AdNU Employee Research System: An Online Research Showcase for AdNU Employees

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AdNU Employee Research System: An Online Research Showcase for AdNU Employees

by

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EXECUTIVE SUMMARY

The System is a web based online repository of research paper for the employees of Ateneo de Naga University (AdNU). The web application is for employees of AdNU to showcase their research papers. Using the languages PHP and Bootstrap the system features a search and sorting function that lets users find various research with ease. For users to upload their own research they would be an employee of AdNU and login with their gbox account. The uploaded content would be saved in MySQL database.

Chapter 1

Introduction

1.1. Project Context

The Ateneo de Naga University has employees that are partaking in research but without an online repository website to store and showcase their research.The rise in digital services where the information can be stored through digital devices with the use of internet is efficient.The the traditional way of searching information is time consuming.The need of digital libraries are needed so that there is an easy access to research.[1]

1.2. Purpose and Description

The purpose of the proposed project is to create a web application that showcases the research paper made by the researchers of all the different departments and colleges of Ateneo de Naga University. The employees of Adnu will be able to upload their research papers through the system to make a digital copy of their work for other users to see.

The AdNU Employee Research Archive will collect and store research paper of employees of the Ateneo de Naga University.The search function is not only limited to the title of projects but can also be used to search other projects by an author.

1.3.   Objectives

1.3.1 General Objectives The goal of the project is to develop a web-based repository of research papers for the employees of all department and colleges of the Ateneo de Naga University and will be managed by the URC as the admin.

1.4.   Specific Objectives

1.4.1 Specific Objectives

- Profile accounts for verified employees of AdNU and login using their gbox account

- Employees of Ateneo de Naga University to be able to upload their reseach paper using the system

- All users to be able to view a dashboard that contains all research paper made by the employees of AdNU

- Create database to store the data

- To conduct a user testing and provide an evaluation

- To fully develop the proposed system and deploy to URC

1.5.   Scope and Limitations

The System will be develop as a web-based online repository of research papers of the employees of all departments and colleges in Ateneo de Naga University.

- Guest users to be restricted to viewing only abstract paper

- Faculty can input details regarding their completed research, presented research and published research.

- The inputted details can be summarized into citations(based on APA 6th edition format)

- The URC can sort the inputted information based on:

  1. year of completion, year of presentation, year of publication

  2. type of publication (e.g. book, journal, etc.)

  3. faculty name

  4. type of research work (e.g. completed, presented, published)

  5. academic rank

  6. department / unit

- Employees and Admin to manage their research papers (edit,delete)

- The URC can unsubmit and email faculty if details provided are not appropriate

- View statistics of the research paper (number of views, number of downloads)

This System is limited that only employees of Ateneo de Naga University can upload research projects and users that are not employees can only view the projects. The research projects will be following the APA format as the standard and PDF as the file standard.

Chapter 2

Review of Related Systems and Related Literature

This chapter consists of studies and systems that are related and will be helpful to how the project will be developed. The related systems and studies would help the users get a grasp on the perspective of the authors on how these studies and systems were developed and an opportunity for the reader to appreciate the related readings and systems that were gathered.

2.1. Institutional Repositories for Colleges and University

In the paper, its been discussed by the Crow, R about the importance of having a repositories to preserve an intellectual output made by the Colleges and Universities communities and how it will impact the communication process of the Institute. The Institutional Repositories displays as an academic quality of the institution hence, its provides in increase of quality of work, visibility and public value. It will improve the interest of the College and University communities as availability of digital networking while keeping the existing traditional journal publishing system. /

2.2.   Digitization of Library Resources: Challenges and Implications

The manual way of searching for information and materials inside the library is difficult since it is time consuming and there are instances that the sources gathered are identical. [2] has mentioned that the traditional way of gathering articles and research would be inefficient and time consuming. Though the use of digital library is widely used nowadays, it will be very helpful to solving such as issues.Then again digitization of library resources is easier said than done. However there are a lot of challenges. Creating a digital library is a very expensive venture which requires adequate planning and monitoring. The major problem is lack of technical-know-how; hence most digitization projects often run into problems.In addition, the interface should be user friendly, so that users can search for information with ease[2].

