**Chapter II**

**METHODOLOGIES**

This chapter contains about Rational Unified Process (RUP). It is a process that is used by the researchers in developing and designing the system.

**Software Development Methodology**

The researchers shall use the Rational Unified Process as a guide in the development of the proposed Web – Based Electric Consumption of Appliances (SORECO I) at Irosin Sorsogon. This proposed system will be used to calculate the consumption of every household appliance and other features of SORECO l can get and view important information. Like the event of calendar, chart of calculated appliances, breakdown generation and others to have an idea to know the important things about SORECO. And this can help both side the costumers and the management because for gathering more information about each other.

The goal is to know the appliances on how much it consumes and to know how much each customer of SORECO’s appliances cost. This proposed system is the way to improve the relation between customers and SORECO management.

**Overview**

Web – Based Electricity Consumption of Appliances is important to monitor and manage every appliance that consume of SORECO’s customer and can be manage also the other features of system. This system allows the admin to monitor customer’s history and get the data input.

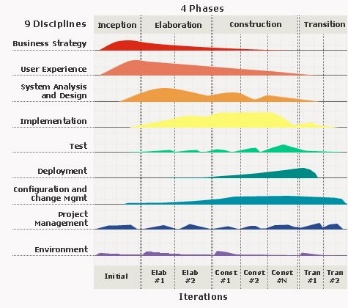


Figure 2.1 – Rational Unified Process

Rational Unified Process (RUP) is an iterative software development process framework. It is to provide a model for effectively implementing commercially proven approaches. The researchers use RUP to create quality software, to predict budget and time frame. RUP phases allow developers to repeat until the main objectives are met.

It divides the development process into four distinct phases that each involve business modeling, analysis and design, implementation, testing, and deployment. The four phases are:

**Phase 1: Inception.** In the inception phase the researcher’s proposed the Web – Based Electricity consumption of Appliances (soreco l). They gathered data to define the requirements needed for proposed system. We started by inquiring on SORECO office Sorsogon Electricity Corporation l to know the process about calculation researcher conduct an interview with their employee to understand how they manage the manual system for transaction. What information are needed to calculate the appliances to right way.

**Phase 2: Elaboration.** In this phase, developers refire the definition of the product. In the development progress of the proposed system. Developers used different diagrams. Developers used Use Case Diagram for presenting the actions that a user or action can be made in the flow of information of every process of every process of the system.

**Phase 3: Construction.** In this phase, the developers already defined the software and hardware requirement for the construction of the system. Developers used a windows 10 OS, Visual Studio Code as a language to code, XAMP PHP ass a source of data in sending, retrieving updating and for the security of data.

**Phase 4: Transition.** The developers test the program components to identify the errors and bugs and how to fix it feedbacks are gathered from conducting it’s testing to make an adjustment in the system to the system to satisfy the needs of the user.

**Scope and Delimitation**

This study focuses on energy consumption calculators that make it easier for the customers to figure out how much electricity will require to run various electrical gadgets and appliances. And assist in reducing energy bills. Elegant and simple method for estimating power consumption in units and cost for each appliance. And also, focuses to the advisory and downloadable documents of the electricity corporation, so that customers can also know how they can use the system correctly. And important information is also included for new updates on the increase in electricity or anything else consumers should know. This system will be using a database for employee of corporation so that they can manage it.

We delimit the payment of the customer’s monthly bills; hence the coverage of our system is only for SORECO I.

**Data Gathering Techniques**

In order to develop the Web Based Electricity Consumption of Appliance of SORECO 1 the use of the following gathering technique the involve employee or IT Service of SORECO. To know the process viewing and updating the data of SORECO l and how the system work and to keep the data of the data safe. In order to develop this Web Base Electricity Consumption of Appliances (SORECO).

**Interview.** The researcher directed to the office of SORECO 1 and refer to IT service of SORECO. To Conduct some data and ask for any suggestions to know the benefits of Web-Base Electricity Consumption of Appliances.

**Data Analysis.** The researcher gathering data and process of SORECO 1, about their service for additional information to user data entries they had collected. To help us design the system and choose what should be prioritized.

**Research.** The researchers conduct research about the proposed project for more ideas to input in the project.

**Source of Data.** The primary source of data in this study are the responses gathered from the series of interview conducted with Mr. Jian Noel F. Silo, designated IT Service office, and Mr. Edwin F. Garcia the General Manager for letting us to conduct an interview.