval. It will also be helpful and serves as the basic guideline of researchers for creating a research and capstone project.

The creation of the Research and Capstone Projects Electronic Repository for references enables end users, including students, faculty, and visitors to browse and protect all data stored in the electronic repository by the registered user. The student will search references to journals that include a range of resources that can be the basis for the next report. It was further concluded that during the experimentation of the project, there were some encountered problems but the researchers had already fixed and tested it back.

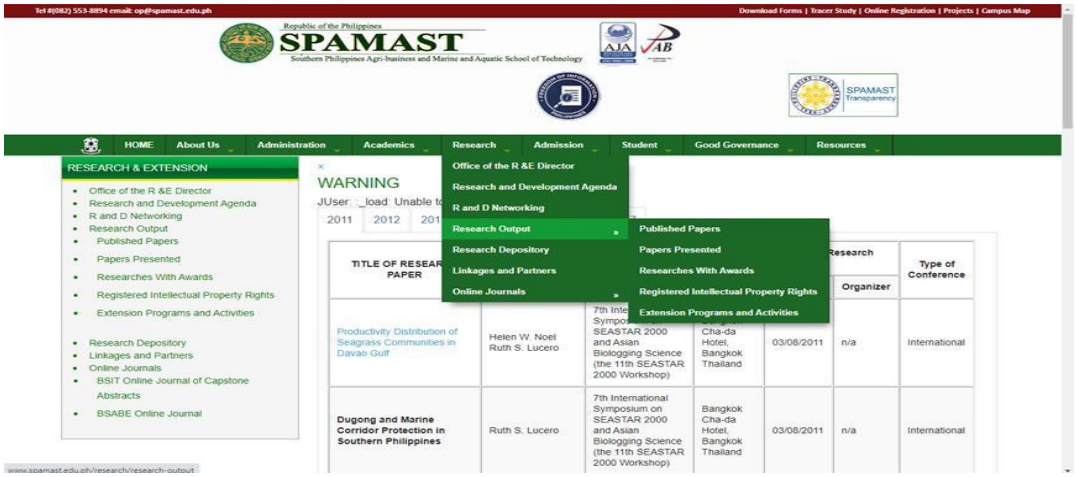


Figure 2.3 Screenshot from SPAMAST Home Page.

Pakistan Research Repository is an institutional repository that can be termed as a digital archive. It collects and organizes electronic materials including theses. Articles and research reports. Institutional repository is also defined as an organized collection of intellectual output in particular academic institution through digital format. These resources contain details about PRR and how other universities collaborate in the creation of digital repository. It also indicates how PRR was defined as the national, multidisciplinary of online repository of research, articles and conference papers particularly PhD dissertations produced in Pakistan. The article also provided details how a software serves as self-archiving, open-access journal publishing, open-

archive initiative and open source. It clearly stated how PRR has succeeded in the collection and digitization of research output from the universities across Pakistan. This foreign research has quite similarity to the study. It aims to accelerate scientific research, have the researches become more accessible for researches that will help them to draw greater insight for future researches. It also aims to lessen the need for physical shelving space and of course, to present the research outputs to the public that will surely lead to positive image for the institution.

Based on the analysis of Ullah and Muhammad (2014) in their study, publications of the study in this repository have been listed on the subjects, sources, organizations and departments basis. Various materials, such as articles, conference papers, unpublished books, books in academic libraries around the world, learning objects, sources, multimedia, patents and data sets have been integrated through.

This web search was conducted and drawn the information from the documents available on the Web site of the Higher Education Commission of Pakistan (2013), Pakistan Research Repository (2013) and directories of open-access repositories.

Figure 2.4 Screenshot from Pakistan Research Repository Home Page.

Repository and Search Engine for Alumni is an ASP based on the final year project that keeps track of the data of old students of the university and retrieved the student's information when required for using Search Engine Algorithm. This Computer science project provides the communication between the college and the old students. This online application was developed to deal with the issue of retrieving records. It would get information directly from the web application. Apart from this, participants should look for an old classmate with whom they have lost touch and the reunion would have been much simpler, of course.

This online archive and search engine application was used for implemented using a technique of three tier framework architecture. The layout Dreamweaver 8 was used to build the graphical user interface, although ASP.NET was the database of choice, Microsoft Access 2010 was this is used to link user to the database information. This study aims to build an online application that will help alumni to stay in touch with themselves and the activities of the association. This study also aims to achieve the objectives that develop a repository for the alumni of Delta State University. Also, it aims to design the Search Engine that can be accessed throughout the world.

Figure 2.5 Screenshot from Repository and Search Engine for Alumni home page

Chapter 3

Research Methodology

3.1 Research Design

The researchers used quantitative research wherein the type of research design used in this project is experimental research. Research uses the scientific method to establish the certain variables that are taken into account, collected, and interpreted to achieve a certain outcome. The study uses independent variables for the research. The independent variable in this study is the system itself, and its functional suitability, performance efficiency, compatibility, usability, reliability, security, sustainability, and portability are the dependent variables.

3.2 Sources of Data

The origins of the data obtained by the researchers came from PUP Taguig's graduating students and professors. The respondents were issued with questionnaires. During the alpha testing and the user's acceptance testing for the device testing, ISO 25010 was used. Researchers used ISO 25010 for the evaluation of software.

3.3 Description of Respondents

The study aims to survey the students and professors of the PUP-Taguig branch. The research focuses on the graduating students of all courses to which they are involved in a particular research group. It also gives attention to the professors who are doing research for their masters and courses they are currently taking. The respondents were given survey questionnaires to be able to know the results of the research.

3.4 Research Instrument

The research instrument that was used in the study is the online survey or questionnaire. The survey contains questions in line with a study. The basis of this survey for the alpha

testing is the ISO 25010. This standard serves as the guideline of the study in creating a quality software product. The characteristics that consider in creating a quality software are the following:

- Functionality Suitability;
- Performance Efficiency;
- Compatibility;
- Reliability;
- Usability;
- Security;
- Maintainability; and
- Portability

Another survey used the user's acceptance testing questionnaire. It was given to the actual users of the system after testing the system.

3.5 Data Gathering Procedure

The researchers used survey questionnaires and unstructured interviews for conducting information in the study. To gather information in this research, the researchers conducted an interview with the client and future users of the project. Due to pandemic situations, the researchers utilized google form questionnaires as the tool for survey questionnaires. Also, the researchers had an interview for the client, to be able to get the information needed for the users. It was needed to be able to identify the needed information for the better improvement and development. The sampling method for data collection was a systematic method. Systematic sampling is a type of sampling method for data collection that follows a set of rules in creating regularity in sampling. This helped the researchers identify whose respondents they needed to gather data.

3.6 Ethical Considerations

The researchers gathered information through the use of survey questionnaires. Respondents answered the consent message attached before participating in the survey. For the client interview, researchers sent a formal letter asking for their participation in the said interview. In compliance with Republic Act No. 10173 or the Data Privacy Act of 2012, respondents' personal information should be kept highly confidential.

3.7 Methods of Research

The researchers used the Agile Software Development Life Cycle or Agile SDLC Model to develop and create a new foundation and development for the newly-developed system.

Planning Phase

The idea phase, often known as pre-project planning, is an important phase in the system life cycle. This is because it will serve as the foundation for the entire process, including the project's long-term viability. Projects are envisioned and prioritized in this area.

In the first phase, the researchers gathered data/information about the Research Management challenge, such as the scope of the system, the system's targets/objectives, and the requirements for constructing the software needed in the organization especially, and other regulations for the system. The researchers also determine the effort and activities required to finish the system. Positions and allocated work to team members were identified during this phase, as well as basic settings, timelines, and needs. Some methods were specified, such as determining which possible tools to utilize in constructing the system, which software life cycle technique is suited for the system, and which programming languages they would employ.

Design Phase

This stage necessitated the organization and discussion of planning knowledge. It's the third phase of the SDLC, and it's where the team standardizes the application's process flow. The system's logical design is developed in this section.

During this phase, the team created diagrams to break down the functionality required for the system's transactions. This also involves the database's creation, particularly the normalized or simplified version. The system's architecture, which is a client-server architecture, was also recognized.

Develop Phase

It is the third and longest phase, in which the agreed ideas and designs, as well as quality assurance, are put into effect. The actual execution of the logical design is put into use and introduced into the system during this phase.

The actual coding is completed in this phase, and immediately following the execution of all of the system's planned designs. The Quality Assurance Tester gave test cases to ensure that all of the functionalities were working properly. Another type of testing is alpha testing, which is carried out by other organizations or peers. The final test is user acceptability testing, in which all of the system's users were able to utilize the system according to the transactions they could perform.

Test Phase

This phase is the fourth phase. Testing phase is the phase where the developers ensure that the solution meets the business requirements. The essence of testing is to:

- Catch as many errors as possible:
- Correct the errors
- Track the errors to understand the causes and any patterns that may exist in the system
- Revalidate the stability of the solution, including ensuring that the correction of one error does not lead to the introduction of another error in the system

Release Phase

The development life cycle is now in its fifth phase. This is the point at which the system is ready for clients to use. If there are any issues discovered during testing, they are reworked or fixed, as well as end-user training on how to utilize the system. The software will be deployed and completely implemented to the end users at this phase.

Cost-Benefits Analysis

Category	Time	Cost
Reduction of Maintenance Costs		
2.1 Programmer	1(month)*25,500.00	P 25,500.00
2.2 Designer	1(month)*23,800.00	P 23,800.00
2.3 Document Analyst	1(month)*29,750.00	P 29,750.00
2.4 Software Tester	1(month)*18,600.00	P 18,600.00
2.5 System Maintenance	1(Year)*75,000	P 75,000
Total Project Cost		P 172,650.00
Reduction of Operational Cost such as Supplies		
1.1 Printer	1(pc)*4739.00	P 4,739.00
1.2 Ballpen	12(months)*50.00	P 600.00
Estimated Cost Benefit		P5,339.00
Total Annual Cost Benefit		P167,311.00

One time cost

Category	Time	Cost
A. New hardware		
1. Barcode scanner	1(Unit) * 889.0	P 889.00
C. New Software		
XAMPP		Free

D. Price of the system (in-house)		Free
Total One-Time Cost		P 889.00

The table shows the breakdown of the cost if the system were to be purchased. In this case, the system itself is free because it is in-house, the only payment that will be received is the salary of the developers.

Recurring Cost

Category	**Time**	**Cost**
A. Internet Connection	6(Months) * 1299	P 7,794.00
B. Paid Domain (Web Hosting)		
1. iPage	1 (Year) * 1500	P 1,500.00
B. Supplies		
1. Bond Paper (Long)	12 (Months) * 200	P 2,400
Total Recurring Cost		P 11, 694.00

This table shows the expenses that the management should provide to ensure that the system is running. The system is only applicable online that's why an internet connection is needed. The iPage domain that will be used for web hosting.

Results and Feedbacks

The system had passed many tests prior to the team's usage of the Develop Phase of the SDLC to ensure that all of the functionalities were operating properly. The alpha was done at the institution, with a number of people being polled and evaluating the system based on its functionality. As a result, the average point of the system can be seen in the given table below of the team's questionnaire:

3.7 Proposed System Definition

- It will notify researchers via auto generated email if their research is approved or disapproved.

3.7.1 Functional Specifications

This part identifies the system boundaries of the newly-developed and proposed system which illustrates by use case diagram, detailed use case diagram and the activity diagrams.

- *Approve pending research* - Allows the admin to approve pending research which then will send notification to the authors via auto generated email.
- *Disapprove pending research* - Allows the admin to disapprove pending research, which sends notification to the authors afterwards via auto generated email.
- *Approved for viewing or searching of researches in guest mode* - Allows the admin to sort researches that are allowed to view or search in the guest mode
- *Copyrighted tag* - Allows the admin to specify if research is copyrighted or not
- *Record of submitted hard copies* - Interface; there will be a record of submitted hard copies of the researches
- *Research citations* - *Automatically* count the number of times if research is used

3.7.7.1 Use case Diagram

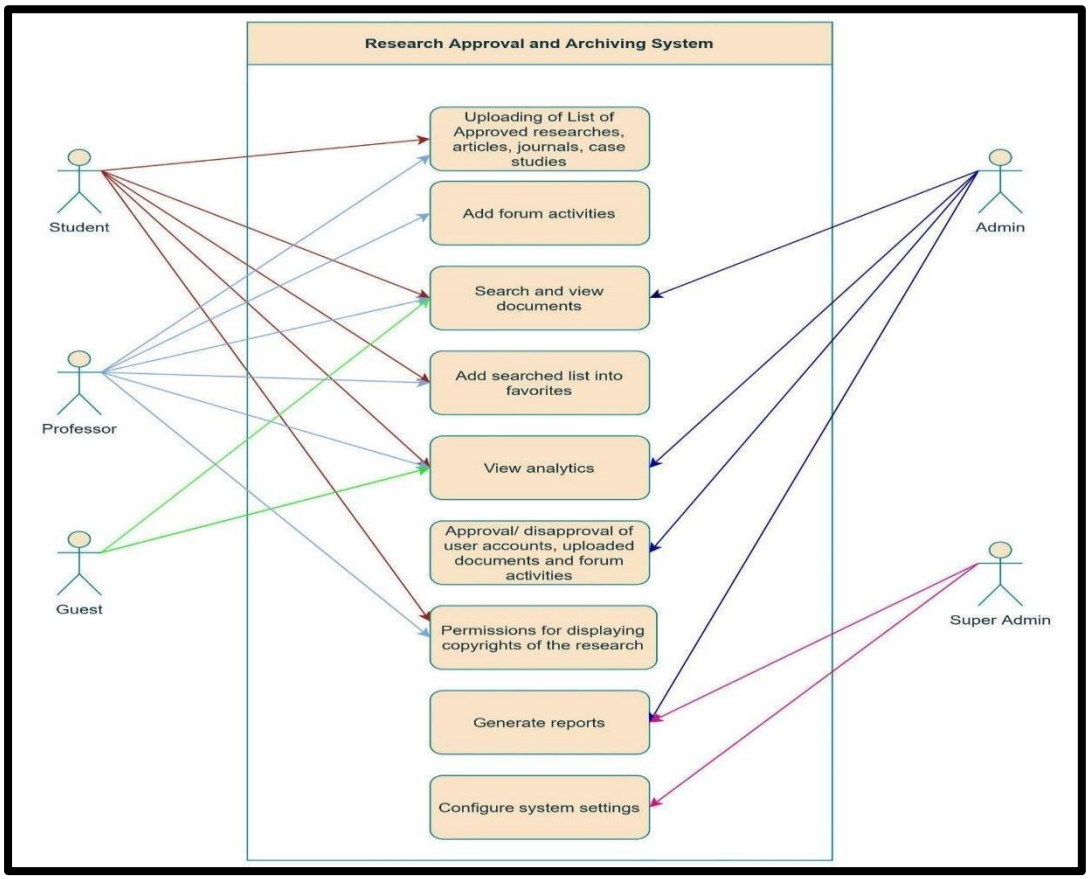


Figure 3: Use Case Diagram

Detailed Use-Case Diagram

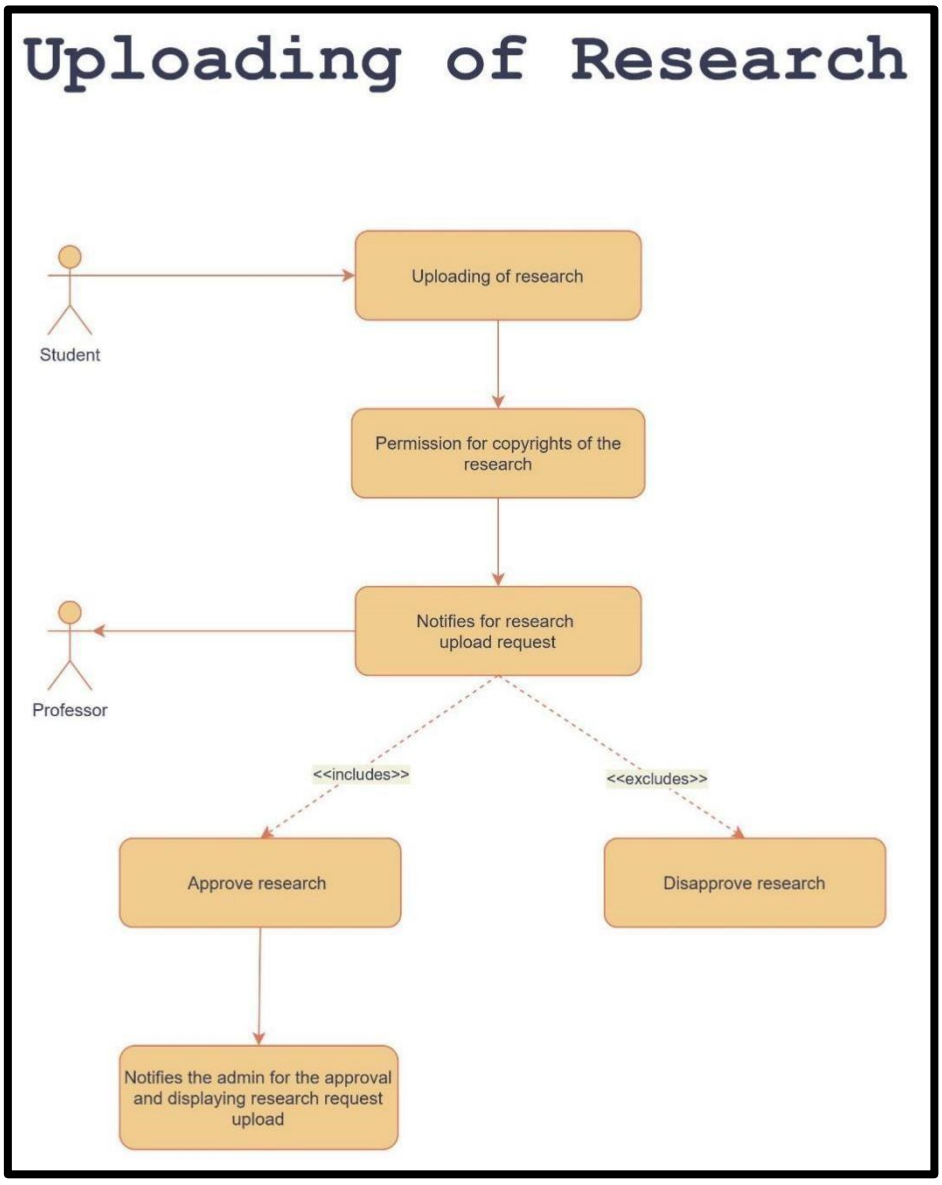
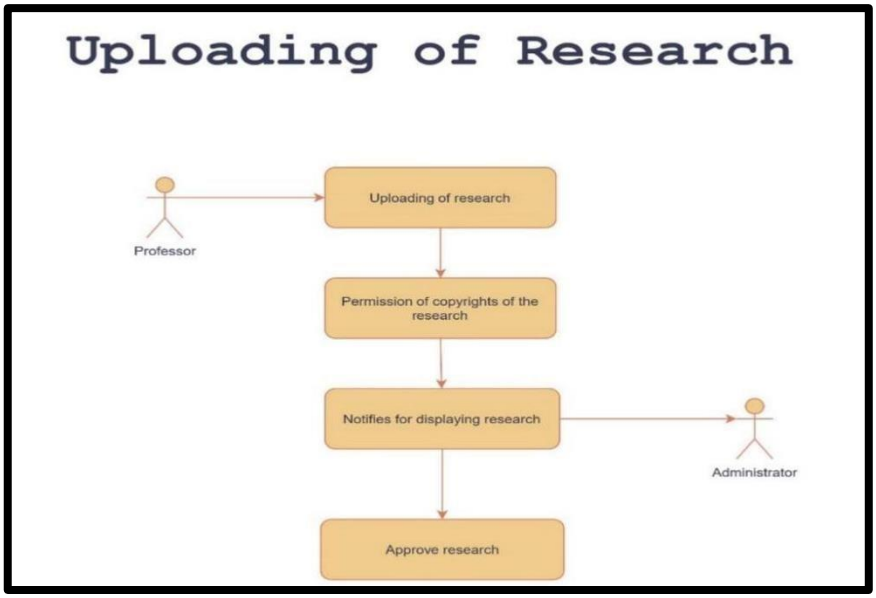


