Child Cloud Management System
Project Proposal

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Document History

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Proposal_0.1	- Add Abstract
	
	- Add Chapter 2
	
	   - Business Review
	
	   - Technology Review
	
	   - Development Tools Review
	
	- Add Chapter 3
	
	   - Quality Standard
	
	- Add Chapter 4
	
	   - Motivation
	
	   - Aims and Objective
	
	   - System Architecture
	
	   - Deliverable and limits
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DO = DOLAWAT WANNAPIRA
SU = SURADIS SUTAMPANG
CC = DR. CHARTCHAI DOUNGSA-ARD

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ABSTRACT

Nowadays, the document in Thailand is hard to manage, because most of the company are still use the papers document. The problems of papers document cannot update information except creating the new one, some parts of papers document losing while the officer is collecting or sending the document.

Foundation for children are use the papers document to handle the children information. And they have a problem about managing the document of children. Because of orphaned carelessness problem cannot solve in our society. That makes the amount of orphan in Foundation for Children are increasing.

At this point, Our team would like to offer Child Cloud Management System that is a web application to help Foundation for children manage the information document. The Child Cloud Management System is using cloud technology to store information on cloud storage that means the Foundation for Children are no longer to use the papers document anymore; they can record the information, manage information and forward information on a web application.

CHAPTER ONE| Introduction & Background

Nowadays, there are many problems in Thai society, and the orphaned carelessness is one of the problems that have to solve as soon as possible, because orphans are lack education, lack of moral training. To the social and economic current conditions makes children lack parental care for or be orphan.

Foundation for children (FFC) was established for helping the childrens that their parents are not ready to taking care, the orphans, and children who have been violated from suffering, such as, being abused, abandoned and illegal labor to have a better life. Encourage the family role and improve the quality of life of the children such as health, EQ, mental, education, and make the children can live with others in society. Foundation for Children has an orphanage that is taking care of children three orphanages which are Baan Tantawan (children newborn to four years old), Moo Baan Dek Saanrak Kindergarten (children four to eight years), and Moo Baan Dek (children eight years or more).

The problems among all of three orphanages are about to send the information document among each of them, paper document losing while they are collecting or sending, and cannot update the document.

Corporate Social Responsibility (CSR) is business practice to benefit society. A Social Responsibility business has various tactics to give away a portion of company's proceeds to charity. There are four broad categories of social responsibility that the companies are practicing including Environmental efforts, Philanthropy, Ethical labor practices, and Volunteering. CRM Cloud company establish CRM-Charity Foundation aim to help the people by using their expertise in cloud computing and IT consulting technology to improving people's education and also helping the non-profit organization in the area of technologies. They undertake to help Foundation for Children by giving ten licenses of Salesforce, which is a cloud-based software and customizing the software to keep the children information on cloud.

With the collaboration of CAMT and CRM Cloud, they decide to develop a web-based application called Child Cloud Management System (CCMS) that help the Foundation for children to manage their child information, prevents the children information losing and to enhance the management of children information. Some part of this project is customized by the previous senior's projects. The CCMS project is still incomplete, so we continue to implement in part of child development information, education information, report development information and forward information.