Chapter 3

Technical Background

These are the preferred technologies, languages and tools to be used in developing the application

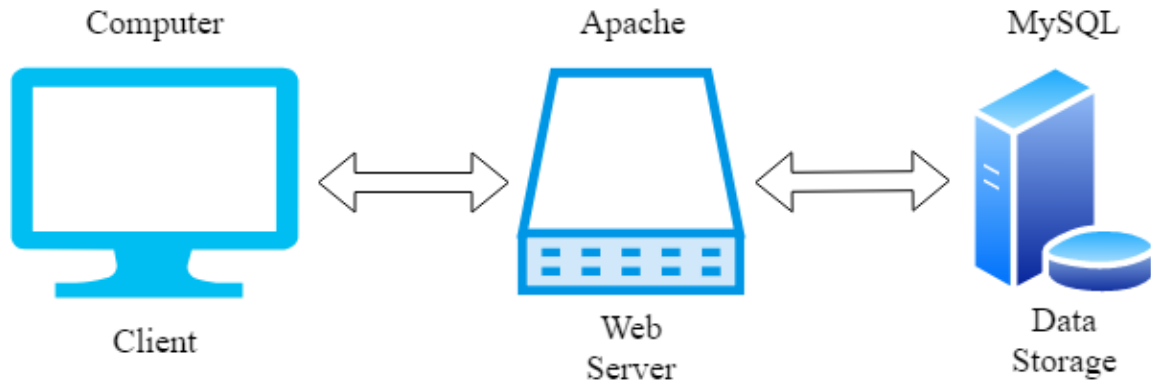## 3.1. Architectural Framework

Figure 3.1: Three Tier System Architecture

The system will be using the three-tier that contains the presentation layer that will be handling the client side for the users through a web browser. The application logic that handles the web server which will be using the Apache from XAMPP. The Data tier that handles the database using MySQL which where the data will be stored.

3.2. Development Tools

PHP: Hypertext Preprocessor

PHP is programming language that is used to develop dynamic web pages or applications. It is a powerful language that is easy to understand.

HTML5

HTML5 or the HyperText Markup Language is a code language that describes web pages. HTML5 does not require payment to be used nor plugins for it to work and is a cross-platform which makes it compatible not only to personal computers but also to mobile phones.

JavaScript

JavaScript is a programming language that manipulates data in web languages. JavaScript is used to perform functions such as updating web pages, add dynamic variables, and calculate. This makes it a necessary component for making a user friendly experience.

Cascading Style Sheet

Cascading Style Sheet is a style sheet language that adjust the web page described by HTML. The CSS is used to change the setting or the appearance of the web such as color and text also it is most compatible with html for designing web pages.

MySQL

MySQL is a database management system that allows users to create and manage databases. It is used to organize and store data of user inputs. MySQL is easy to setup and in not difficult to master compared to other databases. It is also free and compatible with different operating system platforms.

CodeIgniter

CodeIgniter is a PHP framework for developing applications. This framework has built-in features that act independently and is well documented for learning.

Bootstrap

Bootstrap is a HTML,CSS, and JavaScript framework for developing web pages. Bootstrap is the

most popular front-end framework and is supported by other web languages such as HTML. It is used to build user interface components and is most suited at creating web pages on mobile phones.

3.3. Software Engineering Tools

Overleaf

An online, LaTeX based plain text and rich text writing system.The purpose of this online writing environment is to help the document to be well formatted.

Visual Studio Code

Visual Studio Code is a cross platform code editor. It is used to debug and edit codes of different languages. This code editor is used to edit and organize the user's files which makes it one of the best code editor as it supports various code languages with a feature that organizes files with ease.

XAMPP

XAMPP is a free cross-platform package. It is easily installed and is used for ease of access to web-server applications such as Apache.

Draw.io

A free online diagram editor,that will help on creating models and application designs for our application.Making diagrams such as ERD and use-case so that modelling the application will be efficient.

3.4. Hardware Development Tools

These are the proponents specifications of the hardware used in the development of the project.