Figure 4: Detailed Use Case Diagram



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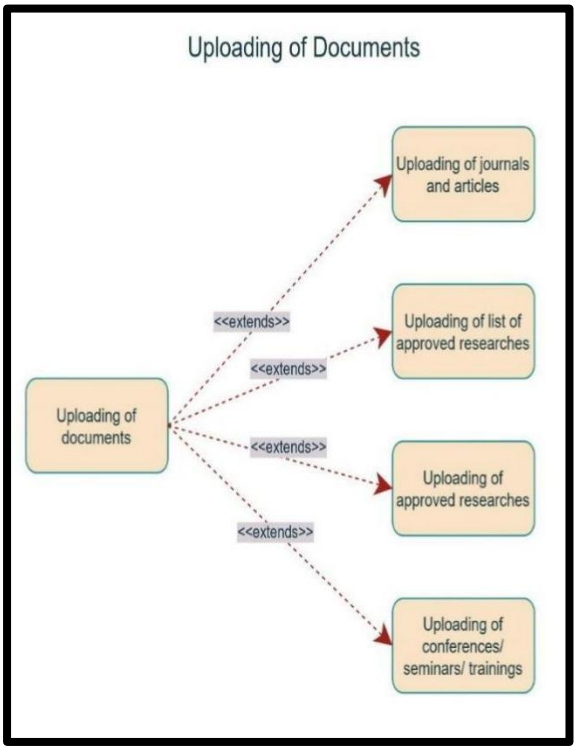


Figure: Detailed Use Case Diagram

3.2 Technical Specifications

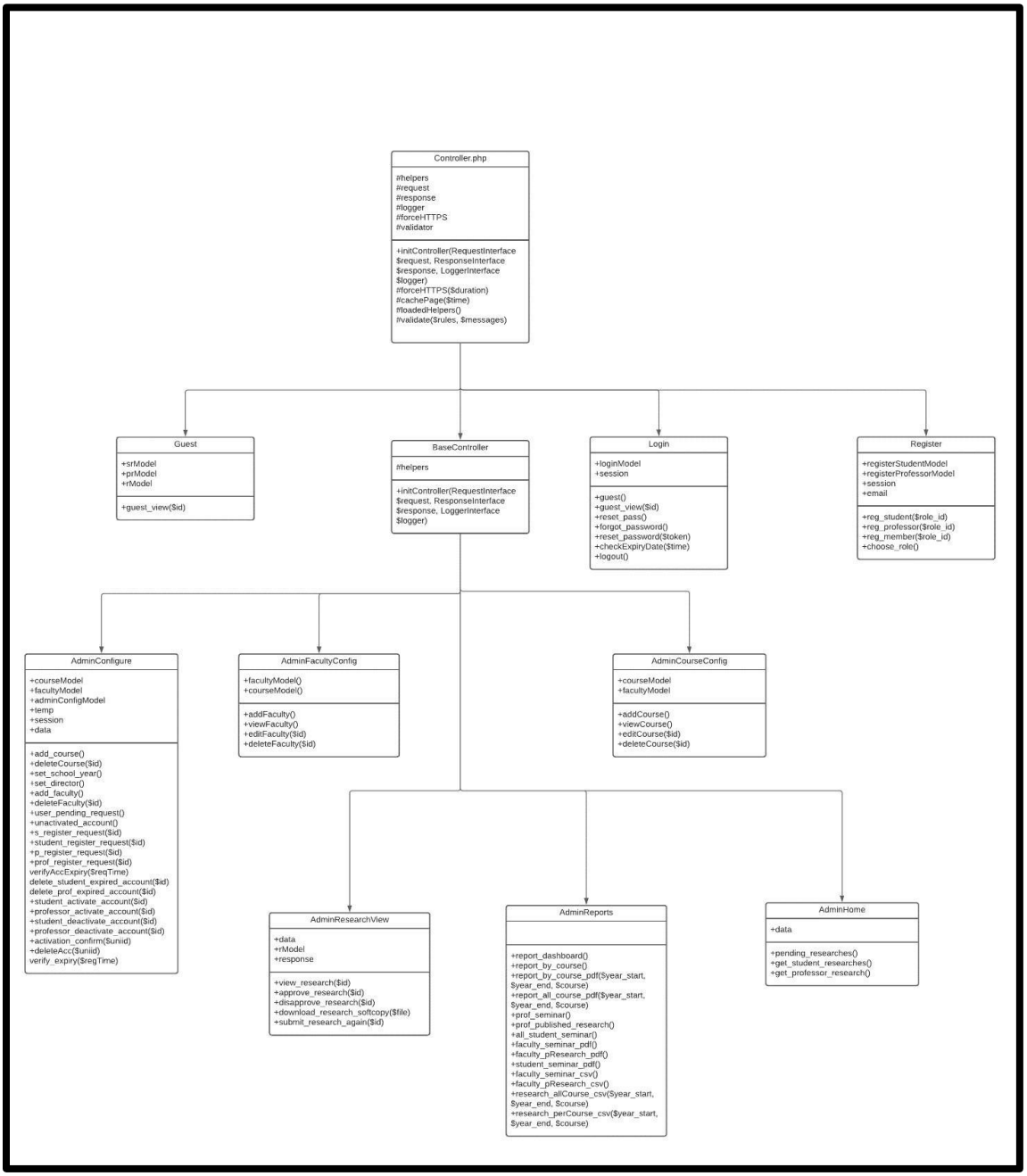
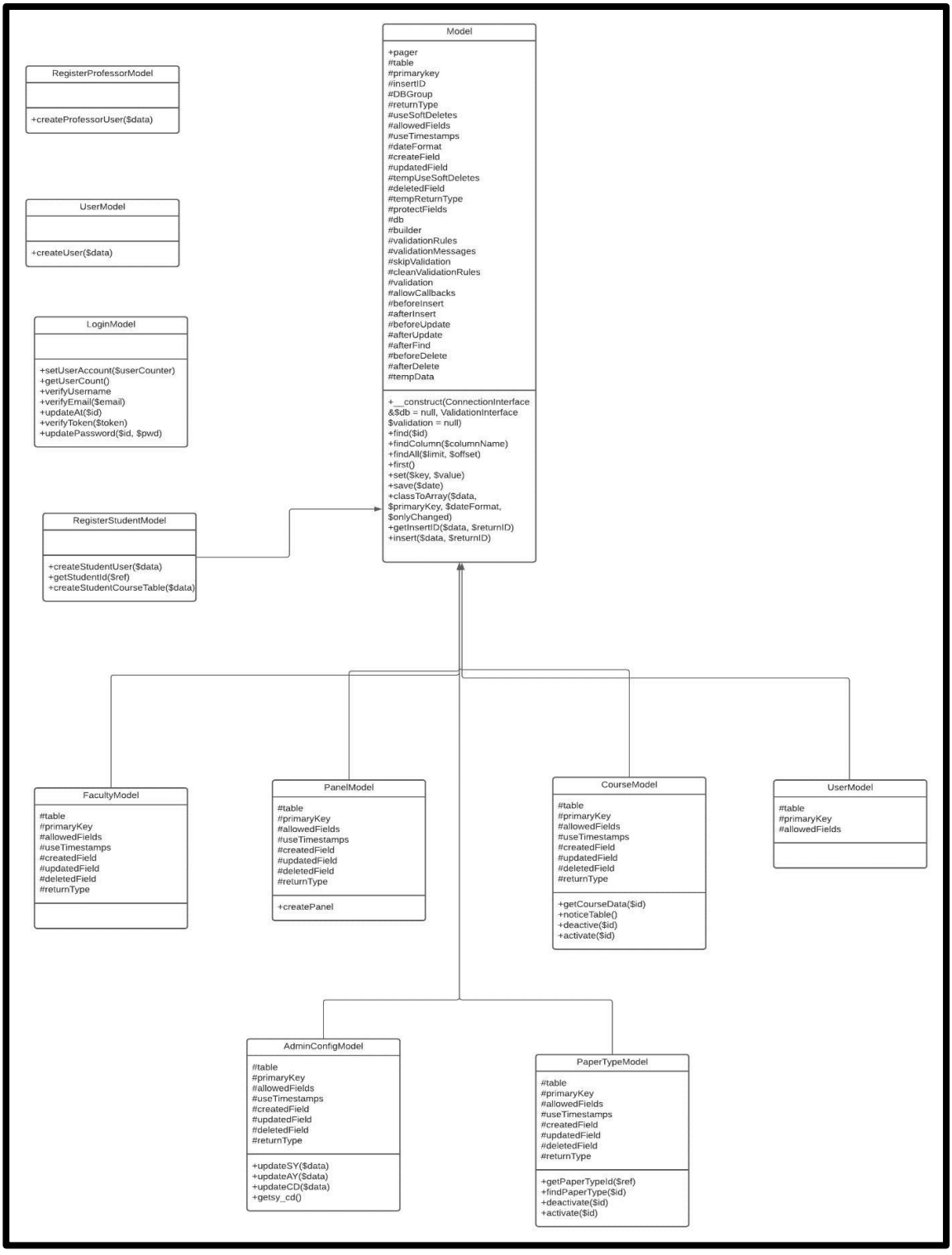


Figure 5: Domain Object Modeling (Admin)



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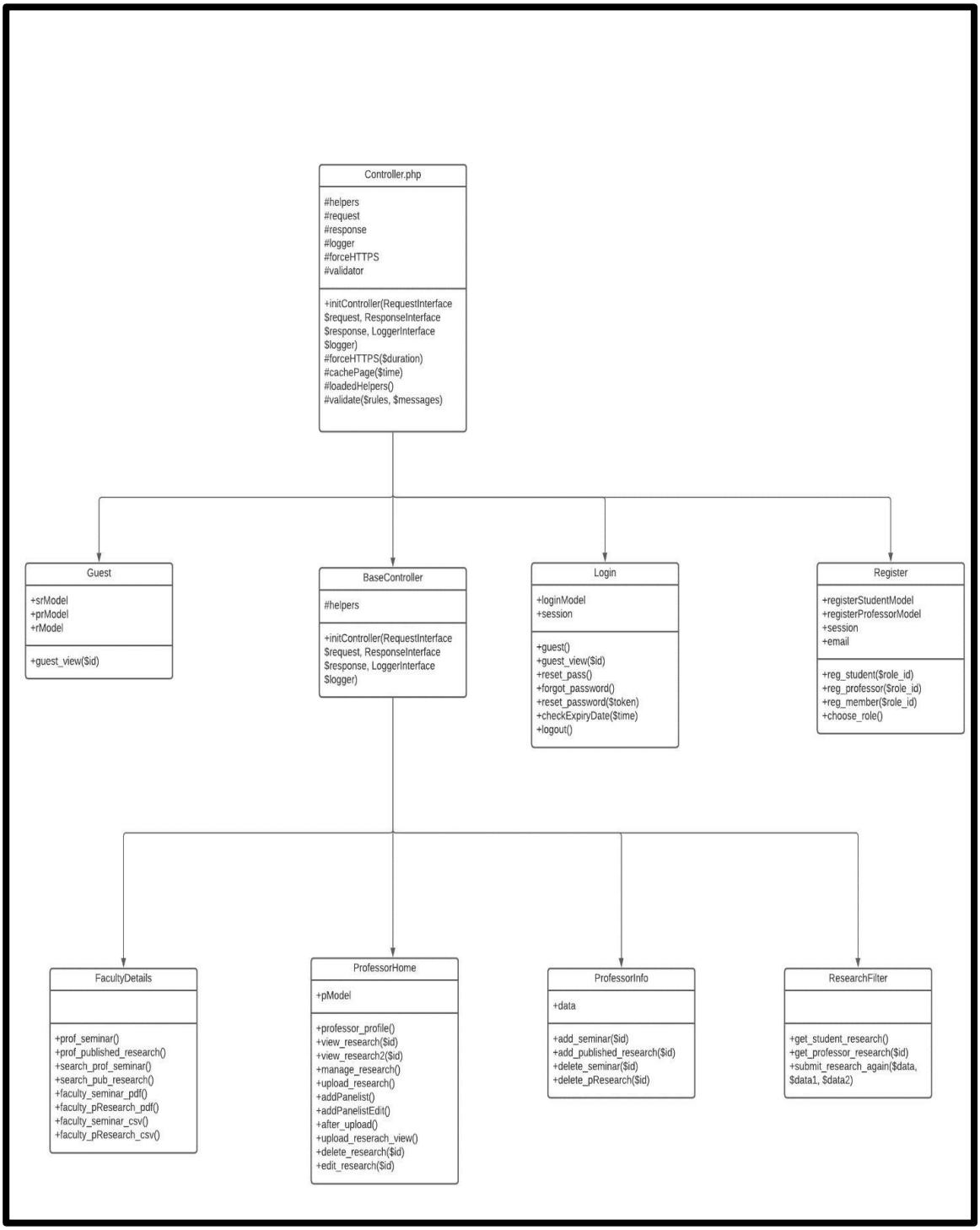


Figure: Domain Object Modeling (Professor)

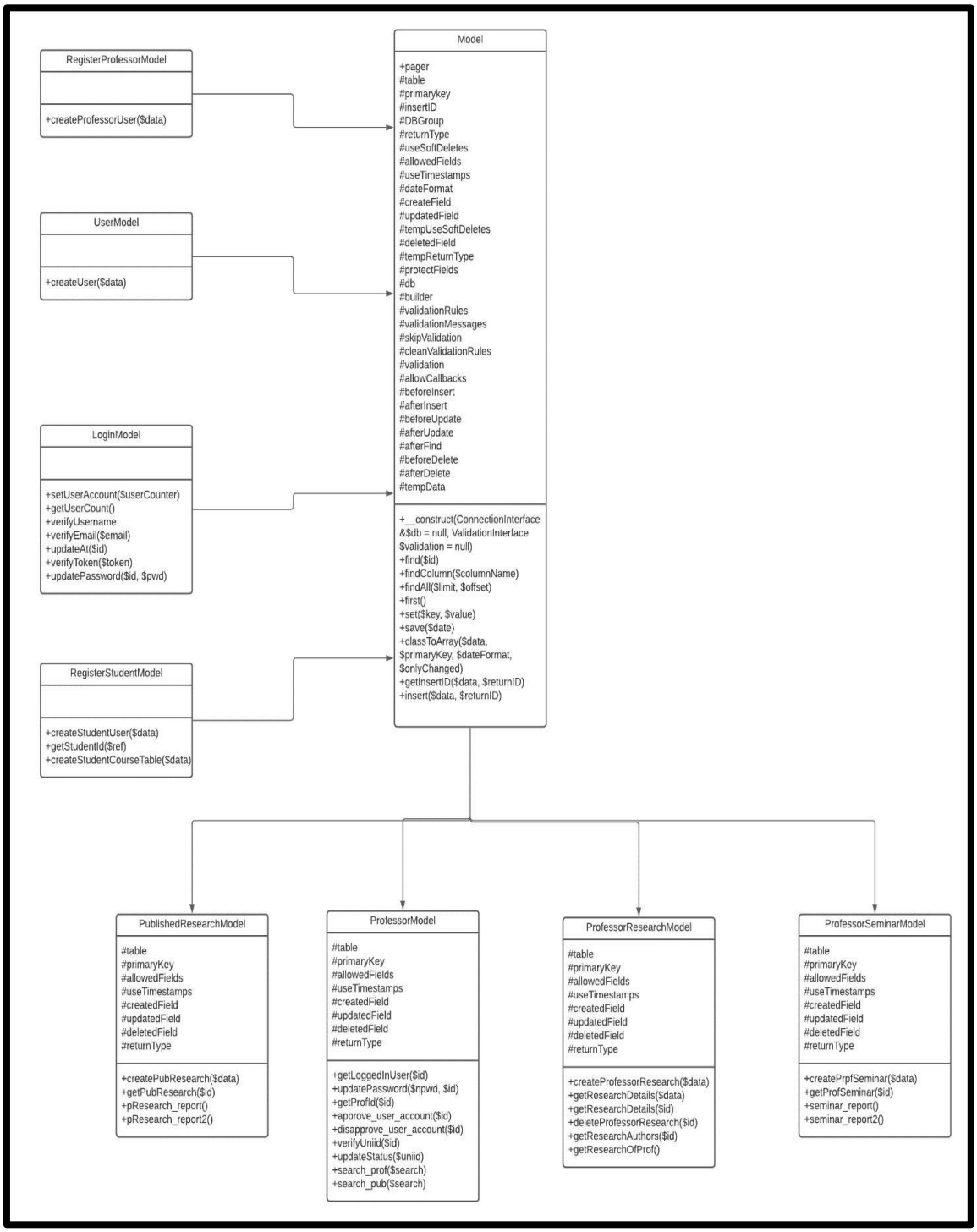


Figure: Domain Object Modeling (Professor)