CHAPTER TWO| Literature Review

## 2.1 Business Review

2.1.1 Foundation for Children Workflow
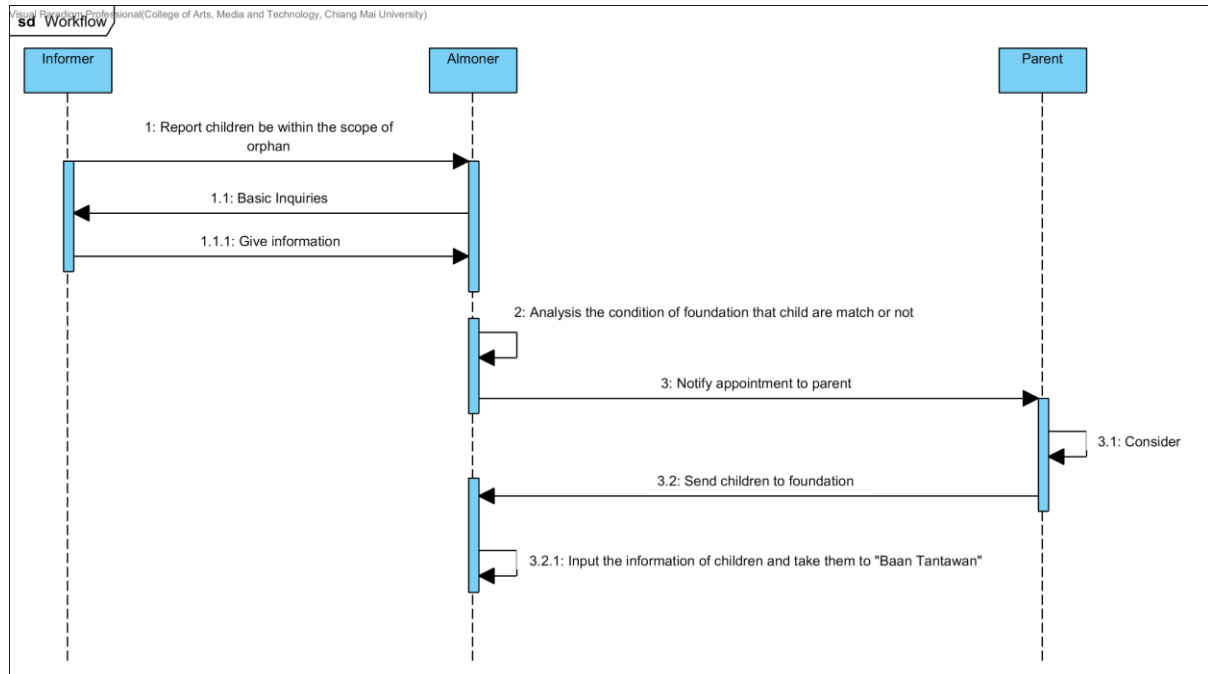
Figure 1: The Sequence Diagram of Foundation for Children Workflow

Figure 1 shows the workflow of the Foundation for Children(FFC) is receiving the report from an informer, then analyze the information that matches with the conditions of orphan or not, if the conditions are matched , the FFC will notify appointment to child-parent. The child-parent must decide to send their child to FFC or not. If the child-parent decide to send their child to the foundation, then the foundation will input the information of child into the document and send the children to the foundation for taking care of children. The foundation separates the orphanages for taking care of children to three orphanages, which is Baan Tantawan (Newborn to four years), Moo Baan Dek Saanrak Kindergarten (four to eight years), and Moo Baan Dek (More than eight years).

2.1.2 Sending Information Workflow
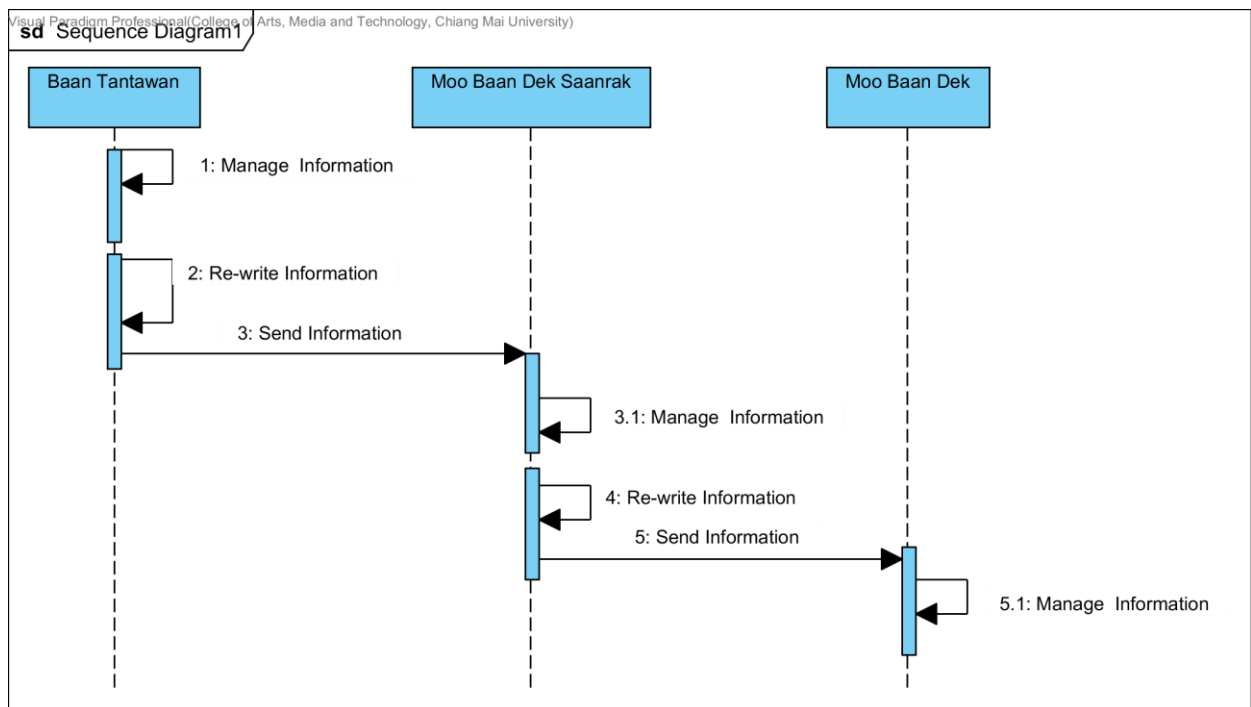
Figure 2: Diagram of Sending Information Workflow