- LENOVO ideapad 330

Chapter 4

Methodology

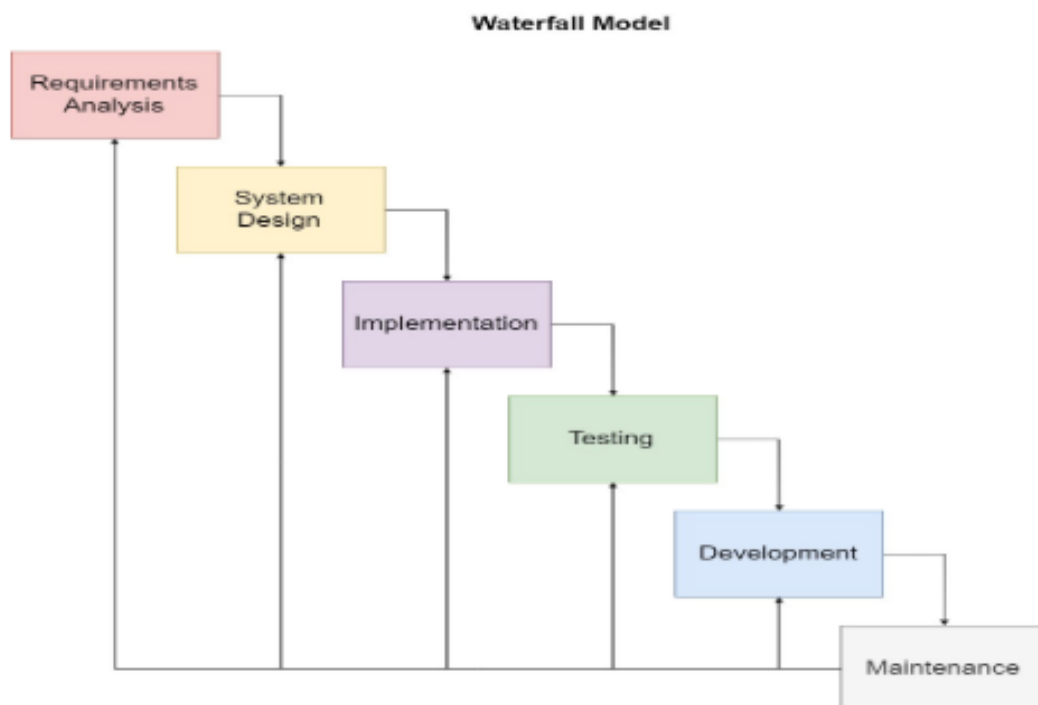## 4.1. Software Development Model

Figure 4.1: Waterfall Model for AERA

The waterfall process model will be used as a development life cycle of the project.

In the first phase, Requirement Analysis, The requirements of the project were gathered and analyzed as the foundation of the proposal. An interview will be conducted to the URC and All Departments of the Ateneo de Naga University in order to gain information about the current existing processes of the Information System of the Reseach Papers and anaylze the scope of the project that are going to be developed.

In the Second phase, Design, The initial start of the software architecture in which to create the essential diagrams and models that will be used in the project. The design functions and features are described with the inital user interface.

In the Third phase, Development. In the Chapter 3 in which the technical background listed are going to be used in this phase. The coding for each module that are described in the objectives will begin.

In the Fourth phase, Testing. After the development of the System, A testing will be conducted to the users to be able to test the application to look for faults and receive feedback. The debugging will commence based on the results from testing.

Lastly, Deployment. The system are expected to be fully functional and met the requirements of the project then it will be deployed to the URC.