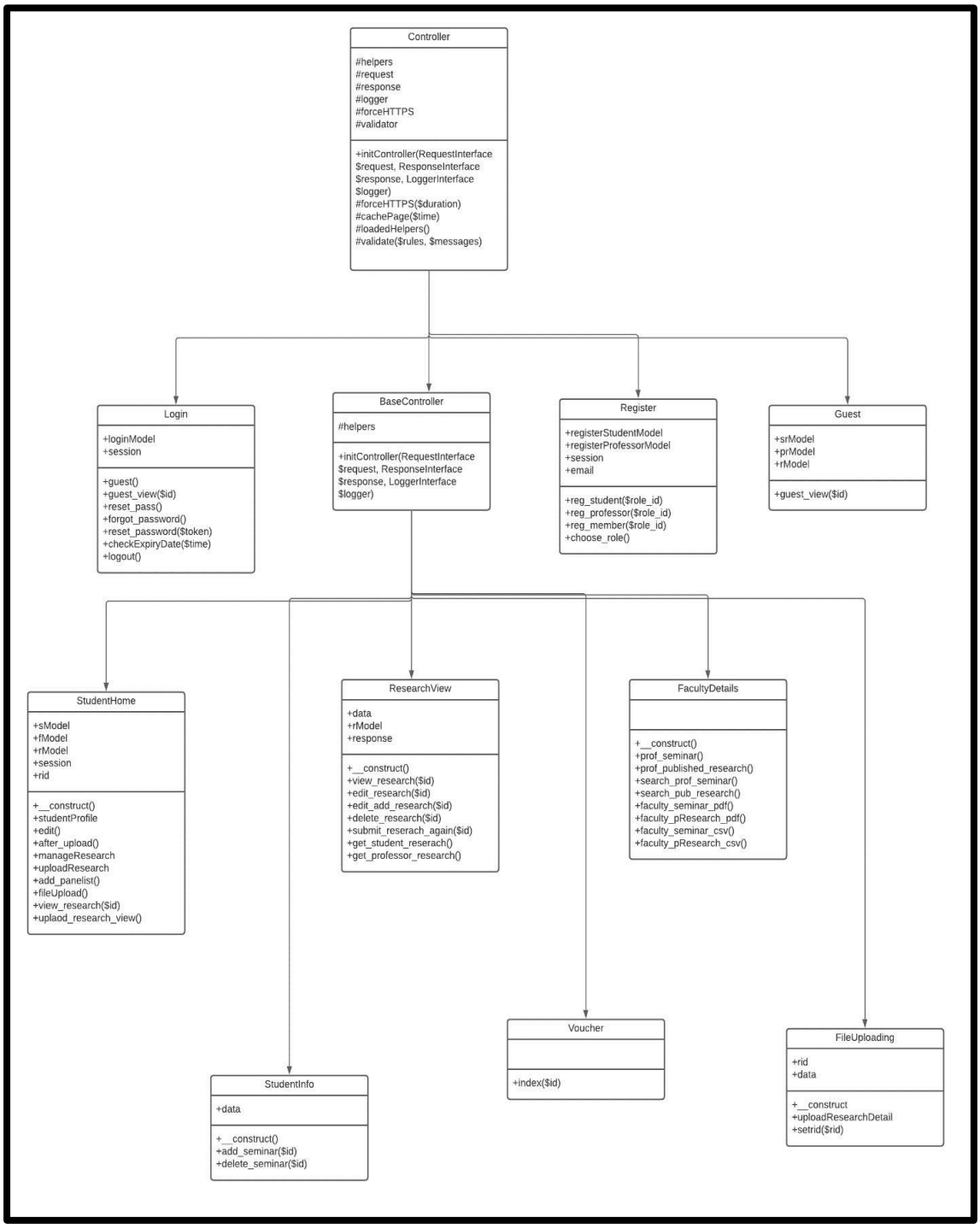


Figure: Domain Object Modeling (Student)

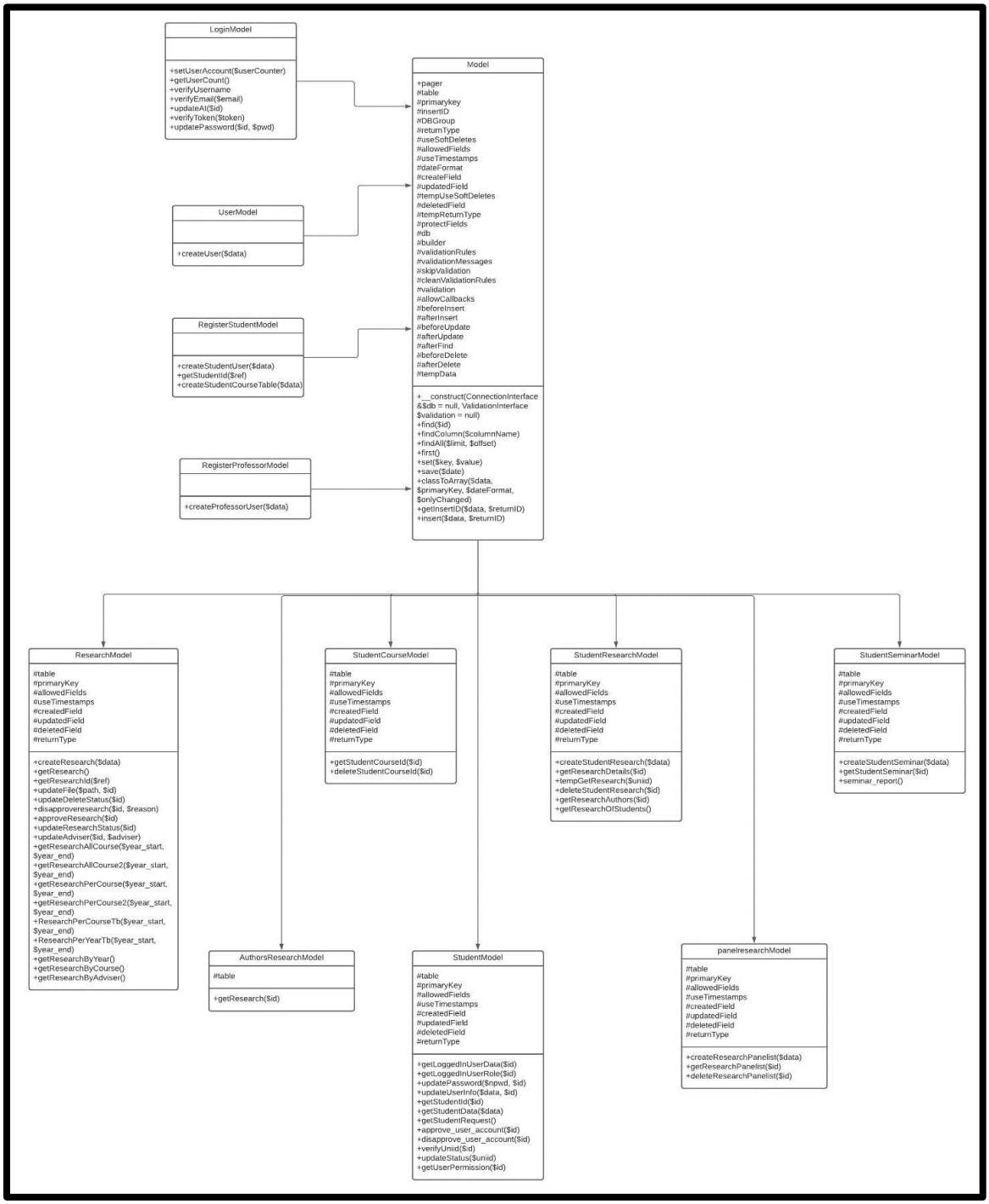


Figure: Domain Object Modeling (SuperAdmin)

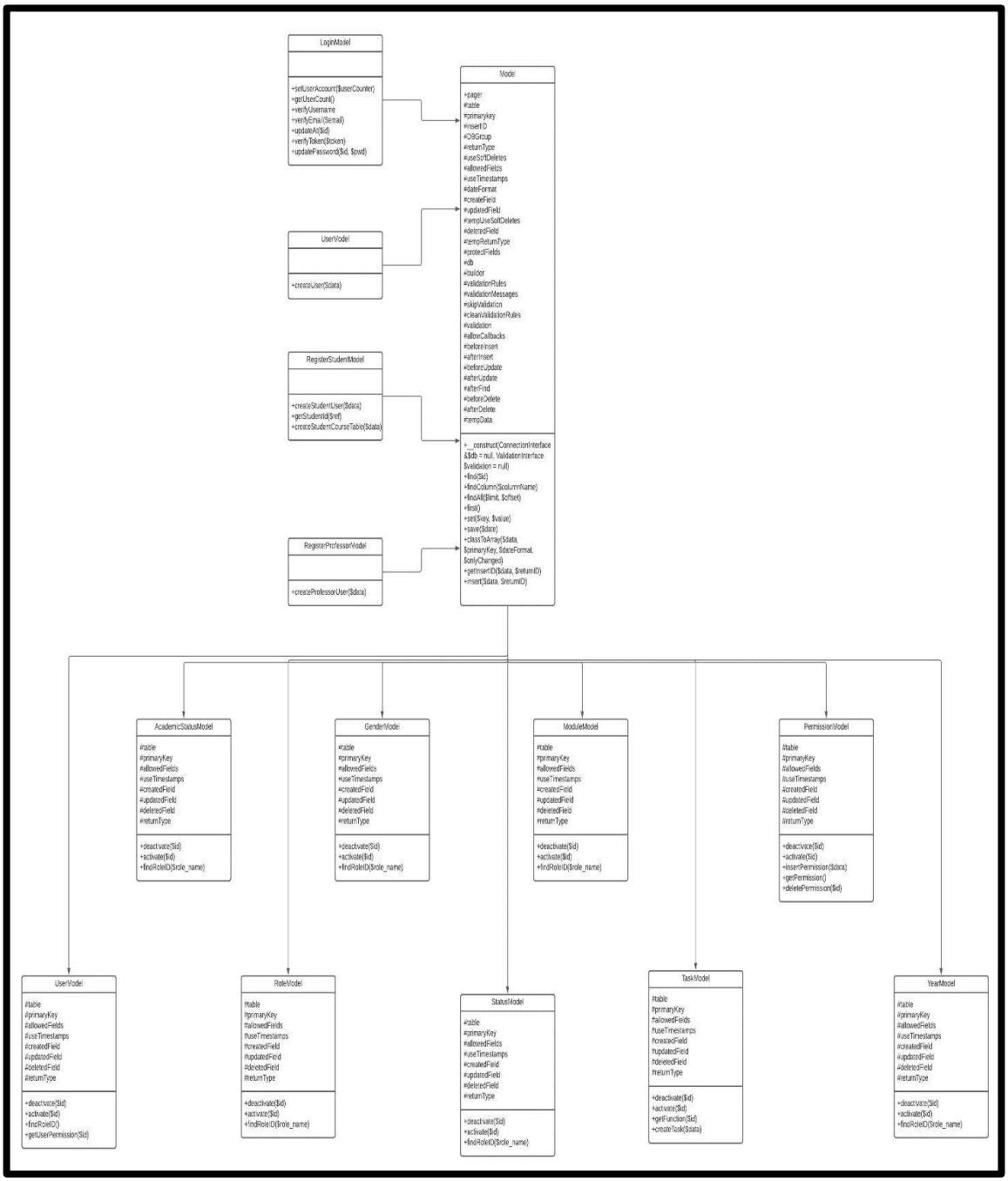


Figure: Domain Object Modeling (SuperAdmin)

3.2.2 Database Design

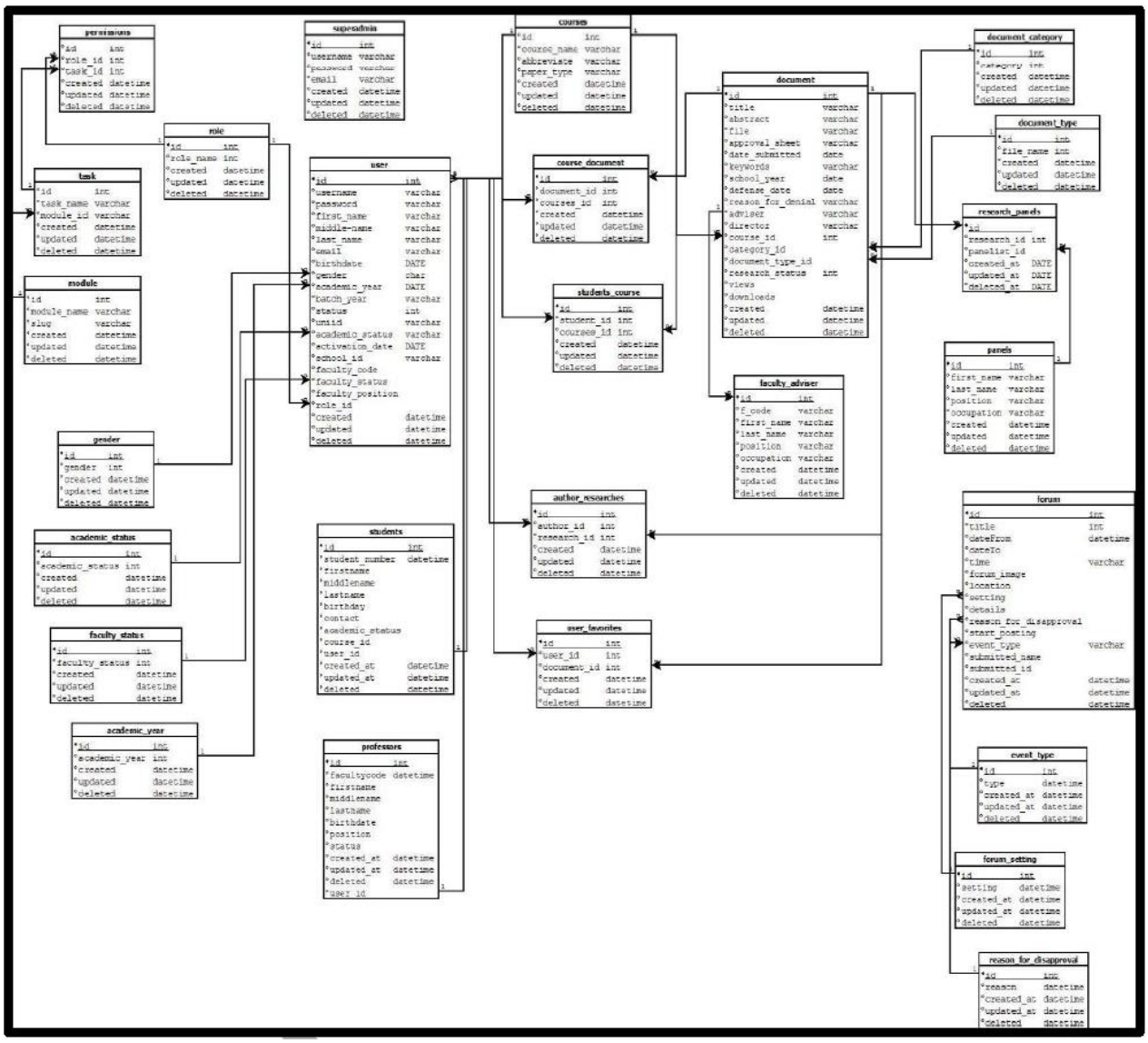


Figure 6: Entity – Relationship Diagram

3.2.2.1 Forms Database Dictionary

STUDENT				
Data Element	Description	Data Type	Length	Sample
id	Student table ID	int		1
student_number	Student number	varchar	20	2018-00304-TG-0
birthdate	Birthdate of the student	date		7/30/1999
gender	Gender of the student	char	5	F
year	Year level of the student	char	10	III
batch_year	Batch year of the student	date		2018
status	Academic status of the student	char	5	1
uniid	Unique ID of the student	varchar	50	
activation_date	Activation date of the student's account	date		4/5/2021
user_id	User ID	int		3

STUDENT RESEARCHES				
Data Element	Description	Data Type	Length	Sample
id	ID of the student researches	int		1
student_id	ID of the student researches	int		1
birthdate	ID of the research	int		1

PROFESSORS				
Data Element	Description	Data Type	Length	Sample
id	Professors table ID	int		1
faculty_code	Professor's Faculty code	varchar	20	FA000035
uiid	Unique ID of the professors	varchar		
position	Position of the professor	varchar	50	Faculty
gender	Gender of the professor	char	5	F
school_id	School ID of the professor	varchar		shoolID.png
f_status	Faculty status	char	5	Part-time
activation_date	Activation date of the account	datetime		4/5/2021

PROFESSORS RESEARCH				
Data Element	Description	Data Type	Length	Sample
id	Professors research table ID	int		1
author_id	Professors ID	int		1
research_id	Research ID	int		1

PROFESSORS SEMINAR				
Data Element	Description	Data Type	Length	Sample
id	Professors research table ID	int		1
seminar_title	Title of the seminar	varchar	50	
sponsor	Sponsor of the seminar	varchar	50	
venue	Venue of the seminar	varchar	50	
event_date	Date of the seminar	datetime		
professor_id	ID of the professor	int		1

PUBLISHED_RESEARCH				
Data Element	Description	Data Type	Length	Sample
id	Published research table ID	int		
research_title	Title of the published research	varchar	100	
publication	Publication of the published research	varchar	50	
institute	Institute of the published research	varchar	50	
volume	Volume of the published research	varchar	50	
published_date	Date of the publication	date		
professor_id	Professors ID	int		1

COURSES				
Data Element	Description	Data Type	Length	Sample
id	ID of the courses	int		1
course_name	Course name	varchar	50	Bachelor of Science in Information Technology

abbreviate	Abbreviate of the Course	varchar	20	BSIT
papertype_id	ID of the papertype	int		1
STUDENT COURSES				
Data Element	Description	Data Type	Length	Sample
id	ID of the student course	int		1
student_id	ID of the student	int		1
course_id	ID of the courses	int		1

3.3 System Requirements

3.3.1 Hardware/ Software/ Network/ Peopleware

3.3.1.1 Hardware Requirements

CLIENT SIDE			
	Processor	**RAM**	**Disk Space**
Desktop PC	Intel Dual Core of Higher Version	2 GB	250 GB

SERVER SIDE			
	Processor	**RAM**	**Disk Space**
RAD	All Intel or AMD – 2 GHz	2 GB	3.5 GB

CLIENT SIDE			
	Processor	**RAM**	**Disk Space**
Android Phone	Higher Version of android processor	1 GB	100 MB

REQUIREMENTS	SERVER SIDE	
	Minimum	**Recommended**
Computer	1.8 GHz	2.2 GHz or above
	512 MB RAM	1 GB RAM, or above
	1280 x700 Display	1024 x 768 Display
	2 GB Free Hard Disk Space	5 GB Free Hard Disk or above
Internet Browser		Google Chrome

Table 1.1 Hardware Requirements

3.3.1.2 Software Requirements

Clients Devices

- Cross-platform Web Browser

Web Server

- JustHost

Development End

- Any text editor—Browser Interface
- MySQL

3.3.1.3 Software Specifications

SS — 1: The web application of the system shall be developed using Atom as IDE and XAMPP.