Figure 2 shows the workflow of the orphanage when they are sending the document. The orphanages are used the paper document while sending the information. It is a problem about the data losing because they have to re-write the paper before sending to another orphanage to taking care of children.

2.1.3 Child Cloud Management System
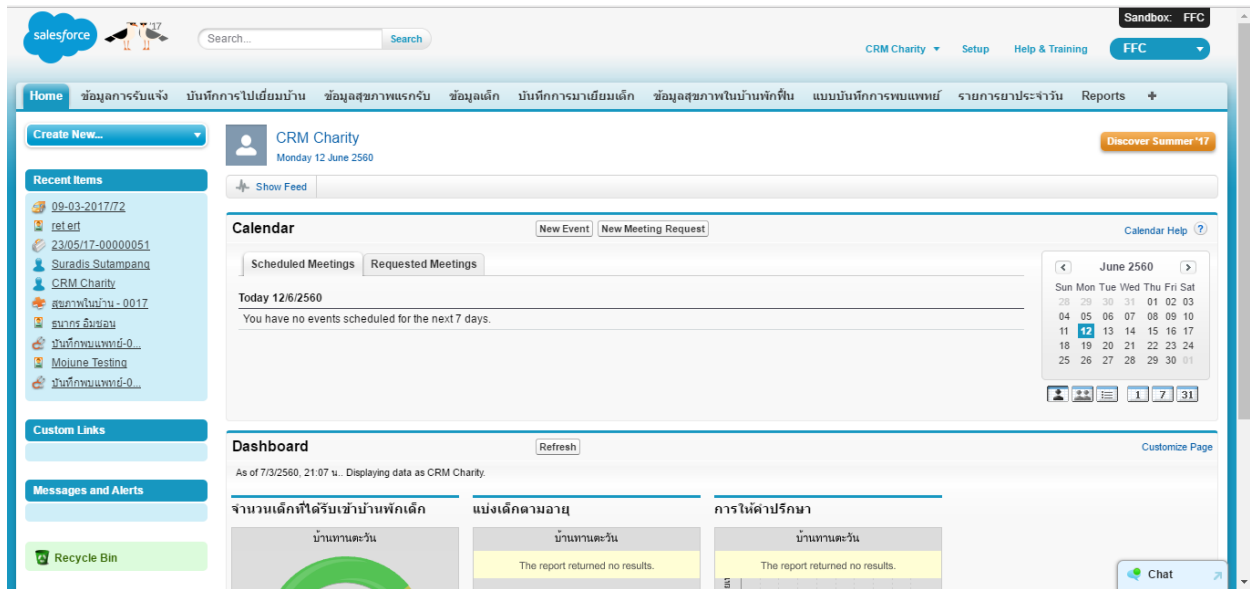
Figure 3: The User interface of "Child Cloud Management System."

Figure 3 shows the user interface of "Child Cloud Management System." The Child Cloud Management System is the web application that senior students created to help to manage the information of orphan in Foundation of Children. This web-application is used Salesforce framework for developing. This web-application classified each information and provided user to recording and updating child information and stored the information on Salesforce cloud storage. Each features is including thirteen-feature followings this list.