4.1.1.   Use Case Diagram

4.1.2.   Use Case Diagram
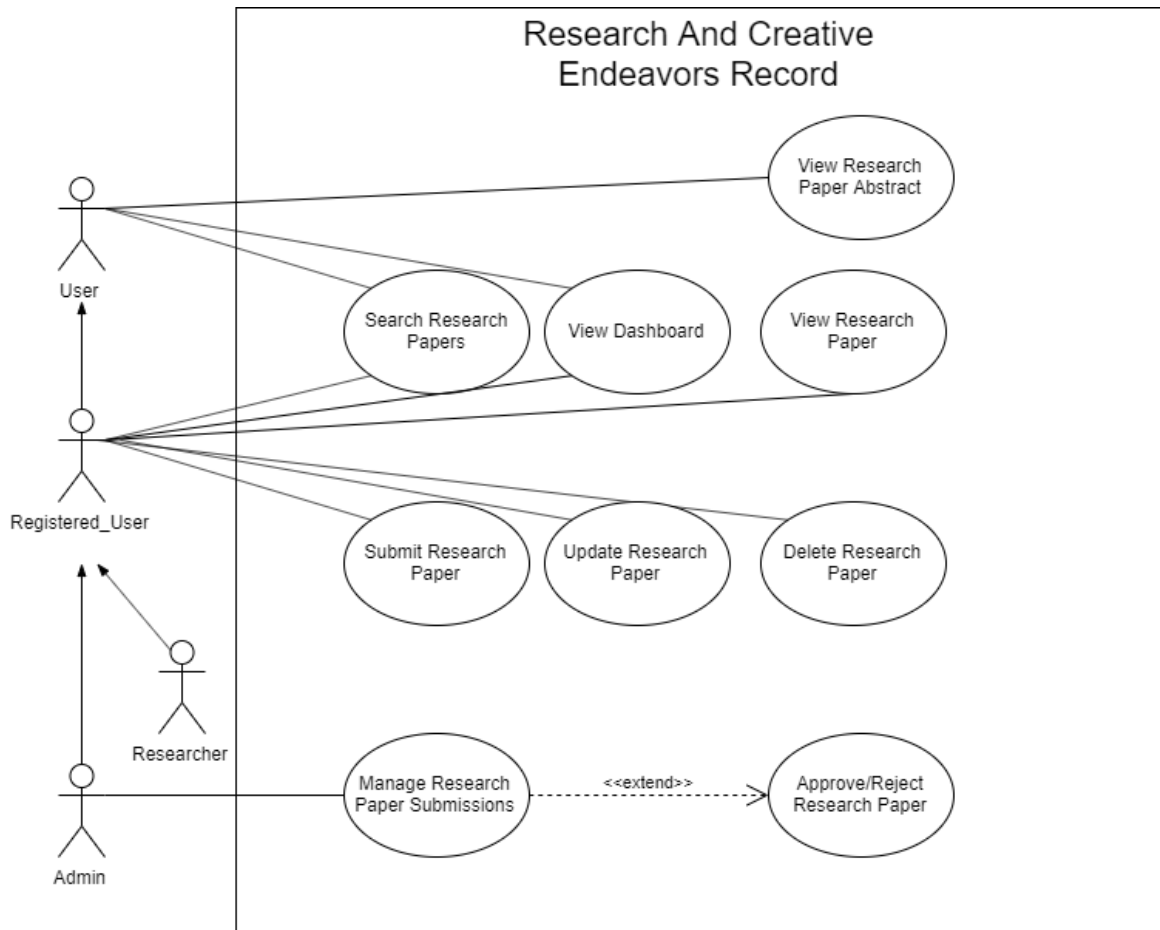
4.1.3.   Relational Diagram Model
