Chapter 2  
**Methodology**

This study presented the methods and procedures used in the conduct of the research study, such as research design, data gathering procedures, and data processing analysis.

**Software Development Methodology** In this study, the feature-driven development (FDD) methodology was applied in the design, development, and implementation of the system. FDD is an agile framework that organizes software development around making progress on features. The proposed system, the Online Product Price Monitoring System at Daraga Albay, was designed to develop and focus on the features that stores in Daraga Albay needed. This method was used to develop the high-level features, scope, and domain object model, and it was used to plan and test the specific requirements and tasks based on the main features where they belonged.

Feature Driven Development (FDD) primary goal was to develop real, working software and meet deadlines systematically.   
 FDD organized workflow based on which feature needed to be developed first. FDD had five (5) stages: 1st developing the overall model, 2nd building a feature list, 3rd planning by feature, 4th designing by feature, and 5th building by features.

Figure 1

A diagram of a diagram

Description automatically generatedFive FDD Process

**Process 1: Develop overall model**.

This was the first phase of activity, where in the overall scope and requirements of the system were determined. To determine the overall scope, the researchers conducted interviews with Hardware shops, poultry shops and meat shop. They were asked about the methods currently employed in Monitoring in Product Price in Daraga Albay. The results of the data gathered were evaluated to determine the veracity of the information. After a thorough evaluation, the overall scope of the system was determined.

Based on the results of the evaluation of the data gathered, the first step was to determine the problems that the store’s in Daraga Albay encountered in terms of update in product prices, lack of awareness of the discount available, and human errors and delays in updating price information. The next step was to determine the features of the system that the online product price monitoring system was to determine the strategy of implementation to achieve the desired benefits of the system needed. The last step was to determine the implementation strategy to achieve the desired benefits of the system.

The main objective of the system was notifications manual process using the Online Product Price Monitoring System at Daraga Albay, information dissemination about the pricing to customer and store owner easy and faster manner.

A diagram of a group

Description automatically generatedFigure 2  
Flow Diagram in developing an overall model.  
  
Process 2: Build a feature list.

A screenshot of a computer screen

Description automatically generatedIn this phase, the researchers identified the set of features using the knowledge obtained from Process 1. This was a simple, functional decomposition into subject areas that came from the partitioning of the domain by the domain experts for their domain area walk-through in Process 1. After planning the overall model, the process began with adding or identifying the features suitable for the system that were based on the overall model. Mainly, the feature of having price monitoring and receive accurate and timely information was a priority for online price monitoring for the customer and store’s owner in Daraga Albay to see about the update of the price. When the product is become high or low the customers and the stores owner easily to know by visiting the website on online price monitoring.

Figure 3. Flow Diagram of Building a Feature Lists.

**Process 3: Plan by Features.**

The process of planning features was planned in order by the researchers based on the complexity of the features. Having a user profile was prioritized when creating the user account. The researchers used Visual Studio 2010 with the MySQL database code by.Net. This process was for the authorization to use the system that needed an account before access. After creating the user profile saved in the database, all the necessary features were created.

A diagram of a process

Description automatically generatedFigure4.  
Flow Diagram for Planning by Features

**Process 4: Design by Features.**

In this process, many features were scheduled for development by assigning them to a programmer. The programmer selected features for development from the priority list of assigned features. The programmer identified the people likely to get involved in designing this set of features and updated the feature database accordingly. The programmer identified the researchers' needs to form the Features team from the website. The feature team studied the reference document(s) for the feature to be designed, all-screen designs, external system interface specifications, and any other supporting documentation. In this particular phase, each feature of the system was constructed. These aspects were done in this phase, from coding to the interface designs, testing, and evaluation.  
Figure 5.

A diagram of a software development process

Description automatically generatedFlow Diagram for Build Features

**Process 5: Build By Features.**

In this process, all items necessary to satisfy the requirements of the website for these features were implemented, and code inspections with the team members were held before or after the unit test task. The development team tested the code to ensure all requirements of the website were satisfied.

All items were implemented in this process to support the design. As soon as all the requirements were met for all the features in process 4, the researcher proceeded to process 5. In this process, testing of each customer was conducted to guarantee that all the requirements for the features had been developed successfully in the system. When all the features were developed successfully, the system was executed and built the overall model feature by feature. The proposed system is the overall model for implementation.

After planning the overall model, it proceeded with building the features—first the system's user interface. The final form consisted of online pricing monitoring, the store owner can update the prices of the product.

**Scope and Delimitation**

The scope of the study entitled “Online Product Price Monitoring System at Daraga Albay” is to provide customer a webpage that they are able to look for the prices of the various store categories such as Meat Shops, General Merchandise Stores, Animal feed Stores, and Hardware Stores within Daraga, Albay. And provide store owners an inventory system that able to add, update, edit, and delete products.

The delimitation of the study will not support other stores out of Daraga, Albay. The system will not include third-party services such as payment methods, reservation and delivery as it is intended for price comparison and monitoring only. The study will not address the marketing strategies necessary to encourage store participation nor influence the stores pricing policies. Furthermore, consumer behavior analysis is not included in the study.

**owner can update the price of the product**

The researchers utilized various techniques to gain a more comprehensive understanding of the online Price monitoring system for the customers in Daraga, Albay to address the inquiries in this project study.

Interview. The researchers employed interview-guided questionnaires as a technique to gather information from the Store Owners. Regarding the Price Monitoring. This questionnaire assisted the researchers in steering the conversation towards Price Monitoring.

Survey. The researchers employed survey questionnaires as a technique to gather information from the Customer in Daraga, Albay.

Document Analysis. The researchers used this technique to obtain comprehensive information on the price monitoring system of customers of Daraga, Albay.

**Data Gathering Techniques**

Store Owners. The researchers gave surveys and distributed questionnaires to the Store Owners in Daraga, Albay

Customer. The researchers conducted interviews with the customer in Daraga, Albay to obtain information about organizing Price Monitoring.