- Inform Information
- Children Information
- Children's Family Information
- Visited Home Information
- Health before FCC Information
- Health after FFC Information
- Doctor Visit Record Information
- Children Growth Information
- Medical Management Information
- Legal Information
- Special Record Information
- Child Sponsorship Information
- Reason for Leaving Information

2.1.4 Baby Connect

Figure 4: The User interface of "Baby Connect."

Figure 4 shows the user interface of Baby Connect. The Baby Connect is the most comprehensive baby tracking application, which created by Seacloud Software. It has graphical reports and trending charts, weekly averages, medicine, vaccine and growth tracking, timers, notifications, emails, .csv export, an easy to use interface, unlimited data, and it is the only application that allows user to exchange information in real time with user spouse, babysitter, nanny or daycare.

Pros
1.   The application provides a simple user interface.
2.   The application provides record child information.
3.   The application is designed for maximum security. Everything is password protected.
Cons
1.   This application need to pay before use.

2.2 Technology Review

2.1.1 Salesforce Framework

Figure 5: Salesforce Framework

Tool Description : The Salesforce Framework Builder gives developers easy-to-use tools to modify characteristics the data, as well as specify the scope of applications or the layout of data on a page. The developers can also define workflows based on user interaction with data, or create reports on the data. The developers can use buttons or custom links to extend the default capabilities of their Force.com application. The developers can set up and modify tabs, which can be associated with a Force.com object, Visualforce page, s-control or any web page. The developers can give users access to tabs, and the user can customize the display of their set of tabs within an application.

Reasons to Use:
1. This framework is especially for force.com.
2. This framework has many components to use.
3. This framework can work with others framework.
4. This framework uses Model-View-Controller paradigm.

2.2.2 Apex

Figure 6: Apex

Tool Description : The Apex is a strongly typed, object-oriented programming language that allows developers to execute flow and transaction control statements on the Force.com platform server in conjunction with calls to the Force.com API. Using the syntax that looks like Java and acts like database stored procedures, Apex enables developers to add business logic to most system events, including button clicks, related record updates, and Visualforce pages. Apex code can be initiated by Web service requests and from triggers on objects.

Reasons to Use:

1.   This language support for common Force.com platform

2.   This language provides built-in support for unit test creation and execution

3.   This language is automatically updated when Force.com platform is upgraded

2.2.3 SOQL

Figure 7: SOQL

Tool Description : Dynamic SOQL refers to the creation of an SOQL string at runtime with Apex code. Dynamic SOQL enables the developers to create more flexible applications. For example, the developers can create a search based on input from an end user, or update records with different field names.

Reasons to Use:

1. This database is a Salesforce build-in.

2. This database could retrieve data from a single object or from multiple objects that are related to one another.

3. This database could count the number of records that meet specified criteria.

4. This database could sort results as part of the query.

5. This database could retrieve data from number, date, or checkbox fields.

2.3 Development Tools Review

2.3.1 Force.com

Figure 8: Force.com

Tool Description : Force.com is a platform as a service (PaaS) product designed to simplify the development and deployment of cloud-based applications and websites. Developers can create apps and websites through the cloud IDE (Integrated Development Environment) and deploy them quickly to Force.com's multi-tenant servers.

Reasons to Use:

1. This platform is especially for Salesforce.
2. This platform builds apps lightning fast with drag and drop tools.
3. This platform customizes data model with clicks.
4. This platform customizes UI with clicks or go further with HTML

CHAPTER THREE| Quality Standard

3.1 ISO 29110 for Very Small Entity (VSE)

ISO/IEC 29110-4-1:2011 applies to Very Small Entities (VSEs). A Very Small Entity (VSE) is defined as an enterprise, organization, department or project having up to 25 people. A set of standards and guides have been developed according to a set of VSEs' characteristics and needs. The guides are based on subsets of appropriate standards elements, referred to as VSE profiles. The purpose of a VSE profile is to define a subset of International Standards relevant to the VSE context.

3.1.1 Project Management Process

The purpose of the Project Management process is to establish and carry out the tasks of the software implementation project in a systematic way, which allows compliance with the project's objectives in terms of expected quality, time, and costs. Project Manager contains four main activities.

