

# **CS 22310: "Fishing Association Website Prototype Development"**

Due on Tuesday, April 22, 2014

**James Euesden - jee22**

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## Introduction

For this task, I was provided a Requirements Specification[1] about a new website for the fictional 'Consolidated Fishing Association'. In this scenario, the association wishes to have a new website designed to boost their profits through pooling batches of caught fish together into auction lots that are hosted on an online auction application and sold to the highest bidder. My task was to use this specification and take the idea through to the prototype stage.

## Task Analysis

Beginning with the task analysis in the requirements specification, I took a look at who the users of the application would be, what their needs were and what tasks the application should fulfill in order to meet their expectations.

### Who is involved?

From studying the functional requirements of the application, it was clear that there were four main types of users.

- Fishermen, who catch the batches of fish, bring them to the warehouse, upload data about their batches to the website database and then label the batches accordingly.
- Warehouse staff members that look at all of the currently available batches on the website and create auction lots out of them, based on the species and weights.
- Buyers who wish to bid on the auctions and buy the lots of fish.
- Administrative staff members that have the ability to add new users of different types to the system.

To further demonstrate the users and what they require, here is a picture representation:

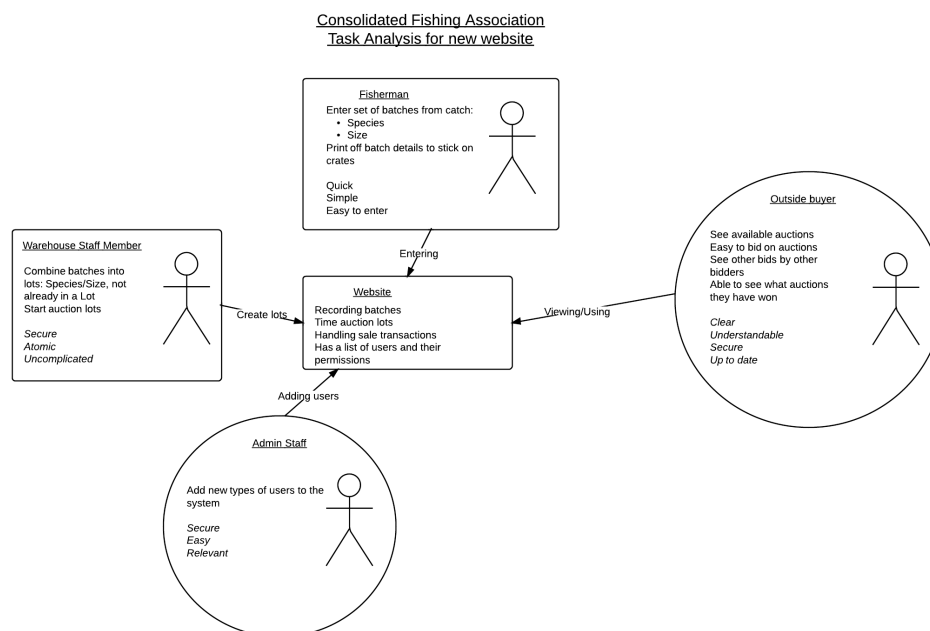


Figure 1: A rich picture to show who the users are and what they require from the system

## Use Case Diagram

From further examination of the functional requirements, I found it useful to draft up a Use Case diagram, displaying the basic needs of each individual person who will be using the application, and what might be needed for them to accept this application into their daily routine.