SS — 2: The system shall use MySQL database server to store data.

.3.1.4 Peopleware

P-1: Researchers / Author

3.3.2 Security Requirements

SE-1: The administrator is permitted to view the overall functions of the system.

1.2 Business Rules

- Researches should be uploaded by one author only.
- Members should have a user account.
- Uploaded researches should go to pending researches for approval.
- The administrator is the only person who will approve or disapprove researches.

3.3.3 Security Requirements

NS — 1: TCP/IP protocol shall be used to support basic communications in the system.

NS — 2: The system needs any internet connection to access its features and services for its is a stand-alone information system.

3.4 Functional Specification Report

3.4.1 Current I.T Environment / Infrastructure

The Research Department is using an old system which was the ORTAC which was the software resources of the development of this project.

3.5 Data Requirements

This section shows the different forms and reports associated with the proposed system which is the *Research Approval and Archiving System*. The list and description of all the forms and reports that we have gathered from the organization were shown. The contents and data dictionary of these data requirements are also indicated.

3.5.1 Forms

3.5.1.1 List of Forms

LIST OF FORMS				
Figure	**Name of Form**	**Description**	**Source**	**User**
	Approval Sheet	This form is an indication that an author's research is approved by the admin.	**Admin**	**Researches/ Author**
	List of Researches	This contains the overall list of all the researches uploaded in the system.	**Admin**	**Researches/ Author**
	Uploading Form	This contains information about the researches to be uploaded.	**Admin**	**Researches/ Author**
	Registration Form	This contains information about the author to obtain an access to the system.	**Admin**	**Researches/ Author**
	Login Form	This contains the username and password to access the system.	**Admin**	**Researches/ Author**

Table 1.1 List of Forms

3.5.2 Layout of Forms

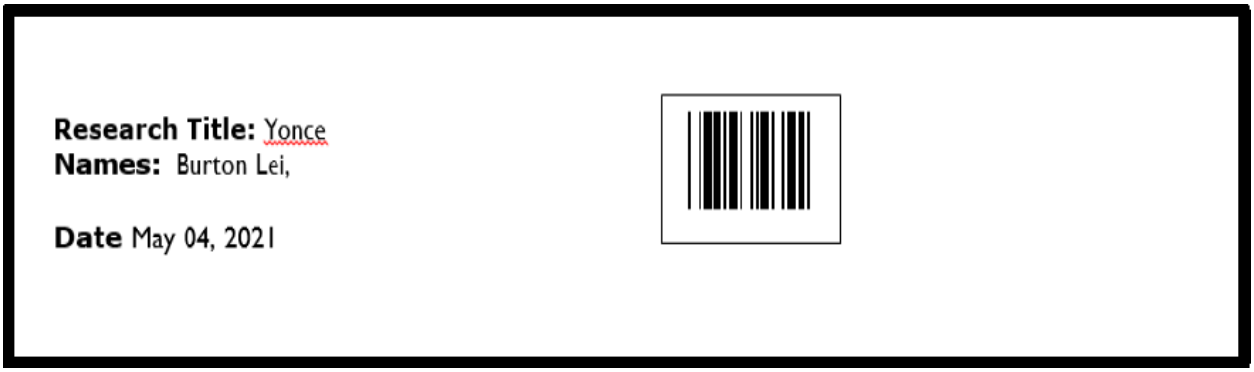


Figure 7: Sample of Approval Sheet

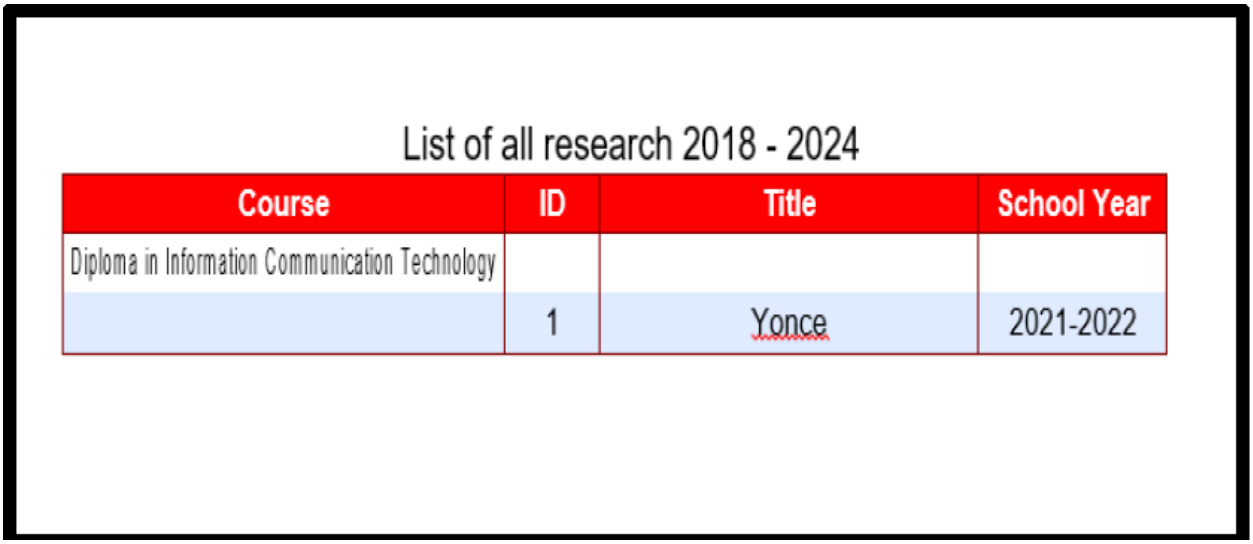


Figure 8: Sample of List of Researches Form

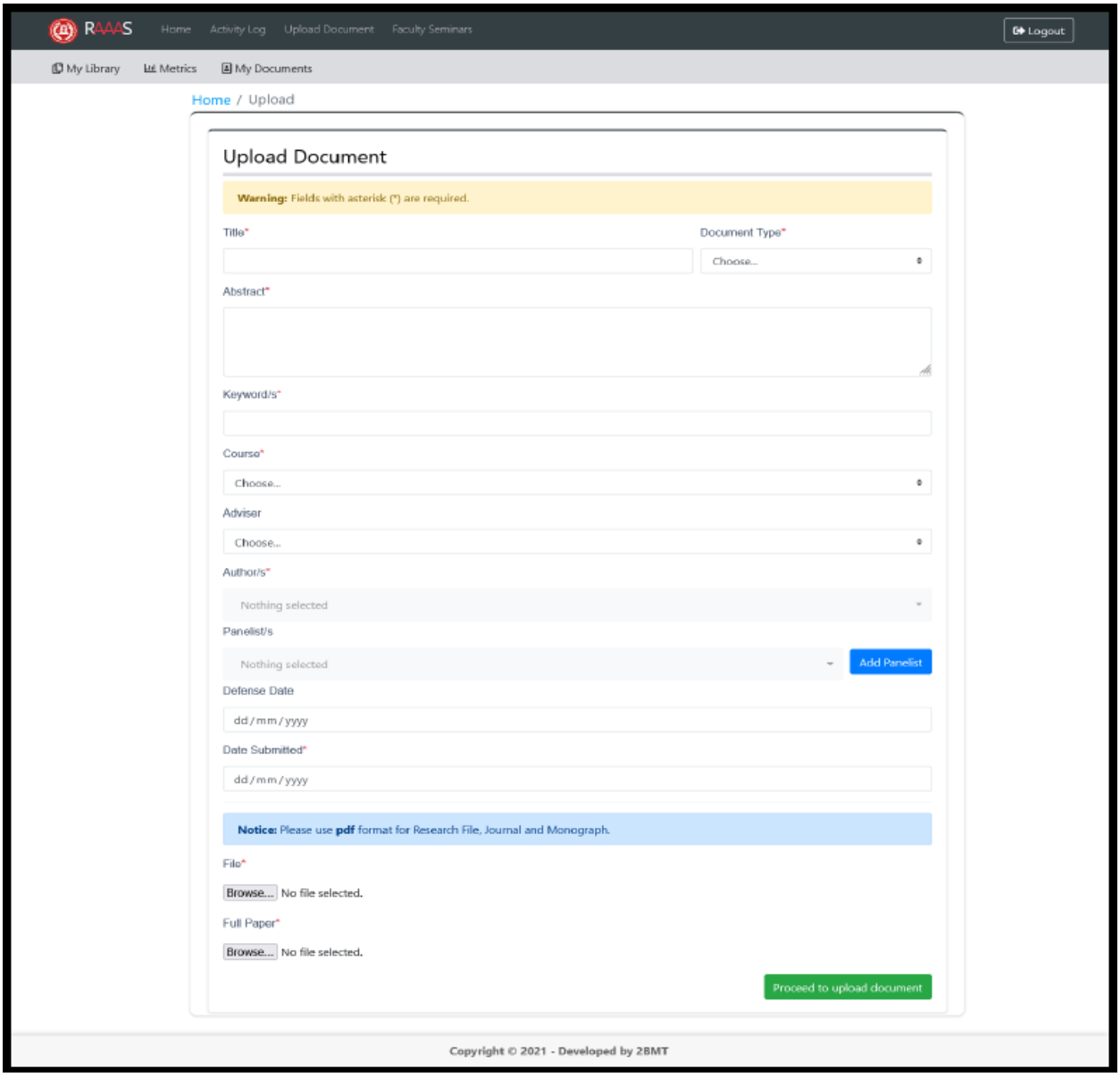


Figure 9: Uploading Form

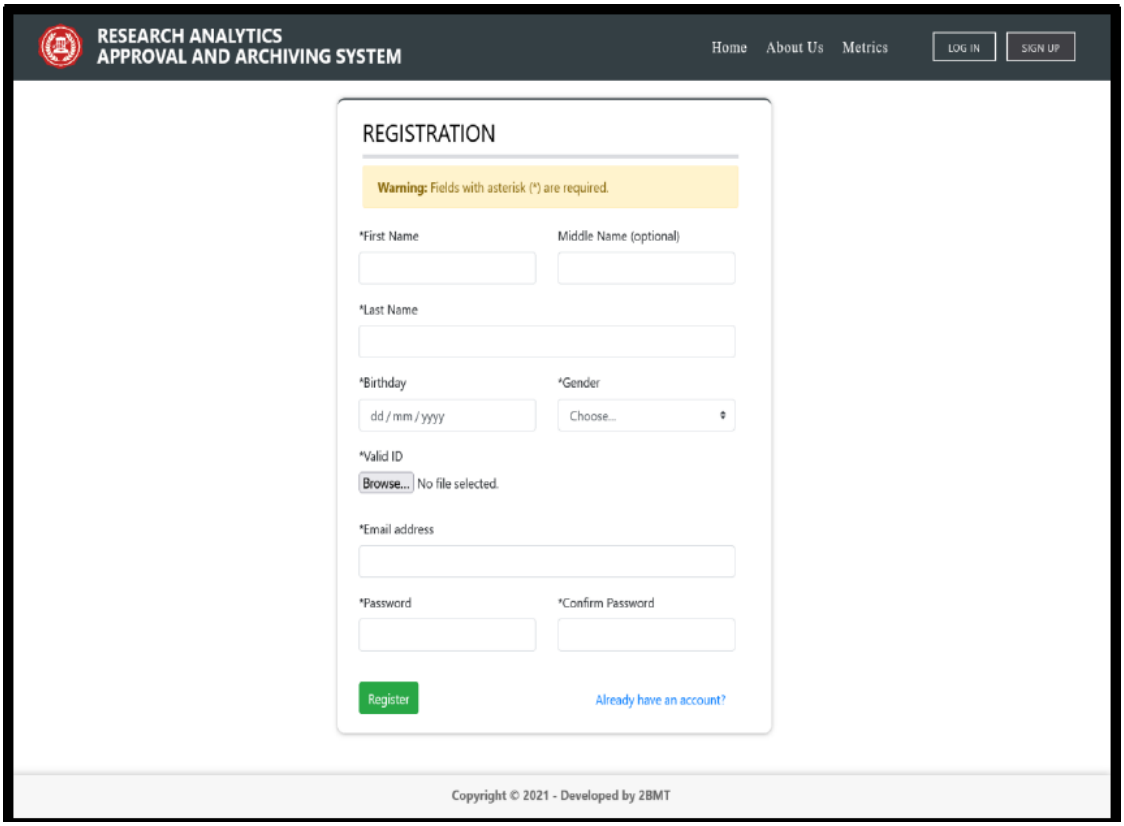


Figure 10: Registration Form

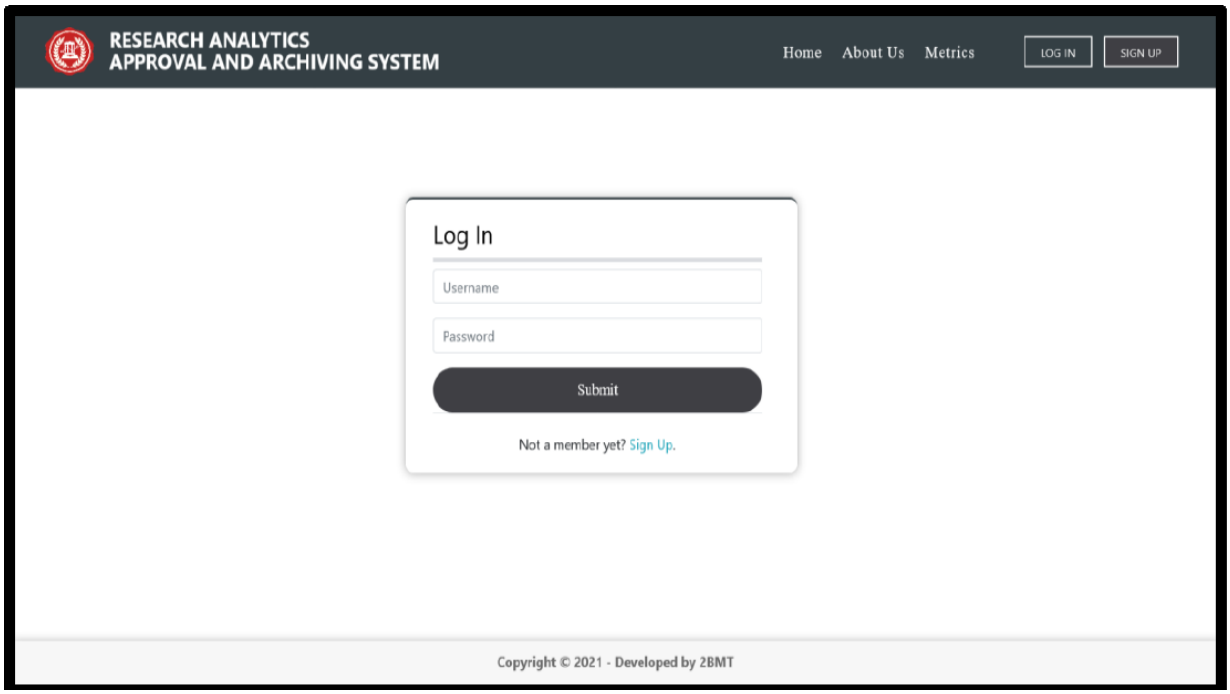


Figure 11: Login Form

3.5.3 Data Dictionary of Forms

AUTHOR				
Data Element	**Description**	**Data Type**	**Length**	**Sample Data**
student_ number	Student number if the author is Student.	varchar	50	2018-00000-TG-0
f_code	Faculty code if the author is Professor.	varchar	50	FA00000TG2009
email	Email of the author.	varchar	50	j.balatong1999@gmail.com
first_name	Firstname of the author.	varchar	50	Jayson
last_name	Last name of the author.	varchar	50	Balatong
birth_date	Birth date of the author.	date		12/13/1999
gender	Gender of the author.	varchar	50	M
position	Position of the Professor in the Organization.	varchar	50	Head of the Academic Affairs

status	Status of author if he/she is a Professor.	varchar	50	Full Time
academic_ status	If the author is a student	varchar	50	Regular
year	Year Level of the author if he/she is a Student.	date		4th
batch_ year	Batch year of the author.	date		2020-2021
school_ id	Scanned picture of the author's ID.	varchar	50	ID.jpeg

Table 1.2 Data Dictionary of Forms

3.5.4 Reports Data Dictionary

ACADEMIC_STATUS					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the academic status.	int	20	Yes	32557
academic_ status	Name of the academic status.	varchar	100	Yes	Regular
created_ at	Date when the academic status created.	datetime		Yes	2021-07-13 23:40:17
updated_ at	Date when the academic status updated.	datetime		No	2021-07-13 23:40:17
deleted_ at	Date when the academic status soft deleted.	datetime		No	2021-07-13 23:40:17

ACADEMIC_YEAR					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the academic year.	int	20	Yes	32557
academic_ year	Name of the academic year.	varchar	2	Yes	IV
created_ at	Date when the academic year created.	datetime		Yes	2021-07-13 23:40:17
updated_ at	Date when the academic year updated.	datetime		No	2021-07-13 23:40:17
deleted_ at	Date when the academic year soft deleted.	datetime		No	2021-07-13 23:40:17