Selected processes

3.1.1.1 Project planning process
3.1.1.2 Project plan execution process
3.1.1.3 Project assessment and control process
3.1.1.4 Project closure process

3.1.2 Software Implementation Process

The purpose of the Software Implementation process is to achieve the systematic performance of the analysis, design, construction, integration, and test activities for new or modified software products according to the specified requirements.

Selected processes

3.1.2.1 Software implementation initiation process
3.1.2.2 Software requirement analysis process.
3.1.2.3 Software architectural and detailed design process
3.1.2.4 Software construction process.
3.1.2.5 Software integration and test process.
3.1.2.6 Software delivery process.

3.1.3 Software Process
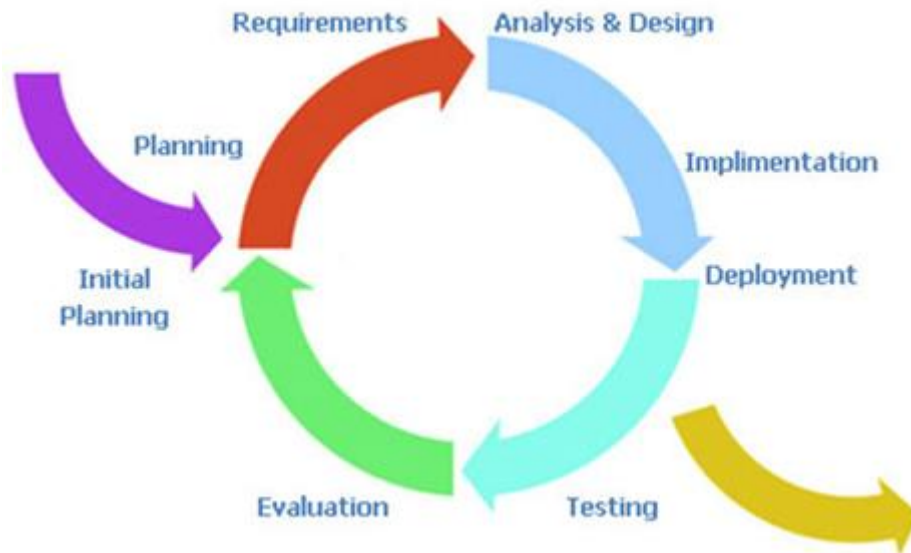
Figure 9: Iterative process model

Figure 9 shows the iterative development model is a cycling development from gathering the requirements until delivering functionality. This process will break down the process into phase then repeat. At each iterative mean new function will be added.

Therefore, The Child Cloud Management System using the iterative process because It is developing software feature to feature. It will release the complete parts to users for using then continue to implement other parts.

CHAPTER FOUR | Project Plan

4.1 Motivation

The Foundation for Children concern about the losing of children's information and difficult to update the data. As the volunteers, we expect that cloud technology can resolve these problems. Therefore, we interested to customize the "Child Cloud Management System." Child Cloud Management System is the web-based application that keeps the information on the cloud system. Which help the users access to the children information easier, prevent the children information losing and to enhance the ability to manage the information, such as, update information and define the authorization of each user.

4.2 Aim and objectives

4.2.1 Aim

The purpose for improving the web application is to provides the users to manage children easier and decrease the hidden costs associated. It helps the users to:

1. Manage children information.
2. Conclude the development information.
3. Send children information between orphanages.
4. Secure children information from the unauthorized user.

4.2.2 Objectives

The objectives of improving the web application is to provide user to:

- The users can manage child's development information.
- The users can manage child's education information.
- The users can create a report of development information.
- The users can send child's information between orphanages.