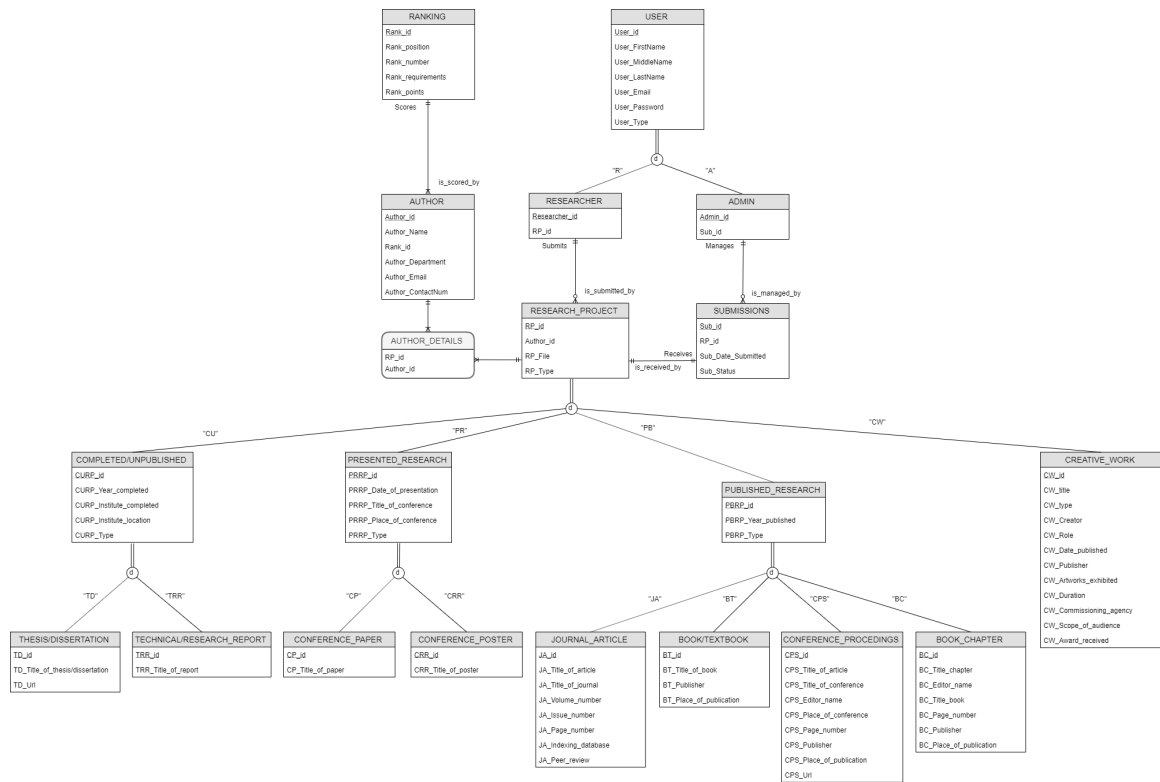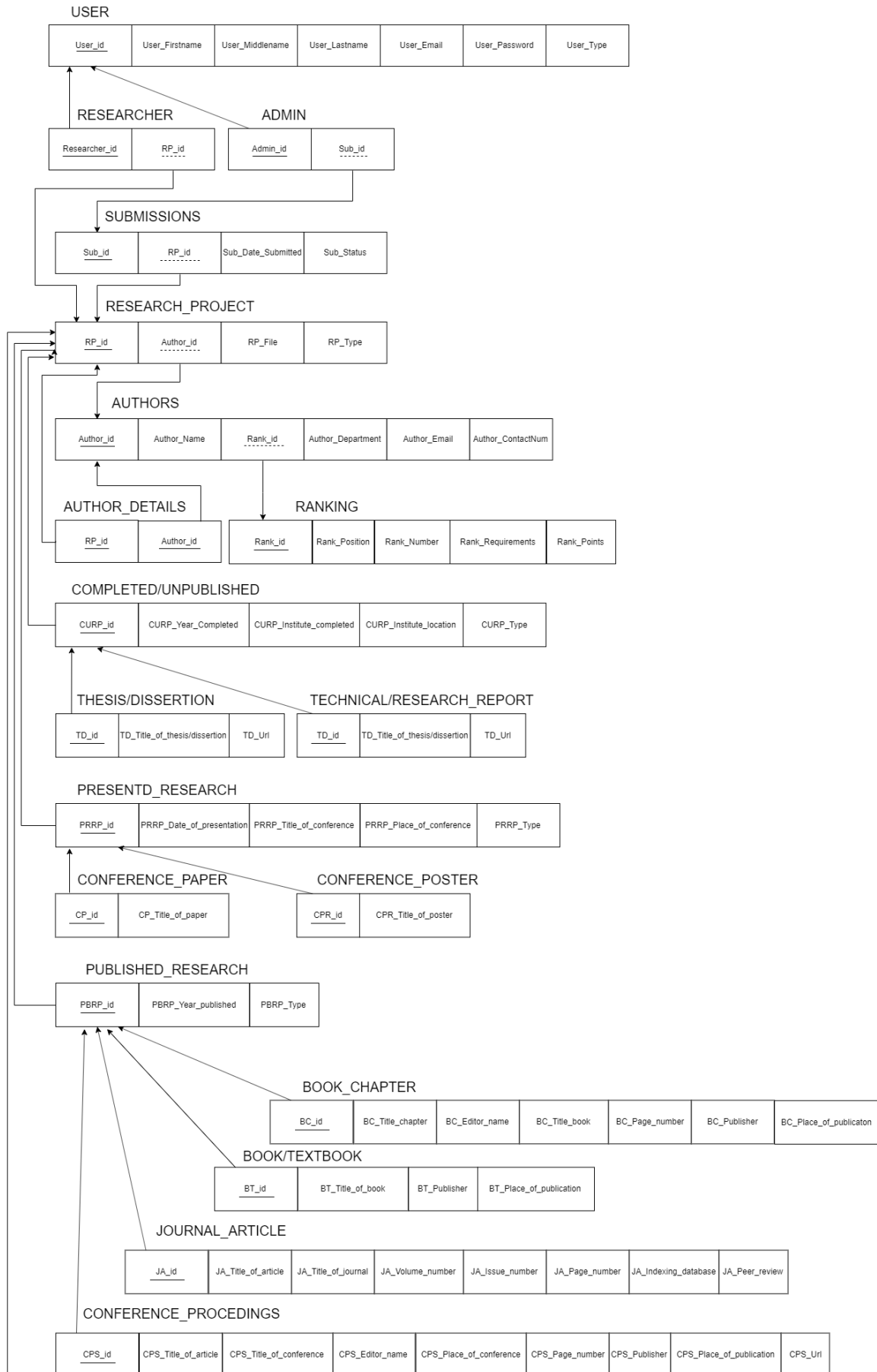
4.1.4.   Mock up Design