ACTIVITY_LOG					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the activity log.	int	20	Yes	32557
user_id	User who does the action.	int	20	Yes	65424
task_ name	Task done by the user.	varchar	50	Yes	Add Forum
created_ at	Date when the activity log created.	datetime		Yes	2021-07-13 23:40:17
updated_ at	Date when the activity log updated.	datetime		No	2021-07-13 23:40:17
deleted_ at	Date when the activity log soft deleted.	datetime		No	2021-07-13 23:40:17

ADMIN_CONFIG					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the admin config.	int	20	Yes	32557
school_ year	Current school year.	varchar	50	Yes	2018-2019
current_ director	Current director for current school year.	varchar	100	Yes	Dr. John Doe
archive_ year	Research year filter to be display in the system.	varchar	50	Yes	2016-2021
created_ at	Date when the config created.	datetime		Yes	2021-07-13 23:40:17
updated_ at	Date when the config updated.	datetime		No	2021-07-13 23:40:17
deleted_ at	Date when the config soft deleted.	datetime		No	2021-07-13 23:40:17

ADMIN_REASON					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the admin reason.	int	20	Yes	32557
reason	Reasons for rejecting the paper.	varchar	100	Yes	Invalid Research File
created_ at	Date when the admin reason created.	datetime		Yes	2021-07-13 23:40:17
updated_ at	Date when the admin reason updated.	datetime		No	2021-07-13 23:40:17
deleted_ at	Date when the admin reason soft deleted.	datetime		No	2021-07-13 23:40:17

ADVISER_REASON					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the adviser reason.	int	20	Yes	32557
reason	Reasons for rejecting the paper.	varchar	100	Yes	Invalid Research File
created_at	Date when the adviser reason created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the adviser reason updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the adviser reason soft deleted.	Datetime		No	2021-07-13 23:40:17

COURSE					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the academic course.	int	20	Yes	32557
course_name	Name of an academic.	varchar	100	Yes	Bachelor of Science in Accountancy
abbreviate	Abbreviation of an academic course.	varchar	15	Yes	BSA
created_at	Date when the academic course created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the academic course updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the academic course soft deleted.	datetime		No	2021-07-13 23:40:17

COURSE_DOCUMENT					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the course document.	int	20	Yes	32557
document_id	The document id number.	int	20	Yes	65424
course_id	Course id number.	int	20	Yes	53637
created_at	Date when the course document created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the course document updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the course document soft deleted.	datetime		No	2021-07-13 23:40:17

COURSE_SCHEDULE					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the course schedule.	int	20	Yes	32557
course_id	Course id number.	int	20	Yes	65424
dateForm	The start date of uploading.	date	20	Yes	2021-07-13
DateTo	The end date of uploading.	date		Yes	2021-08-03
created_at	Date when the course schedule created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the course schedule updated.	datetime		No	2021-07-13 23:40:17

deleted_ at	Date when the course schedule soft deleted.	datetime		No	2021-07-13 23:40:17

DOCUMENT					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the document.	int	20	Yes	32557
title	Title of a document	varchar	100	Yes	Difference-in-Difference Analysis
file	File name of a document.	varchar	100	Yes	DDA.pdf
full_paper	File name of a document full paper	varchar	100	No	DDS(Full).pdf
abstract	Abstract of a document.	varchar	5000	Yes	The Internet has become a primary resource for…
keywords	Keywords of a document.	varchar	250	Yes	Research, IT, IOT
school_ year	School year of a document	varchar	50	Yes	2020-2021
defense_ date	Date when the document defended.	date		Yes	2021-07-13
date_ submitted	Date when the document submitted to professor.	date		Yes	2021-07-13
adviser	Adviser of the document.	int	20	Yes	43234
director	The current director when the document is made.	varchar	100	Yes	Dr. John Doe
reason_for _denial	Reason why the document is denied.	varchar	50	No	Too few Abstract
research_ status	Status of research (2 - Not yet Approved, 3 - Approved)	int	1	Yes	3

privacy	Privacy level of a document.	int	1	Yes	1
copyright	Certificate of copyright image or document.	varchar	100	No	Copyright.jpeg
course_ id	Course id number.	int	20	Yes	34532
category_ id	Category of the document.	int	20	No	43453
document_ type_id	Type of document.	int	20	Yes	44533
slugs	Unique identifier of document.	varchar	12	Yes	WGhJvLZC6OMw
views	Count of views of a document.	int	5	Yes	32
downloads	Count downloads of a document.	int	5	Yes	21
created_ at	Date when the document created.	datetime		Yes	2021-07-13 23:40:17
updated_ at	Date when the document updated.	datetime		No	2021-07-13 23:40:17
deleted_ at	Date when the document soft deleted.	datetime		No	2021-07-13 23:40:17

DOCUMENT_AUTHOR					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the document.	int	20	Yes	32557
document _id	ID of a document.	int	20	Yes	45645
author_id	Document's authors.	int	20	Yes	65465
created_ at	Date when the document author created.	datetime		Yes	2021-07-13 23:40:17
updated_ at	Date when the document author updated.	datetime		No	2021-07-13 23:40:17

deleted_at	Date when the document author soft deleted.	datetime		No	2021-07-13 23:40:17

DOCUMENT_TYPE					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the document type.	int	20	Yes	32557
type	Document type Name.	varchar	100	Yes	Article
created_at	Date when the document type created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the document type updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the document type soft deleted.	datetime		No	2021-07-13 23:40:17

EVENT_TYPE					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the event type.	int	20	Yes	32557
type	Event type Name.	varchar	100	Yes	Seminar
created_at	Date when the event type created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the event type updated.	datetime		No	2021-07-13 23:40:17

deleted_ at	Date when the event type soft deleted.	datetime		No	2021-07-13 23:40:17

FACULTY_ADVISER					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the faculty adviser.	int	20	Yes	32557
f_code	Faculty Code of a faculty.	varchar	100	Yes	FA00014TG2019
first_name	First name of a faculty.	varchar	50	Yes	John
last_name	Last name of a faculty.	varchar	50	Yes	Doe
middle_ name	Middle name of a faculty.	varchar	50	No	Dela Cruz
position	Position of a faculty	varchar	50	No	IT Faculty
created_ at	Date when the document type created.	datetime		Yes	2021-07-13 23:40:17
updated_ at	Date when the document type updated.	datetime		No	2021-07-13 23:40:17
deleted_ at	Date when the document type soft deleted.	datetime		No	2021-07-13 23:40:17

FACULTY_PUBLICATION					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the faculty publication.	int	20	Yes	32557
faculty_id	ID of a professor.	int	20	Yes	45345
research_ title	Title of the publication.	varchar	50	Yes	Standing were you
publication	Publication file name.	varchar	50	No	Publication.pdf

volume	Volume of the publication.	varchar	50	No	10. Issue 5
institute	Institute of the publication.	varchar	50	No	PUP Taguig
abstract	Abstract of the publication.	varchar	5000	Yes	The Internet has become primary resource for…
school_ year	School year when the publication uploaded.	varchar	50	Yes	2020-2021
date_ published	Date of the publication	date		Yes	2021-07-20
created_ at	Date when the faculty publication created.	datetime		Yes	2021-07-13 23:40:17
updated_ at	Date when the faculty publication updated.	datetime		No	2021-07-13 23:40:17
deleted_ at	Date when the faculty publication deleted.	datetime		No	2021-07-13 23:40:17

FACULTY_SEMINAR					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the seminar.	int	20	Yes	32557
faculty_ id	ID of Professor	int	20	Yes	45435
event_ title	Title of the event	varchar	50	Yes	IT Spade
sponsor	Sponsor of the event	varchar	50	Yes	Computer Society
venue	Venue of the event	varchar	50	Yes	PUP Taguig

date	Date of the publication	date		Yes	2021-07-20
created_at	Date when the seminar created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the seminar updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the seminar deleted.	datetime		No	2021-07-13 23:40:17

FACULTY_STATUS					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the faculty status.	int	20	Yes	32557
faculty_status	Faculty status Name	Int	20	Yes	Full-time
created_at	Date when the faculty status created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the faculty status updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the faculty status soft deleted.	datetime		No	2021-07-13 23:40:17

FORUM					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the forum.	int	20	Yes	32557
title	Title of the forum	varchar	100	Yes	IT Spade
dateFrom	Start date of the forum	date		Yes	2021-07-13
dateTo	End date of the forum	date		Yes	2021-07-13
time	Time starts of the forum	time		Yes	23:40:17

event_type	Type of the forum	varchar	50	Yes	Workshop
start_posting	Date when will the event be posted	date		Yes	2021-07-13
forum_image	Image poster of the event	varchar	50	No	Image.jpg
status	Status of the forum (1 – Not yet Approved, 2 – Approved, 3 – Disapproved)	int	1	Yes	2
details	Details of the events	varchar	500	No	Please wear black shirt
location	Location of the event	varchar	50	Yes	PUP – Taguig
parameter	Mode of the event	varchar	50	Yes	Virtual
reason_for_ disapproval	Reason for disapproving the forum	varchar	50	No	Poster doesn't match
submitted_ name	Name of person who encode the forum	varchar	50	Yes	John Doe
submitted_id	ID of the person who encode the forum	int	20	Yes	34323
created_at	Date when the forum created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the forum updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the forum soft deleted.	datetime		No	2021-07-13 23:40:17

FORUM_REASON

Fields	Descriptions	Data Type	Field Length	Required	Sample Data
id	Primary key of the forum reason.	int	20	Yes	32557
reason	Reason name of disapproving the forum	varchar	100	Yes	Wrong details
created_at	date when the forum created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the forum updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the forum soft deleted.	datetime		No	2021-07-13 23:40:17

FORUM_SETTINGS					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the forum setting.	int	20	Yes	32557
name	Name of the forum settings.	varchar	100	Yes	Virtual
created_at	date when the forum setting created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the forum setting updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the forum setting soft deleted.	datetime		No	2021-07-13 23:40:17

GENDER					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**

id	Primary key of the gender.	int	20	Yes	32557
gender	Name of the gender	varchar	100	Yes	Male
created_at	Date when the gender created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the gender updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the gender soft deleted.	datetime		No	2021-07-13 23:40:17

MODULE					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the module.	int	20	Yes	32557
module_name	Name of the module	varchar	100	Yes	Research Management
created_at	Date when the module created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the module updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the module soft deleted.	datetime		No	2021-07-13 23:40:17

PANEL					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the panel.	int	20	Yes	32557
first_name	First name of the panel	varchar	100	Yes	John
last_name	Last name of the panel	varchar	100	Yes	Doe
middle_name	Middle name of the panel	varchar	100	No	Dela Cruz
occupation	Occupation of the panel	varchar	100	Yes	Professor

company	Company of the panel	varchar	100	No	KMC
created_at	date when the panel created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the panel updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the panel soft deleted.	datetime		No	2021-07-13 23:40:17

PERMISSION					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the permission.	int	20	Yes	32557
role_id	Role assign for permission	int	20	Yes	45345
task_id	Task assigned to a role	int	20	Yes	23422
created_at	date when the permission created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the permission updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the permission soft deleted.	datetime		No	2021-07-13 23:40:17

PROFESSORS					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the professor.	int	20	Yes	32557
faculty_code	Faculty code of the faculty	varchar	100	Yes	FA00088TG 2009

firstname	First name of the faculty	varchar	100	Yes	John
lastname	Last name of the faculty	varchar	100	Yes	Doe
middlename	Middle name of the faculty	varchar	100	No	Dela Cruz
birthdate	Birthdate of the faculty	date		Yes	2021-07-13
status	Status of the faculty	varchar	50	Yes	Part Time
position	Position of the faculty	varchar	50	Yes	IT Faculty
user_id	User ID of the faculty	int	20	Yes	32423
created_at	date when the professor created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the professor updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the professor soft deleted.	datetime		No	2021-07-13 23:40:17

RESEARCH_PANEL					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the research panel.	int	20	Yes	32557
research_id	Research ID	int	20	Yes	86354
panel_id	Panels of the research	int	20	Yes	54352
created_at	date when the research panel created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the research panel updated.	datetime		No	2021-07-13 23:40:17

deleted_at	Date when the research panel soft deleted.	datetime		No	2021-07-13 23:40:17

ROLE					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the role.	int	20	Yes	32557
role_name	Name of the role	varchar	100	Yes	professor
created_at	date when the role created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the role updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the role soft deleted.	datetime		No	2021-07-13 23:40:17

STUDENTS					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the student.	int	20	Yes	32557
Student_ number	Student number of a student	varchar	100	Yes	2018-00484-TG-0
firstname	First name of a student	varchar	100	Yes	John
lastname	Last name of a student	varchar	100	Yes	John
middlename	Middle name of a student	varchar	100	No	Dela Cruz
birthdate	Birthdate of a student	date		Yes	2021-07-13
contact	Contact number of a student	varchar	11	Yes	9673104257

academic_ status	Academic status of a student	int	20	Yes	45353
course_id	Course of a student	int	20	Yes	43252
user_id	User ID of a student	int	20	Yes	26474
created_at	date when the student created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the student updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the student soft deleted.	datetime		No	2021-07-13 23:40:17

SUPERADMIN					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the superadmin.	int	20	Yes	32557
username	Username of a superadmin	varchar	100	Yes	superadmin
password	Encrypted password of a superadmin	varchar	100	Yes	$2y$10$kp9F5VJj3Tm7wX81ufHjcOVlpeSt.bXQ.2dHX2oG6ZhJOrjXcdati
created_at	date when the superadmin created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the superadmin updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the superadmin soft deleted.	datetime		No	2021-07-13 23:40:17

TASK					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the superadmin.	int	20	Yes	32557
task_name	Name of the task	varchar	100	Yes	Add to favorites
module_id	Module where the task belongs	int	20	Yes	73434
created_at	date when the task created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the task updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the task soft deleted.	datetime		No	2021-07-13 23:40:17

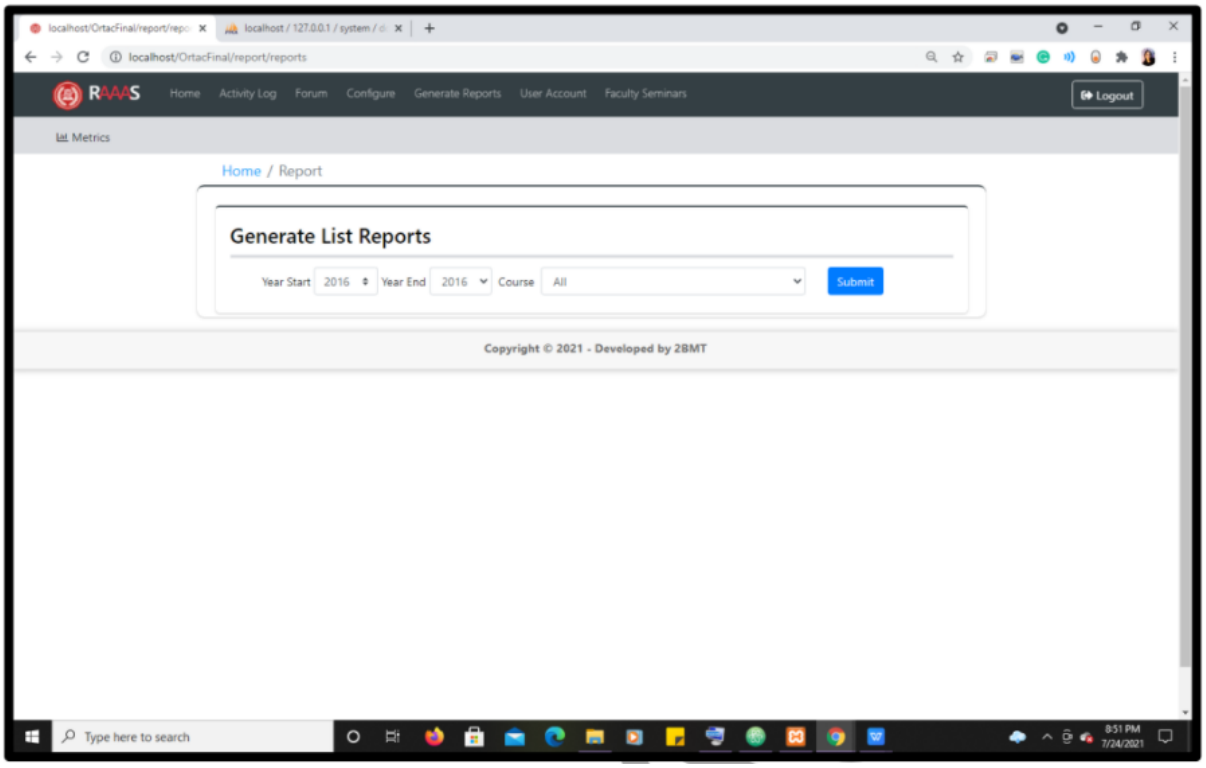
USER					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the user.	int	20	Yes	32557
username	Username of a user	varchar	100	Yes	Admin
email	Email of a user	varchar	100	Yes	johndoe@ gmail.com
password	Password of a user	varchar	60	Yes	$2y$10$kp9F5V Jj3Tm7wX81ufH jcOVlpeSt.bXQ. 2dHX2oG6ZhJO rjXcdati
firstname	First name of a user	varchar	100	Yes	John
lastname	Last name of a user	varchar	100	Yes	Doe
middlename	Middle name of a user	varchar	100	No	Dela Cruz
birthdate	Birthdate of a user	date		Yes	2021-07-13

gender	Gender of a user	varchar	11	Yes	Female
valid_id	ID hat is uploaded by the user	varchar	20	No	Image.jpg
academic_ status	Academic status of a student	int	20	No	45323
academic_ year	Academic year when the user account created	varchar	20	No	2018-2019
batch_year	Year when the user graduated	varchar	50	No	2018-2019
student_ number	Student number of a user	varchar	20	No	2018-00253-TG-0
faculty_code	Faculty code of a user	varchar	20	No	FA00014TG 2009
faculty_ status	Faculty status of a user	varchar	20	No	Part time
faculty_ position	Faculty position of a user	varchar	20	No	IT Professor
role_id	Role if a user	int	20	Yes	53423
uniid	Unique identifier for user	varchar	32	Yes	f36779fa695cb14df3f8a238936cf895
status	Status of a user (1 – Activated, 2 - Deactivated)	int	1	Yes	1
activation_ date	Date of activation	date		No	2021-07-13
created_at	date when the user created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the user updated.	datetime		No	2021-07-13 23:40:17

deleted_at	Date when the user soft deleted.	datetime		No	2021-07-13 23:40:17

USER_FAVORITES					
Fields	**Descriptions**	**Data Type**	**Field Length**	**Required**	**Sample Data**
id	Primary key of the user favorite.	int	20	Yes	32557
User_id	User who makes a favorite.	int	20	Yes	43245
Document_ id	Document that makes user its favorites	int	20	Yes	72347
created_at	date when the user favorite created.	datetime		Yes	2021-07-13 23:40:17
updated_at	Date when the user favorite updated.	datetime		No	2021-07-13 23:40:17
deleted_at	Date when the user favorite soft deleted.	datetime		No	2021-07-13 23:40:17