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Document Type	Proposal	Release Date	26/06/2017	Print Date	26/06/2017

4.3 Deliverables and limits

4.3.1 Deliverables

4.3.1.1 System Architecture
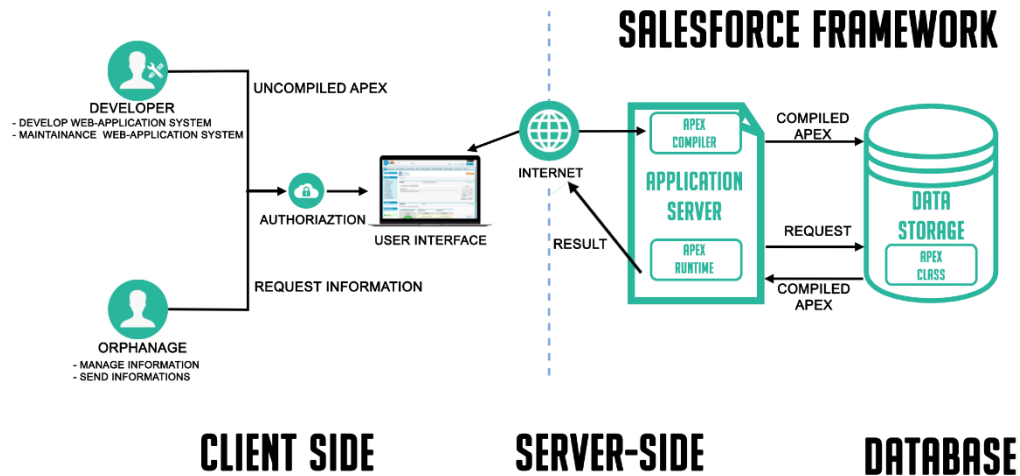
Figure 10: Child Cloud Management System Architecture

Figure 10 shows the architecture of Child Cloud Management System. This system consists of three parts. The first one is a client-side part, the user login by using Salesforce system, recording children development, and education information. Each user has a different role to use this web application by limiting the authorization. Next, the server-side part communicates with web application and database. The web application will send a request to the platform application server, and the server will respond to the web application. Finally, the database part, that is use for store the data that necessary in the system.

When a developer writes and saves Apex code to the platform, the platform application server first compiles the code into an abstract set of instructions that can be understood by the Apex runtime interpreter and then saves those instructions as metadata. When an end-user trigger the execution of Apex, perhaps by clicking a button or accessing a Visualforce page, the platform application server retrieves the compiled instructions from the metadata and sends them through the runtime interpreter before returning the result. The end-user observes no differences in execution time from standard platform requests.

4.3.2 Feature

Feature #1: Child's development information management
    Description: This feature provides the ability to manage and track child's development.

Feature #2: Child's education information management.
    Description: This feature provides the ability to manage and track child's education.

Feature #3: Report development information
    Description: This feature provides the ability to create the report of child's development.

Feature #4: Child's information forwarding.
    Description: This feature provides user to forward child's information between orphanages.

4.3.3 Document

- Proposal
- Project plan
- Quality plan
- Software requirement specification
- Software design document
- Testing document
- DVD stores source code, related file, all documents and poster files in PDF format.
- Traceability record
- Software quality assurance document
- Project poster

4.3.4 Limits

- This web application allows only ten users.
- This web application support only Thai and English(Thai mostly).
- This web application required an internet connection for using this system.

4.5 Schedule & Milestones

4.5.1 Schedule

The schedule and milestones of the working through activities system. During the period, there are work terminologies, and the description is shown below that:

Milestone	Task	Milestone Criteria	Planned date
1	Proposal	Topic defined	May 2017
2	Proposal	- Proposal reviewed - Proposal submitted - Proposal presentation	June 2017
3	Progress Report I	- Software requirements specification - Feature#1 (Child's development information management) - Feature design - Feature implement - Feature test - Progress report submit - Progress report presentation	July 2017
4	Progress Report II	- Feature#2 (Child's education information management.) -Feature#3 (Report development information.) - Feature design - Feature implement - Feature test - Progress report submit - Progress report presentation	October 2017
5	Show Pro	- Feature#4 (Child's information forwarding.) - Feature design - Feature implement - Feature test - Progress report submit - Progress report presentation	November 2017
6	Final Progress Report	- Overall system must be complete -Integrate and review all documents - Tests all features - Reviews documents are complete. - Progress report submit - Progress report presentation	December 2017