Figure 4.2: Use Case Diagram

Figure 4.3: Use Case Diagram

USER

User_id	User_Firstname	User_Middlename	User_Lastname	User_Email	User_Password	User_Type

RESEARCHER

Researcher_id	RP_id

ADMIN

Admin_id	Sub_id

SUBMISSIONS

Sub_id	RP_id	Sub_Date_Submitted	Sub_Status

RESEARCH_PROJECT

RP_id	Author_id	RP_File	RP_Type

AUTHORS

Author_id	Author_Name	Rank_id	Author_Department	Author_Email	Author_ContactNum

AUTHOR_DETAILS

RP_id	Author_id

RANKING

Rank_id	Rank_Position	Rank_Number	Rank_Requirements	Rank_Points

COMPLETED/UNPUBLISHED

CURP_id	CURP_Year_Completed	CURP_Institute_completed	CURP_Institute_location	CURP_Type

THESIS/DISSERTION

TD_id	TD_Title_of_thesis/dissertion	TD_Url

TECHNICAL/RESEARCH_REPORT

TD_id	TD_Title_of_thesis/dissertion	TD_Url

PRESENTD_RESEARCH

PRRP_id	PRRP_Date_of_presentation	PRRP_Title_of_conference	PRRP_Place_of_conference	PRRP_Type

CONFERENCE_PAPER

CP_id	CP_Title_of_paper

CONFERENCE_POSTER

CPR_id	CPR_Title_of_poster

PUBLISHED_RESEARCH

PBRP_id	PBRP_Year_published	PBRP_Type

BOOK_CHAPTER

BC_id	BC_Title_chapter	BC_Editor_name	BC_Title_book	BC_Page_number	BC_Publisher	BC_Place_of_publicaton

BOOK/TEXTBOOK

BT_id	BT_Title_of_book	BT_Publisher	BT_Place_of_publication

JOURNAL_ARTICLE

JA_id	JA_Title_of_article	JA_Title_of_journal	JA_Volume_number	JA_Issue_number	JA_Page_number	JA_Indexing_database	JA_Peer_review

CONFERENCE_PROCEDINGS

CPS_id	CPS_Title_of_article	CPS_Title_of_conference	CPS_Editor_name	CPS_Place_of_conference	CPS_Page_number	CPS_Publisher	CPS_Place_of_publication	CPS_Url

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[2] R. CROW, in The case for institutional repositories: a SPARC position paper, 2002.