3.6 Reports


localhost/OrtacFinal/report/reports
RAAAS
Home
Activity Log
Forum
Configure
Generate Reports
User Account
Faculty Seminars
Logout
Metrics
Home / Report
Generate List Reports
Year Start
2016
Year End
2016
Course
All
Submit
Copyright © 2021 - Developed by 2BMT
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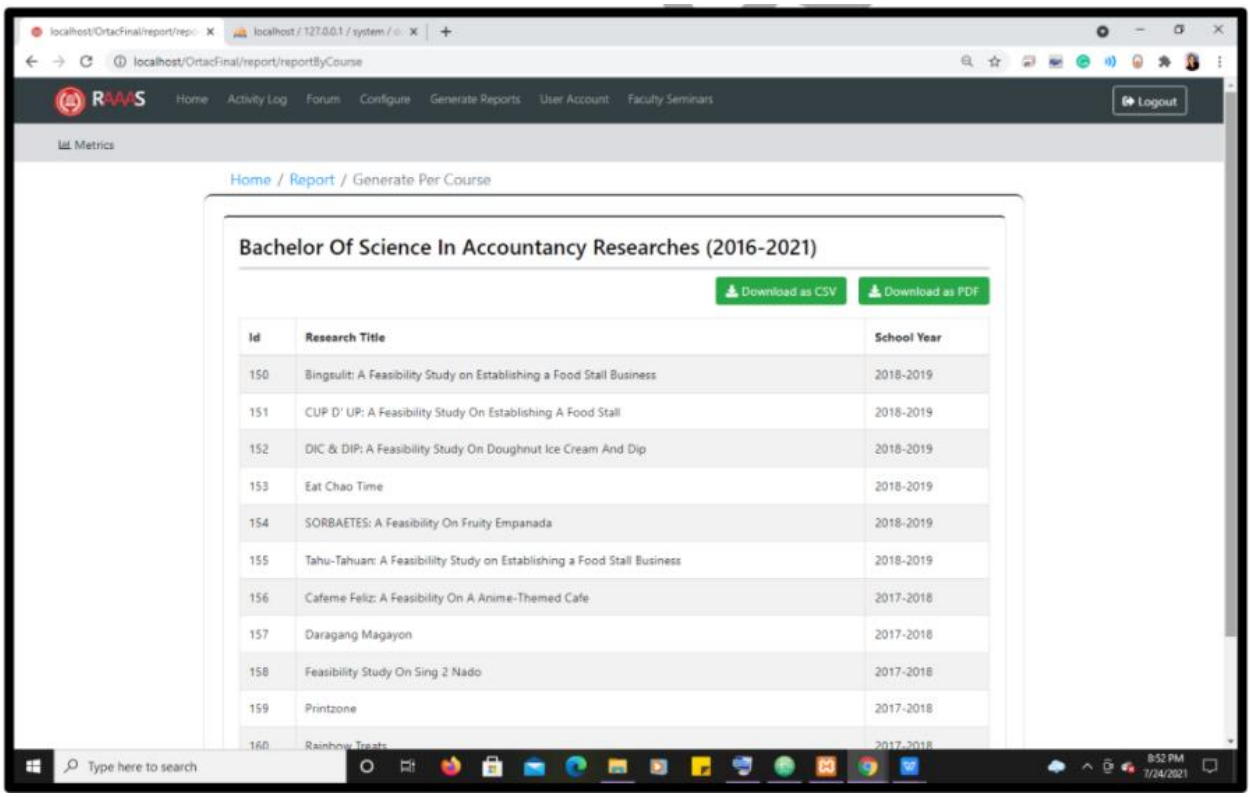
7/24/2021


localhost/OrtacFinal/report/reportByCourse
RAAAS
Home
Activity Log
Forum
Configure
Generate Reports
User Account
Faculty Seminars
Logout
Metrics
Home / Report / Generate Per Course
Bachelor Of Science In Accountancy Researches (2016-2021)
Download as CSV
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Id
Research Title
School Year
150
Bingsulit: A Feasibility Study on Establishing a Food Stall Business
2018-2019
151
CUP D' UP: A Feasibility Study On Establishing A Food Stall
2018-2019
152
DIC & DIP: A Feasibility Study On Doughnut Ice Cream And Dip
2018-2019
153
Eat Chao Time
2018-2019
154
SORBAETES: A Feasibility On Fruity Empanada
2018-2019
155
Tahu-Tahuan: A Feasibility Study on Establishing a Food Stall Business
2018-2019
156
Cafeme Feliz: A Feasibility On A Anime-Themed Cafe
2017-2018
157
Daragang Magayon
2017-2018
158
Feasibility Study On Sing 2 Nado
2017-2018
159
Printzone
2017-2018
160
Rainbow Treats
2017-2018
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7/24/2021

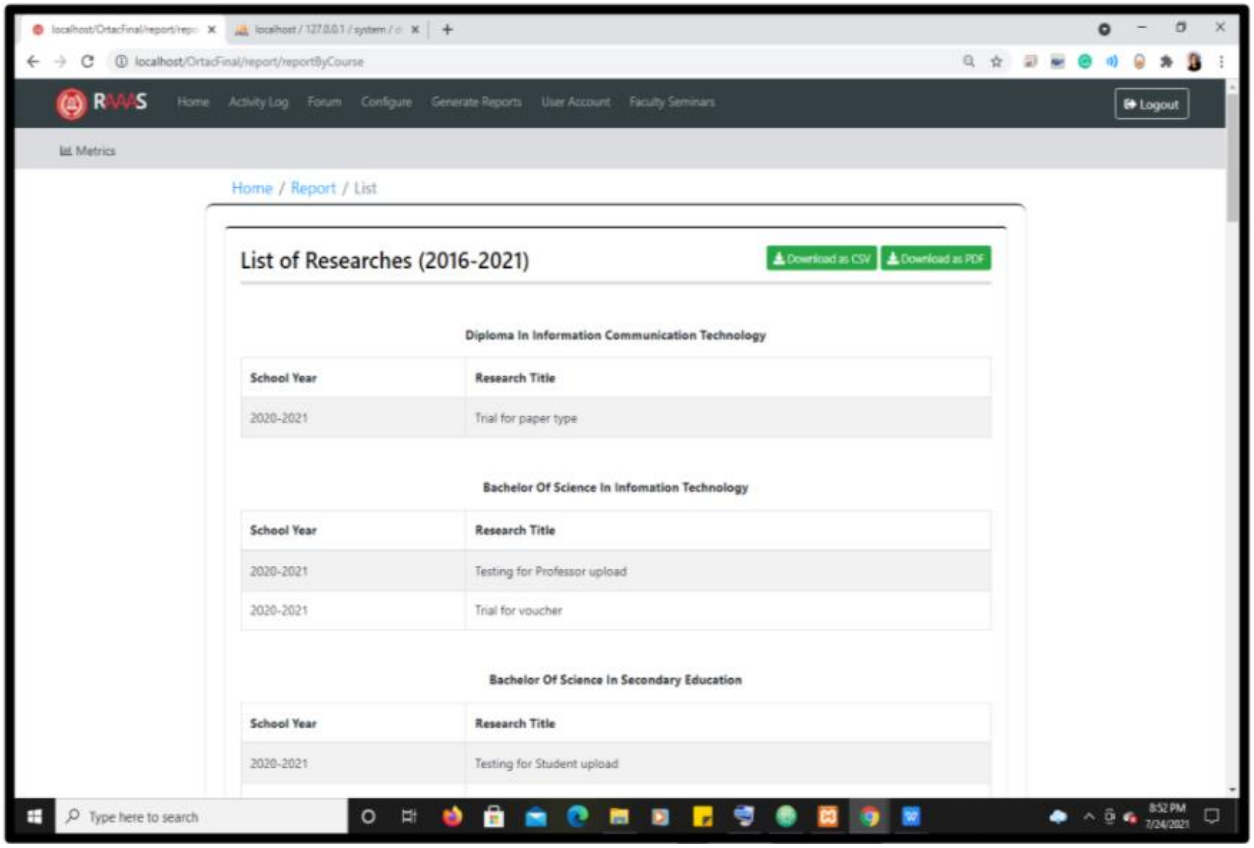
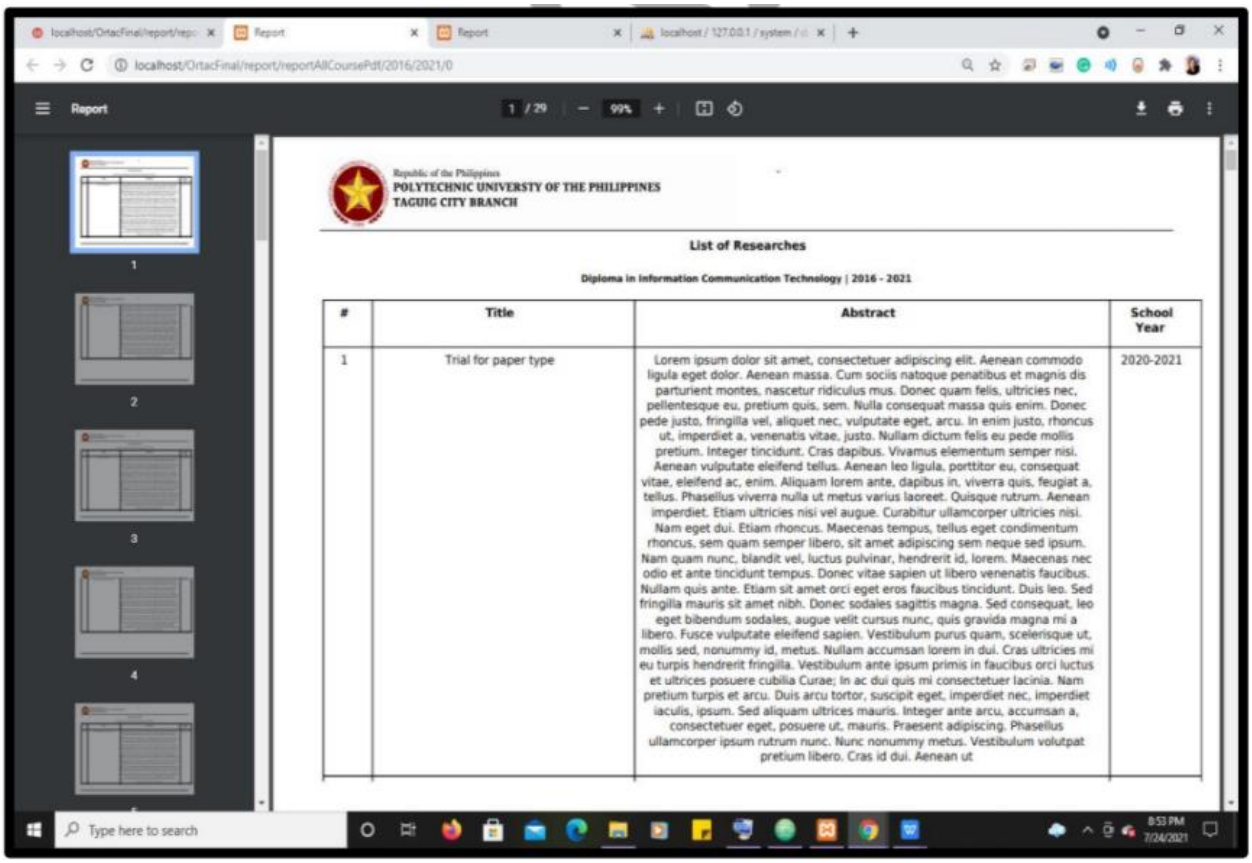


Figure 12: Generating Reports

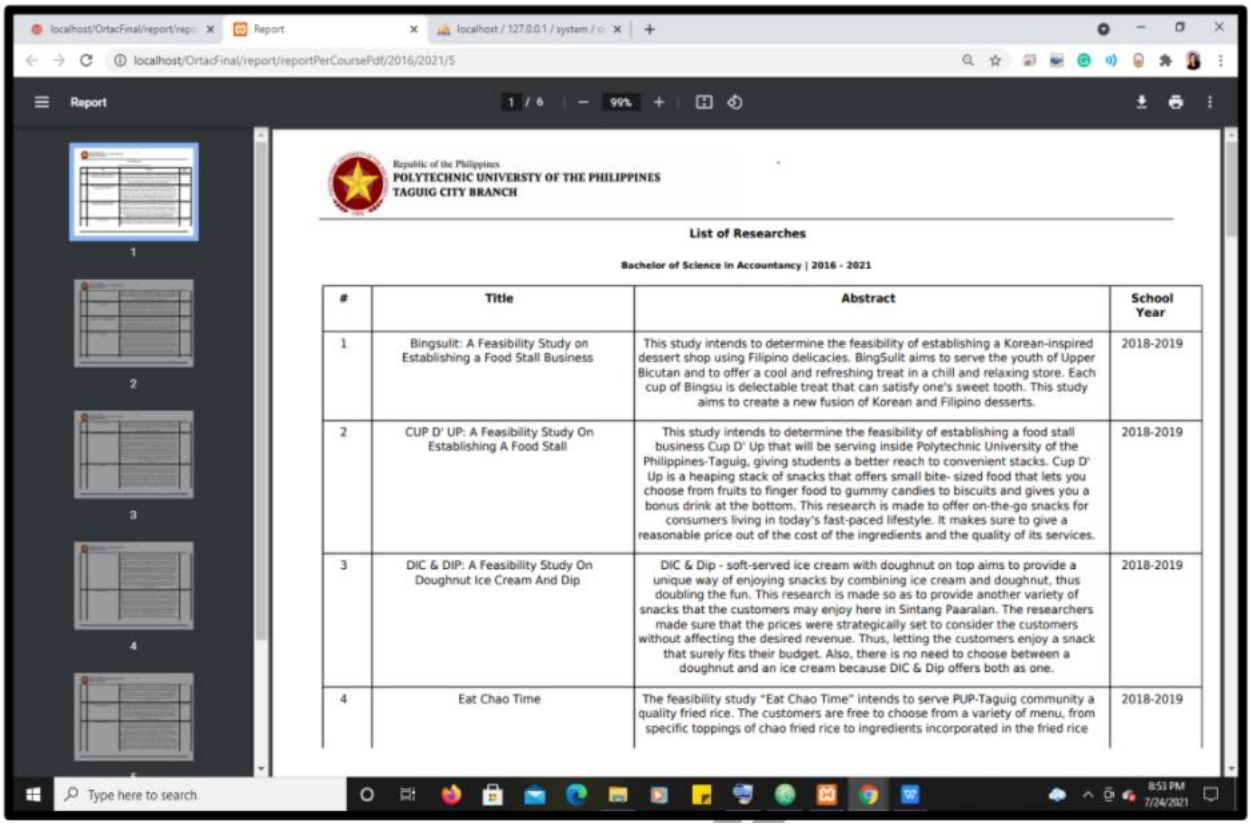


Republic of the Philippines
POLYTECHNIC UNIVERSTY OF THE PHILIPPINES
TAGUIG CITY BRANCH

List of Researches

Diploma in Information Communication Technology | 2016 - 2021

#	Title	Abstract	School Year
1	Trial for paper type	Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Donec quam felis, ultricies nec, pellentesque eu, pretium quis, sem. Nulla consequat massa quis enim. Donec pede justo, fringilla vel, aliquet nec, vulputate eget, arcu. In enim justo, rhoncus ut, imperdiet a, venenatis vitae, justo. Nullam dictum felis eu pede mollis pretium. Integer tincidunt. Cras dapibus. Vivamus elementum semper nisi. Aenean vulputate eleifend tellus. Aenean leo ligula, porttitor eu, consequat vitae, eleifend ac, enim. Aliquam lorem ante, dapibus in, viverra quis, feugiat a, tellus. Phasellus viverra nulla ut metus varius laoreet. Quisque rutrum. Aenean imperdiet. Etiam ultricies nisi vel augue. Curabitur ullamcorper ultricies nisi. Nam eget dui. Etiam rhoncus. Maecenas tempus, tellus eget condimentum rhoncus, sem quam semper libero, sit amet adipiscing sem neque sed ipsum. Nam quam nunc, blandit vel, luctus pulvinar, hendrerit id, lorem. Maecenas nec odio et ante tincidunt tempus. Donec vitae sapien ut libero venenatis faucibus. Nullam quis ante. Etiam sit amet orci eget eros faucibus tincidunt. Duis leo. Sed fringilla mauris sit amet nibh. Donec sodales sagittis magna. Sed consequat, leo eget bibendum sodales, augue velit cursus nunc, quis gravida magna mi a libero. Fusce vulputate eleifend sapien. Vestibulum purus quam, scelerisque ut, mollis sed, nonummy id, metus. Nullam accumsan lorem in dui. Cras ultricies mi eu turpis hendrerit fringilla. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; In ac dui quis mi consectetuer lacinia. Nam pretium turpis et arcu. Duis arcu tortor, suscipit eget, imperdiet nec, imperdiet iaculis, ipsum. Sed aliquam ultrices mauris. Integer ante arcu, accumsan a, consectetuer eget, posuere ut, mauris. Praesent adipiscing. Phasellus ullamcorper ipsum rutrum nunc. Nunc nonummy metus. Vestibulum volutpat pretium libero. Cras id dui. Aenean ut	2020-2021



Republic of the Philippines
POLYTECHNIC UNIVERSTY OF THE PHILIPPINES
TAGUIG CITY BRANCH