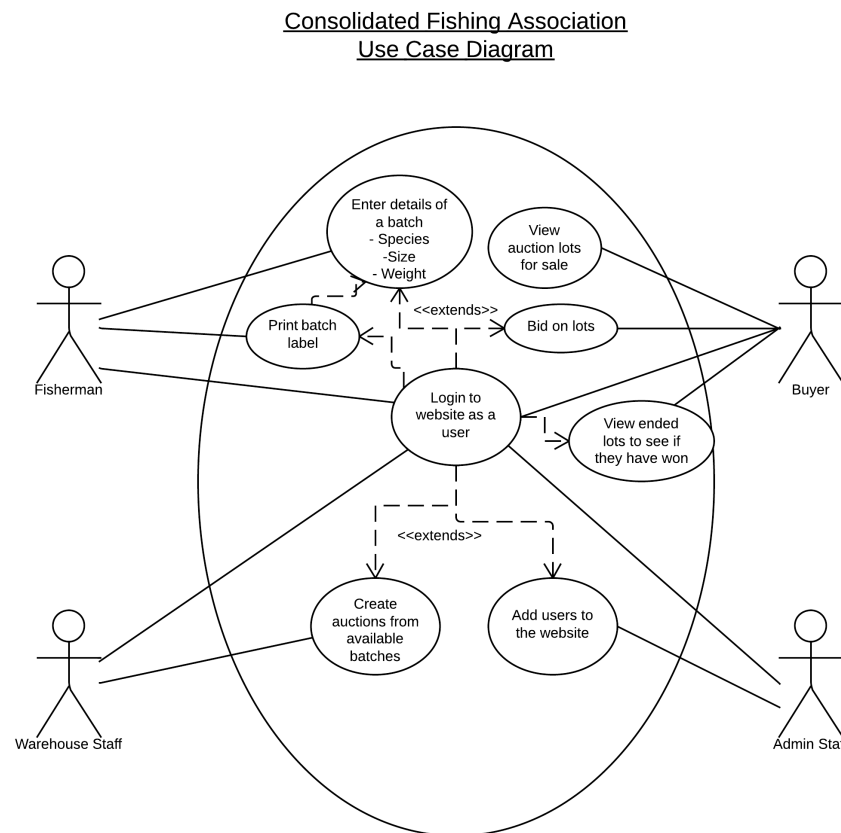


Figure 2: A Use Case diagram to visually represent each users need and how they are shared or separate from one another.

As seen from the figure, each user is required to log in to the system, where they are each presented with their own different options of progressing from there, based on their particular needs and expectations on the website. This leads up to helping with the design decisions of how to best make the website design later, in order to accommodate for each different type of user, and provide them with the services they need on the same platform, without giving them access to everything or nothing. If a user was provided with more than they needed, it would confuse them. If they were to be presented with less than they expected, they could get highly frustrated. Using this Use Case diagram, I can clearly see how each user will expect the application to look for them, and cater to their needs accordingly.

## Data flow

When dealing with a website that handles data of different types of users, I found it good to create a diagram to represent the flow of data in the application. This ignores why or how exactly the data flows this way, and focuses on the actual flow of the data. From where does it start and where does it go to, and what is in the data.

Doing this helped me get an idea of what the finished product would look like in the underlying data structure, and also imagine each type of user interacting with the program, and how they themselves would expect the flow of data to be on the website as a whole.

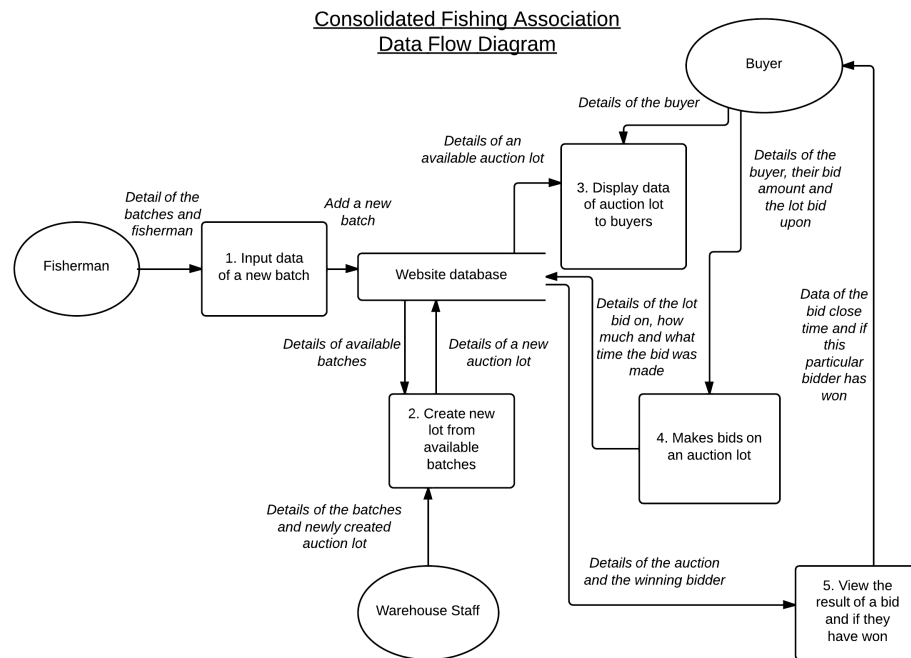


Figure 3: The flow of data, as it enters the application from the Fisherman and where it travels to for each user to see.

This next figure displays the flow of data for registering a new member and the data flow in order to instate them as a member of the website with the correct access they require for their needs.

