# Research and Development Center, Army Support Command, Philippine Army (RDC, ASCOM, PA) Library System

Project Documentation Submitted

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Systems Analysis and Design

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# Executive Summary

Each member of the team has knowledge on HTML, CSS, and PHP which is essential in creating and modifying the web app with Yii2 framework.

The Research and Development Center, Army Support Command, Philippine Army (RDC, ASCOM, PA) process papers manually. The current way of processing their papers is slow and results to storage problems because they use drawers to archive the documents. If RDC tries to access files, they refer to logbooks to locate where the document is stored. The problem being solved is within the office only.

The proposed system would automate the document processing of the RDC, ASCOM, PA. Employees can upload/download the files to/from the system which can be viewed by other employees for faster access of documents. Furthermore, only the administrator or employees with high positions can create new accounts with limited privileges for the new employees. All accounts created have encrypted passwords. The objective on creating the system, is to improve the business process of the office.

The developers would undergo agile development to ensure that the system is on the right track and would meet the needs of the client. Also, the user interface of the system should be as user-friendly as possible since other employees of the system are not used to using computers.

# List of Figures, List of Tables, List of Notations

* Event table
* Use case diagram
* Activity diagram
* Context flow diagram
* Data flow diagram
* UML diagrams
  + Class diagram
  + Communication diagram
  + Object diagram
  + Timing diagram
  + State-machine diagram
  + Sequence diagram
  + Component diagram
  + Composite structure diagram
  + Deployment diagram
  + Package diagram
  + Interaction overview diagram

# Introduction

## Project Context

The advancement of technology today has immersed itself towards business transactions. The pace of technology’s development is getting faster as the years pass. The Research Development Center process documents manually, resulting to slow processing of papers and long hours of finding them. Furthermore, they also encounter storage problems.

AFP-RDC needs a system that manages files with a computer. The developers proposed a system that will improve their business process. This system will lessen the use of papers and at the same time make document processing faster, since it is automated.

## 1.2 Purpose and Description

The proposed system aims to help the Research Development Center of the Philippine Army by creating a document management system for faster processing of papers throughout their office. Developing a database would help the office archive their documents in a more organized manner and would give them faster access to these documents.

## Objectives

* General Objectives
  + To automate the system of RDC
  + To develop a document management system
* Specific Objectives
  + To automate processing of papers for the employees of RDC
  + To develop a database where access and archiving of files can be faster

## Scope and Limitations

* The system will only cover the office of RDC and the processes within it
* A database for archiving and easy access of finished documents
* It will not computerize interactions outside RDC
* Prototype
  + The prototype can only upload files to the system
  + Uploaded files are stored in the database
  + Has capabilities of creating an account with encrypted passwords
  + Frontend and backend are still not yet separated

# Review of Related Literature/Systems

* Alfresco

Alfresco is an enterprise content management system for Microsoft Windows and Unix-like operating systems. It also includes content repository, a web-based user interface for managing and using standard portal content. A CIFS interface that provides file system compatibility on different operating systems.

Retrieved on: 08/08/16/ [https://en.wikipedia.org/wiki/Alfresco\_(software)](https://en.wikipedia.org/wiki/Alfresco_(software)%20)

# Technical Background

The system prototype will be developed with Yii2 framework; it is a framework that uses HTML, CSS and PHP.

# Methodology, Results and Discussion

## Requirements Analysis

A document management system is a type of system software that manages files with a computer. It can also manage and store documents to reduce papers, it can also create and modify files that was created by different users with different versions.

## Requirements Documentation

This requirements document states the requirements for the library system of the RDC, ASCOM, PA.

The product prototype only provides, upload and download of documents. It connects the main test documents to its corresponding documents. It can also create accounts that has encrypted passwords. The web app can be accessed by other personal computers inside the same network.

The separation of backend and frontend modules are not yet accomplished but will be accomplished on the next phase or course. Also, there should be limited privilege for each user in the system.

## Design of Software, Systems, Product, and/or Processes

The software is developed with Yii2 framework. Each table in the database are generated with a create, read, update, and delete feature. To achieve the main function of the prototype, the model, view and controller of the framework are modified including the database model.

The design of the application consists of a web, view and controller. Each view of the web application calls the controllers to perform their desired functions. Then the controller of each web view access the models to add data on the database.

## Development and Testing, where applicable

The developers would perform the agile development where the team and client undergo many iterations to improve the system based on the needs of the client.

Features to be tested:

* Creation of accounts
* Upload of files
* Read list of files
* Update file information
* Delete files

## Description of the Prototype, where applicable

The prototype that the developers created can create an account with encrypted passwords for each employee of the RDC. Unfortunately, the backend module is not yet separated from the frontend module. The user can also upload and download files from the system.

## Implementation Plan (Infrastructure/Deployment) where needed

The first phase of the implementation plan is the discovery and analysis of the problem. In this phase, the developers will set initial meetings and consultation with professors and problem to identify the problem and needs of the client.

Second is the design phase, in this stage the user interface of the system is planned to be as user-friendly as possible. The team will be working on the configurations of the new system and documenting procedures.

Third phase is the development phase, in this part of the implementation plan the system will be prepared to be deployed with its main functionality.

Next step is the iteration or testing phase. In this phase, the team will let the client test the system and check if there are revisions needed. This is where the team uses agile iteration to improve the proposed system.

The last phase of the implementation plan is the deployment, this is where the team assess the system if it should be deployed or not.

## Implementation Results, where applicable

## 4.8 Include discussion on conceptual design / system architecture/ block diagrams and algorithms

# Conclusions and Recommendations

After testing the created prototype, the developers have to consider the people who are going to use proposed system. The developers have learned that prototyping is an essential tool to further learn and to improve the system based on the requirements of the client.

The developers must recognize the tools that are available to them to conveniently improve the system.

# Appendices

May include the following:

- Relevant Source Code

- Evaluation Tool or Test Documents

- Sample input/output/Reports

- Users Guide

- Process/Data/Information Flow

- Screen layouts

- Test Results

- Sample Generated Outputs

- Pictures showcasing the data gathering, investigation done (e.g. floor plan, layout, building, etc.)

- One-Page Curriculum Vitae per team member