List of Researches

Bachelor of Science in Accountancy | 2016 - 2021

#	Title	Abstract	School Year
1	Bingsulit: A Feasibility Study on Establishing a Food Stall Business	This study intends to determine the feasibility of establishing a Korean-inspired dessert shop using Filipino delicacies. BingSulit aims to serve the youth of Upper Bicutan and to offer a cool and refreshing treat in a chill and relaxing store. Each cup of Bingsu is delectable treat that can satisfy one's sweet tooth. This study aims to create a new fusion of Korean and Filipino desserts.	2018-2019
2	CUP D' UP: A Feasibility Study On Establishing A Food Stall	This study intends to determine the feasibility of establishing a food stall business Cup D' Up that will be serving inside Polytechnic University of the Philippines-Taguig, giving students a better reach to convenient stacks. Cup D' Up is a heaping stack of snacks that offers small bite- sized food that lets you choose from fruits to finger food to gummy candies to biscuits and gives you a bonus drink at the bottom. This research is made to offer on-the-go snacks for consumers living in today's fast-paced lifestyle. It makes sure to give a reasonable price out of the cost of the ingredients and the quality of its services.	2018-2019
3	DIC & DIP: A Feasibility Study On Doughnut Ice Cream And Dip	DIC & Dip - soft-served ice cream with doughnut on top aims to provide a unique way of enjoying snacks by combining ice cream and doughnut, thus doubling the fun. This research is made so as to provide another variety of snacks that the customers may enjoy here in Sintang Paaralan. The researchers made sure that the prices were strategically set to consider the customers without affecting the desired revenue. Thus, letting the customers enjoy a snack that surely fits their budget. Also, there is no need to choose between a doughnut and an ice cream because DIC & Dip offers both as one.	2018-2019
4	Eat Chao Time	The feasibility study "Eat Chao Time" intends to serve PUP-Taguig community a quality fried rice. The customers are free to choose from a variety of menu, from specific toppings of chao fried rice to ingredients incorporated in the fried rice	2018-2019

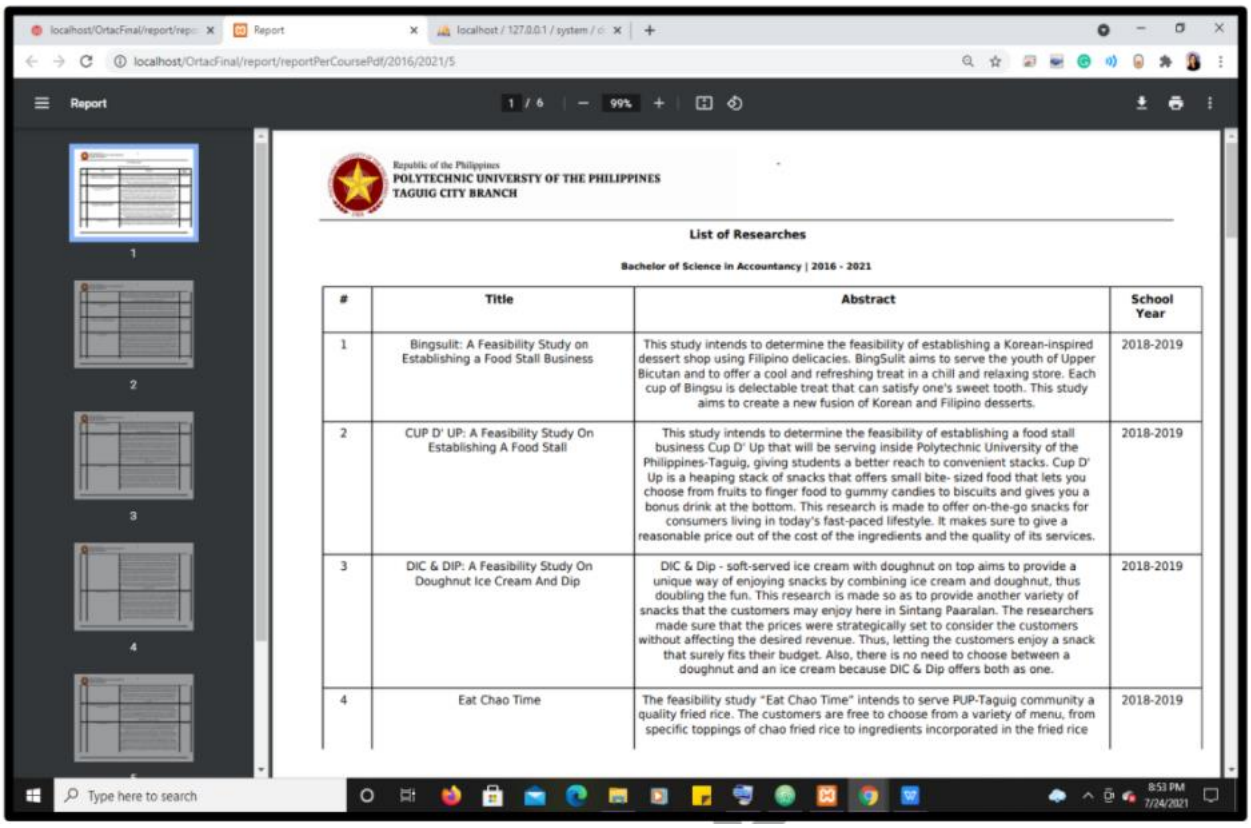


Figure 13: Downloading PDF

3.7 Logical Data Structure

Entity-Relationship Diagram (ERD)

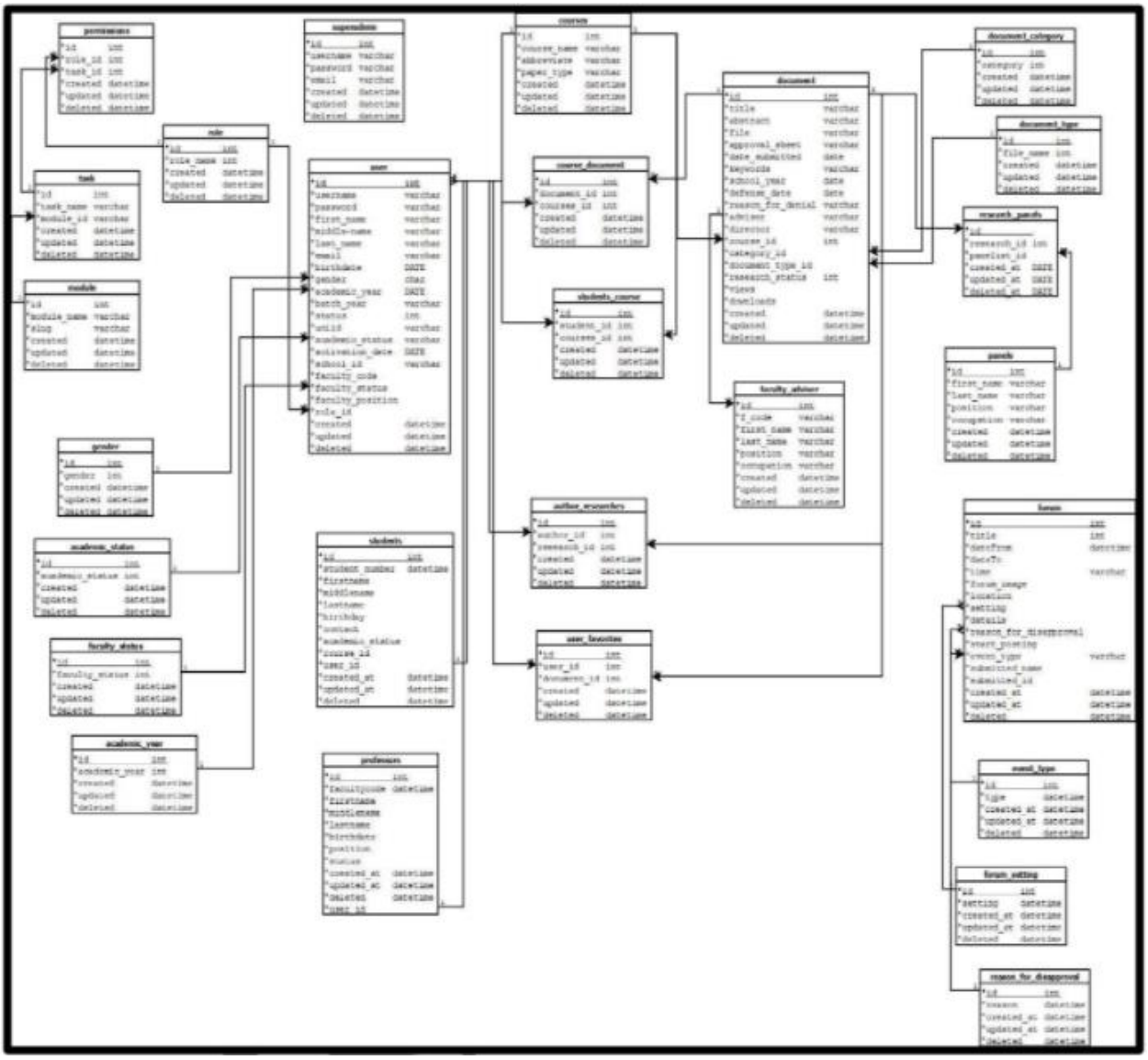


Figure Entity-Relationship Diagram

3.8 Policies and Procedures

3.8.1 Policies

Data Privacy Policy

- Definitions of website “content” and what is protected
- A copyright statement
- A public domain statement
- Ownership of text and data content
- Ownership of metadata
- Permissions (or not) for reuse, including for commercial or non-commercial purposes
- Conditions for permitted reuse
- Contact information for licensing of website content
- Disclaimers, waivers and indemnification procedures
- Enforcement policies in the case of infringement
- Privacy and cookies policies

COPYRIGHT STATEMENTS

The author of a work is defined under copyright law as the person who created the work's original expression. Unless there is a formal agreement by which the author assigns the copyright to another person or entity, such as a publisher, the author is also the owner of copyright. In the case of works created for hire, the author is the employer or commissioning party:

- to be acknowledged as the work's creator when copies are made accessible to the public;
- to object to the work being changed in a way that harms their reputation; and
- to avoid having someone else's work mistakenly ascribed to them.

IP infringement occurs when you use someone else's trade mark, patent, copyright, or design without their permission. It can result in a fine, a prison sentence, or both. You can't copy or use copyright material without permission.