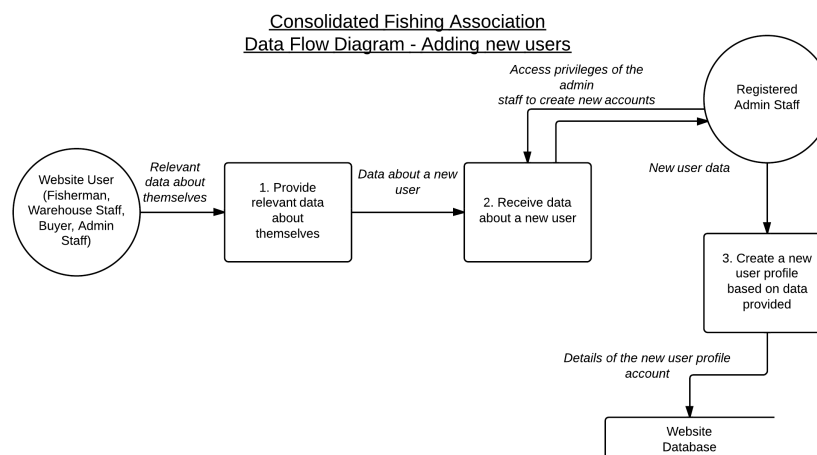


Figure 4: The flow of data, provided by the new user and passing through the application to instate them as a member on the website.

## State Transitions

There are also a number of states that the user and the website can be in, that must be processed in order for all of the tasks that each member of the website wants to perform can be executed correctly. To demonstrate, here are some state diagrams, showing how the real world uses of the website affect the state of the website for other members of it, and how they are able to reach their needs. These diagrams also touch upon how a user of a particular type and view and use the website.

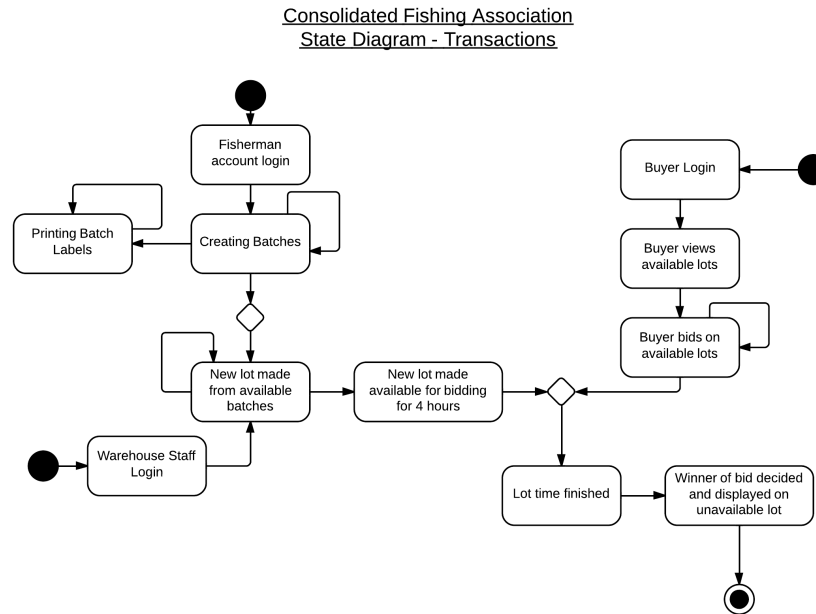


Figure 5: The states of the process of users using the website, from the fish batches being entered into the website, to the state of fish being sold.

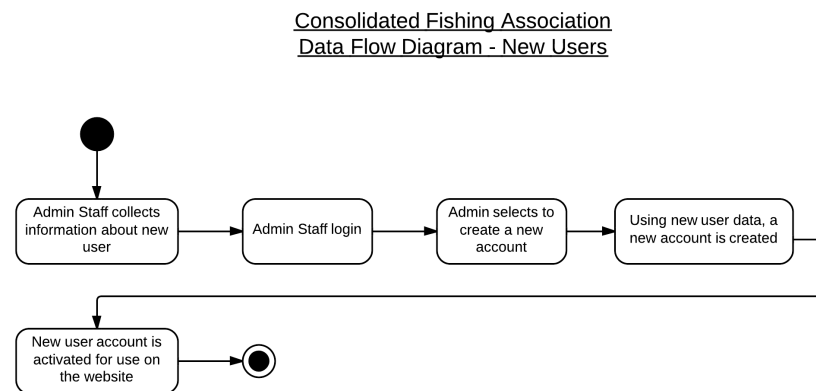


Figure 6: The states of a new account creation for the website.

Through the analysis of the tasks a user wishes to perform with the website, as set out by the requirements specification, I had a clear idea of exactly what and how the application should function. The next stage was to design the website in such a way that these expectations could be met, and give the users the

best and simplest interaction with the website as possible. With the diagrams to refer to a later points, they give a solid understanding of how I had to balance the design of the website with it's usability for the target users.

## **Design**

### **Interaction Design**

### **Navigation**

## **Prototype**

## **Shneidermans 8 Golden Rules**

## References

- [1] N. Hardy, "Fishing Association Project Requirements Specification", CS22310 Assignment 2014, 17th March 2014