4.5.2 Milestone

Proposal
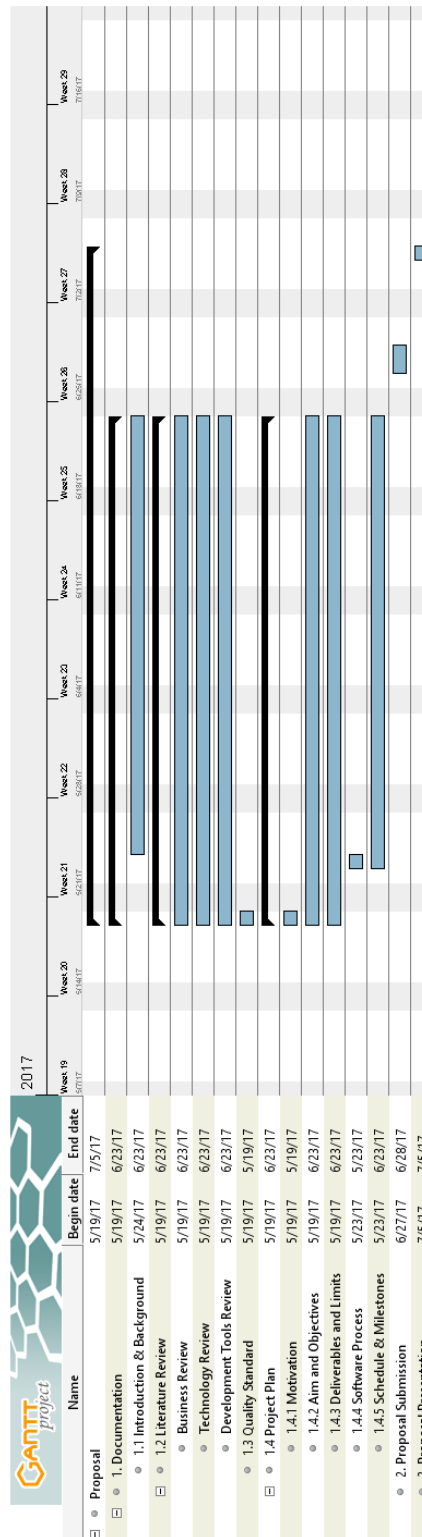
Figure 11: Proposal milestone

Progress I

Name	Begin date	End date
Progress I	7/5/17	7/19/17
Software Requirement Specifications	7/5/17	7/7/17
Project Plan	7/5/17	7/5/17
Software Design Document Feature 1	7/7/17	7/7/17
Use case Diagram Feature 1	7/7/17	7/7/17
Activity Diagram Feature 1	7/7/17	7/7/17
Sequence Diagram Feature 1	7/7/17	7/7/17
Class Diagram Feature 1	7/7/17	7/7/17
Implment Feature 1	7/10/17	7/11/17
Software Testing	7/12/17	7/12/17
Review and Configuration	7/14/17	7/14/17
Progress I Report Submission	7/17/17	7/17/17
Progress I Report Presentation	7/19/17	7/19/17

Figure 12: Progress I Milestone

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Progress II
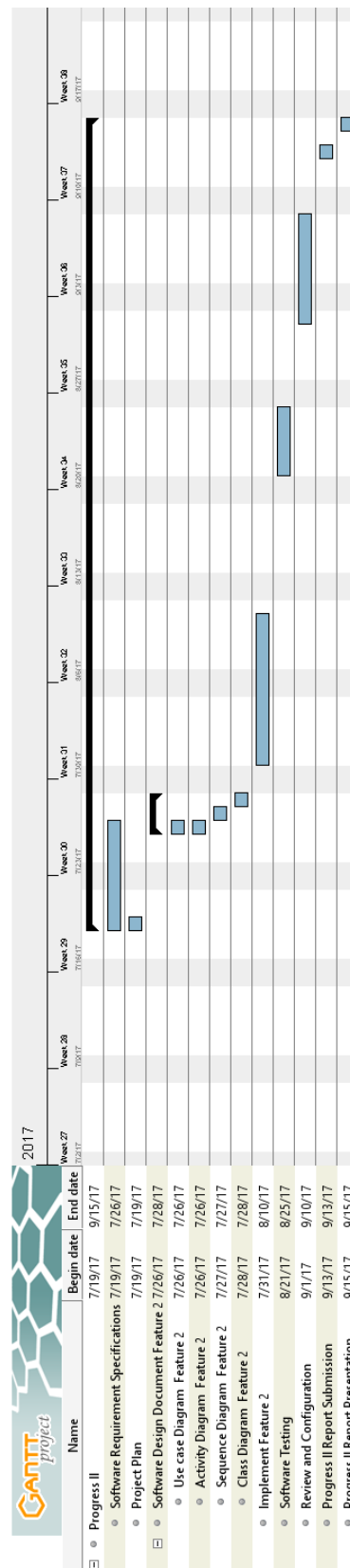
Figure 13: Progress II Milestone