3.9 Procedures

3.9.1 Context Diagram

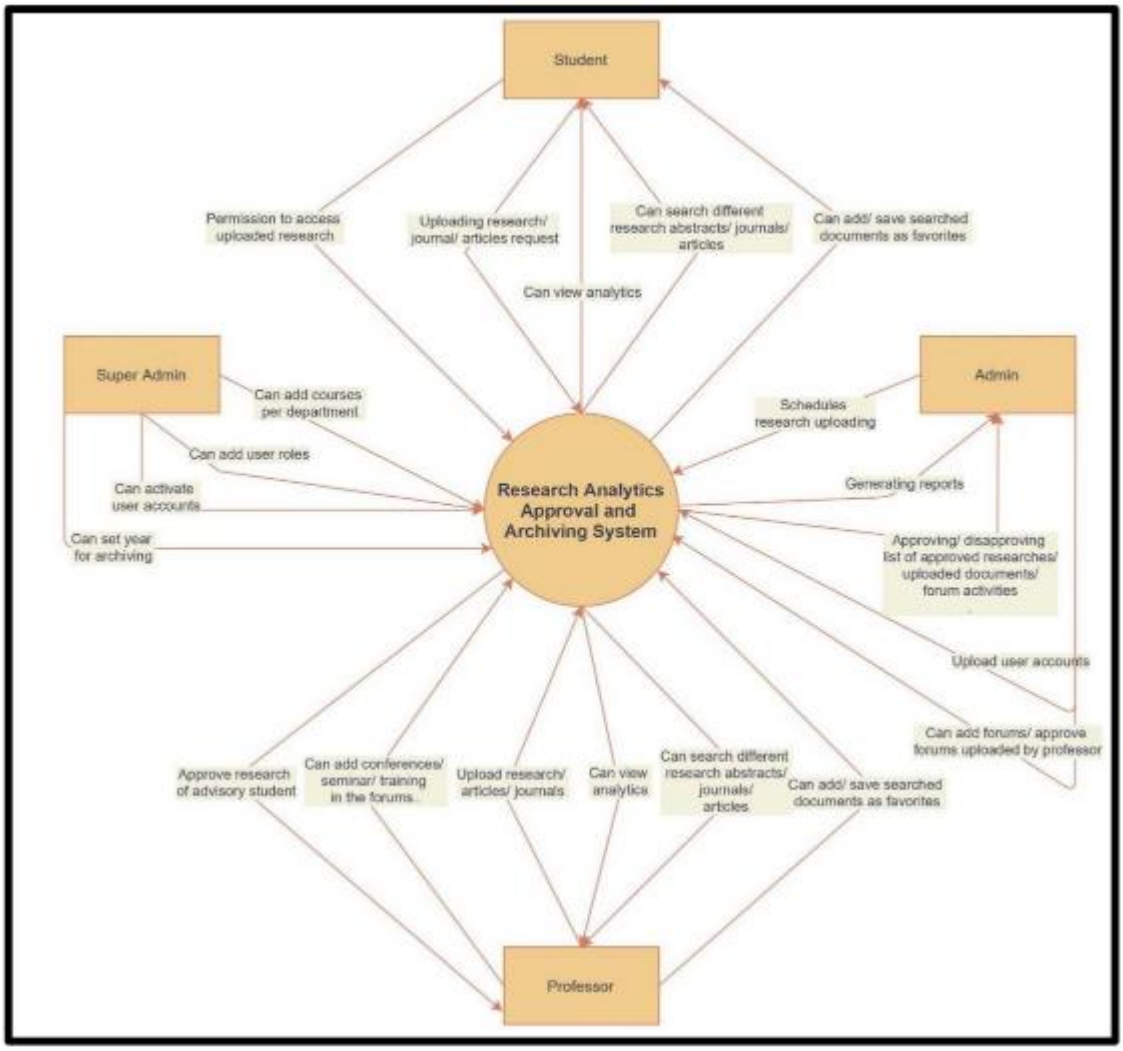


Figure 14: Context Diagram

3.9.2 Data Flow Diagram

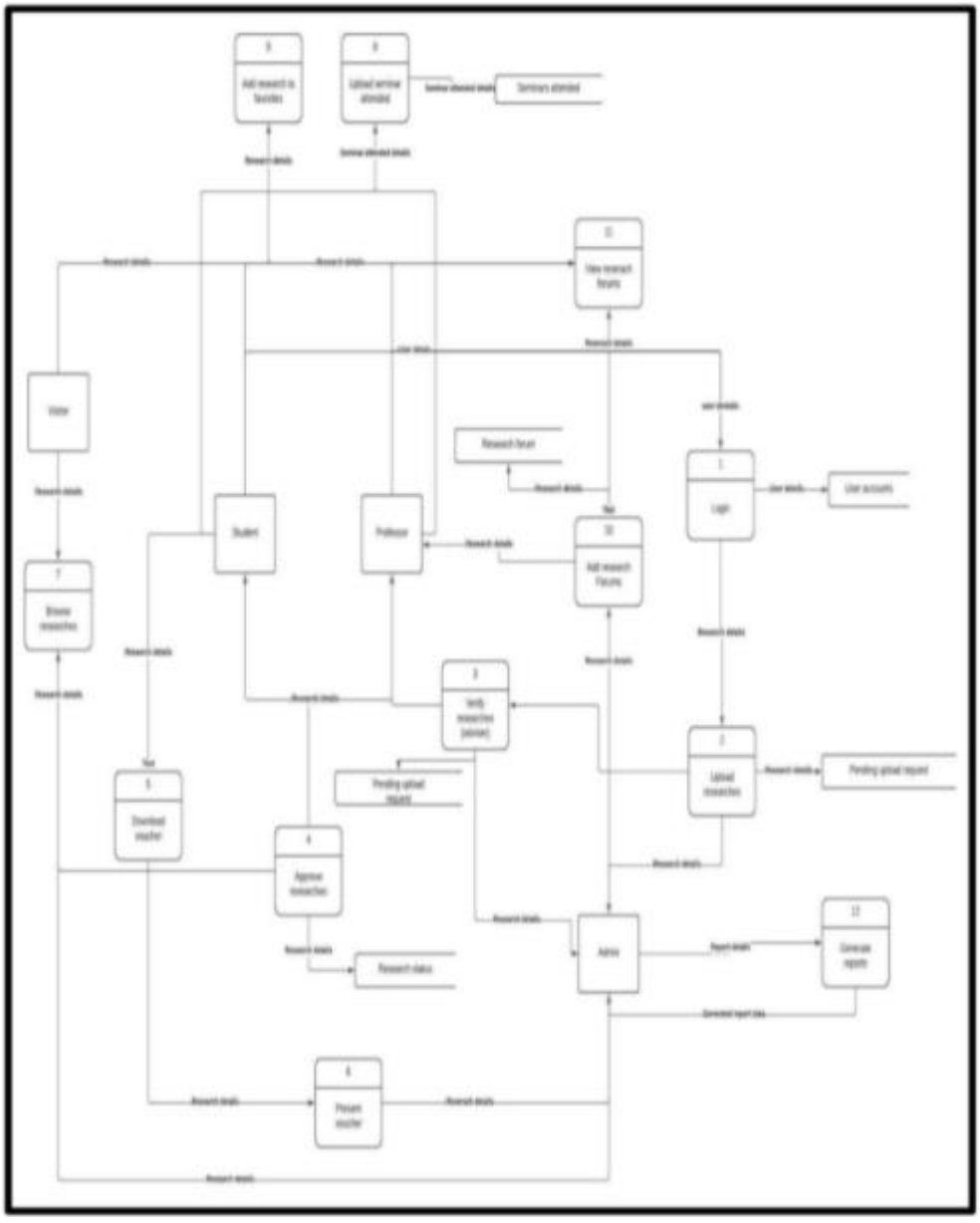


Figure 15 Data Flow Diagram

3.9.3 Process Flow Diagram

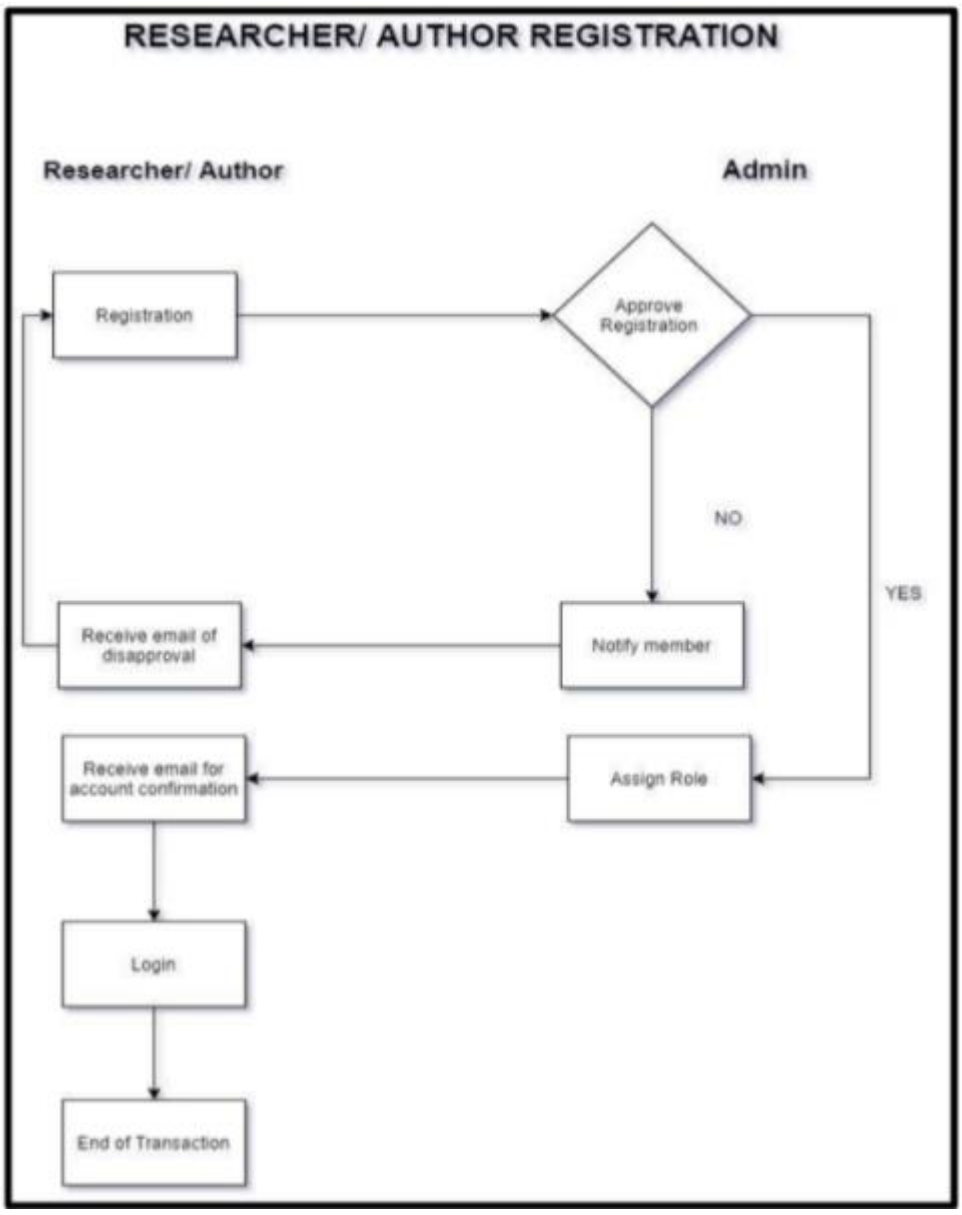


Figure 16: Researcher/Author Registration

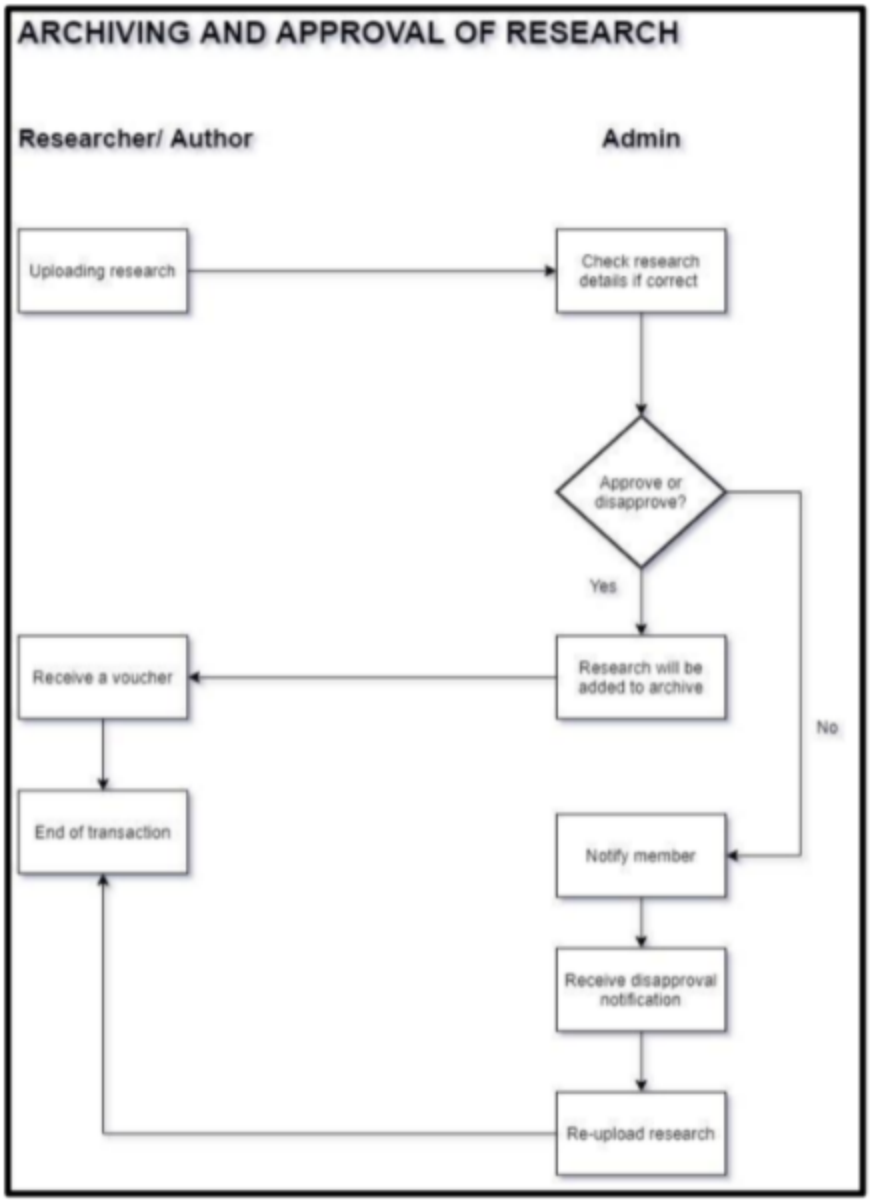


Figure 17: Archiving and Approval of Research

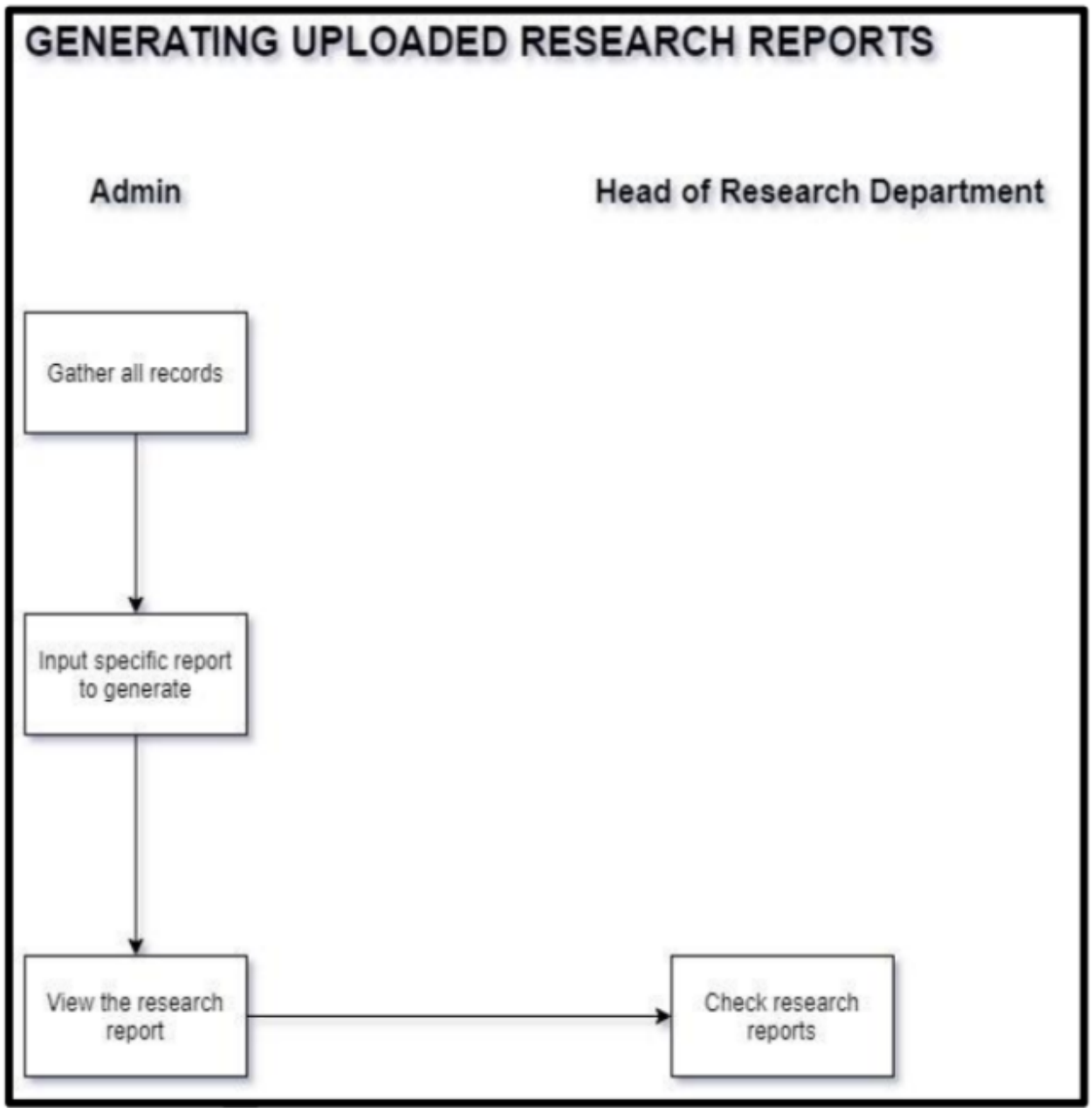


Figure 18: Generating Uploaded Research Reports

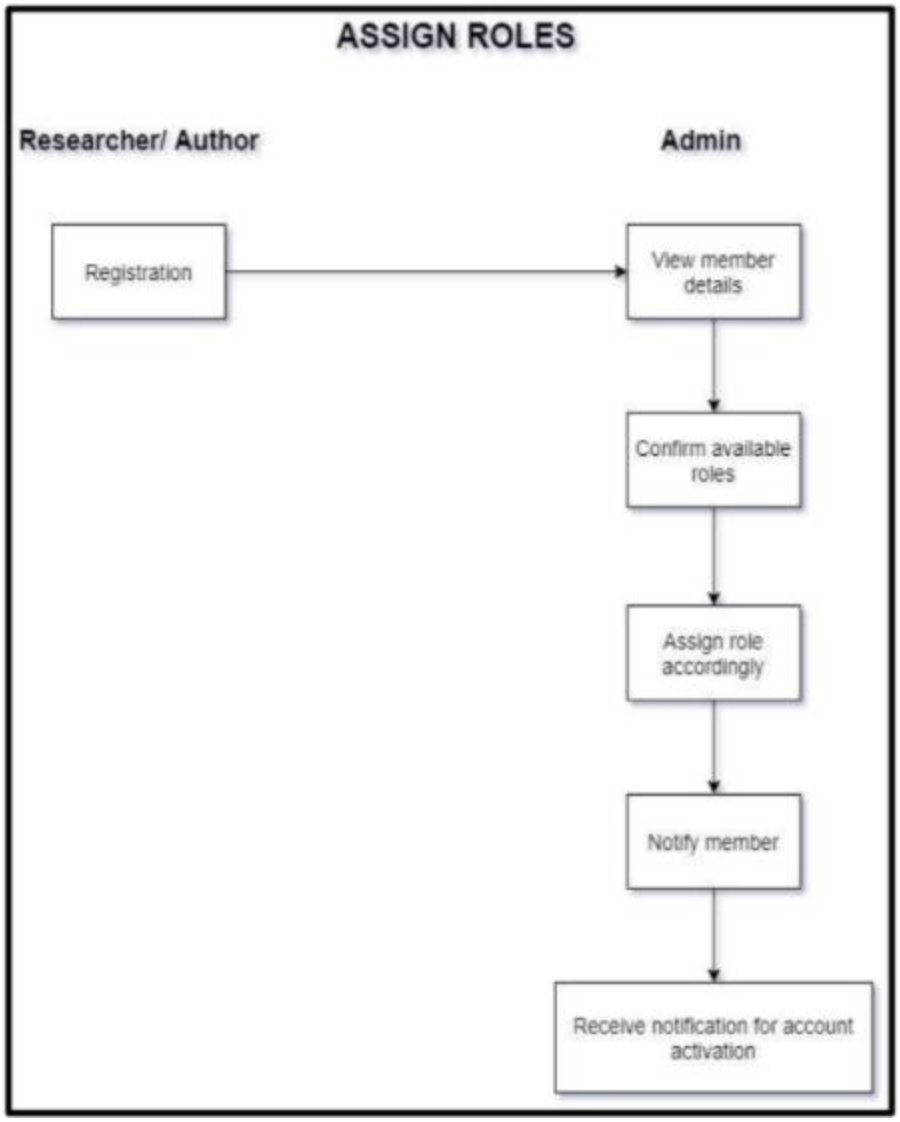


Figure 19: Assign Roles

Figure 19: Maintenance

3.10 Problem Analysis

This analysis identifies the problems that occur in this project. This also identifies the causes and the main problem of the project. This section was divided in to four (4) parts which includes the Fishbone Diagram, Problem Requirements, and Requirements-Feature Matrix.

3.10.1 Fishbone Diagram

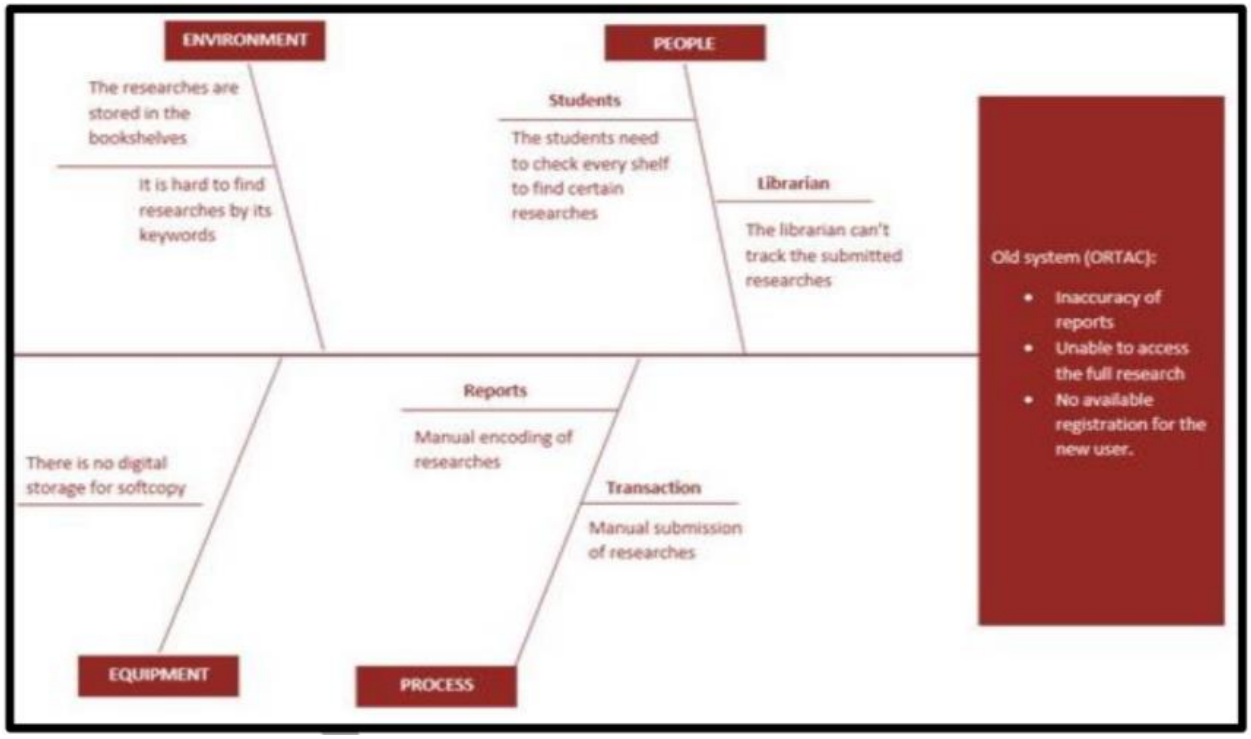


Figure 21: Fishbone Diagram

3.10.3 Problem Requirements

PROBLEMS	REQUIREMENT
Lost of records	There are research documents and other details that have been destroyed.
Research approval	There are instances that the research upload request may not be follow or misinformation.
Unverified account of users	There are users whom are not yet verified.

3.10.4 Requirements-Feature Matrix

REQUIREMENTS/ FEATURES	THE SYSTEM MUST BE ABLE TO RECORD ALL TRANSACTIONS	THE SYSTEM MUST BE ABLE TO ORGANIZE MEMBER'S RECORDS	THE SYSTEM MUST BE ABLE TO MANAGE RESEARCHERS	THE SYSTEM MUST BE ABLE TO MONITOR RESEARCHES	THE SYSTEM MUST GENERATE ACCURATE RESEARCHES REPORT
Check user's information				✓	✓
Add new researches			✓		
Approve researches		✓			
Approve new user		✓			
Generate daily, reports		✓			✓
Generate weekly reports	✓				✓
Generate monthly reports	✓				✓
Generate yearly reports	✓				✓

Figure 22: Requirements - Feature Matrix