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SE Show Pro
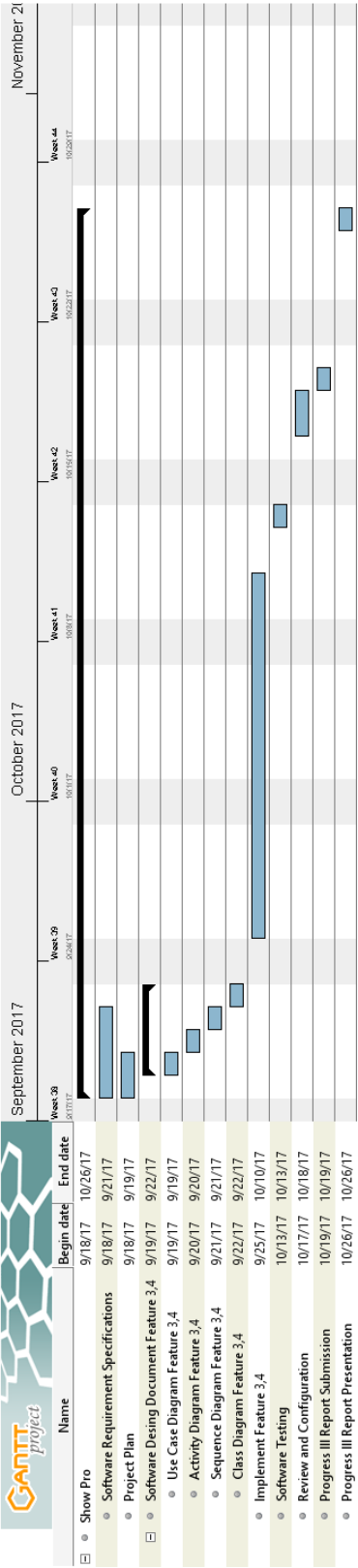
Figure 14: Show Pro Milestone
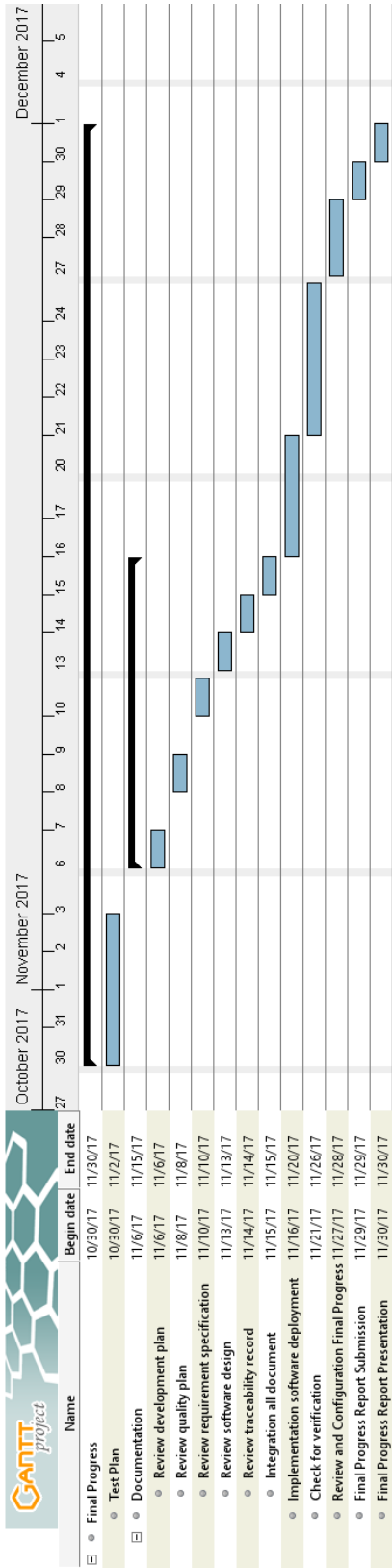
Final Progress

Figure 15: Final Progress Milestone

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