

# **Senior Project Proposal**

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Advisor: Dr. Dekhtyar

## **Problem Statement**

The purpose of this project is to design and develop a horse nutrition database system for Cal Poly's Animal Science Department. The database project will be in collaboration with Dr. Mark Edwards, associate professor in the Animal Science department. The tool will be able to keep track of the specific horse diets, where the horses are located within the Cal Poly Equine Center, and keep track of inventory of the feeding supplies.

## **Tools**

To create this database, I will be using Java for the development in addition to using JDBC for the database interactions with the Oracle DBMS.

## **General Timeline**

The first quarter will be devoted to creating the design of the database to include all of the requirements specified by Dr. Edwards. This will require researching and customer interactions on requirements, along with extended prototypes of the final working product.

The second quarter will focus on implementing the database and delivering it to the customer for critique and modifications. This will include making all features available to the customer in an easy to use GUI application.

## **Meeting the Requirements**

**Independence:** This project meets the independence requirement in that the existing database prototypes need to be revised and implemented to meet the customer's requirement and I will be writing all of the code myself.

**Ownership:** I will be the developer of the project. The functionality and usability decisions will be made with the advisory help from Dr. Edwards. Along with the database requirements and setup decisions made through the advisory help from Dr. Dekhtyar.

**Background Research:** There are currently prototypes of this database system made by a previous database class that have been reviewed by the customer and critiqued. This project will require me to research the requirements given by the customer, the current prototypes and their critiques by the customer, the code of the existing prototypes, and the nutrition patterns of horses, prior to starting the project.

**Creativity:** I will have to be creative in the way that I present the material to the user through a GUI. I will have to engineer a way to make the database fully functional and easy to use by all users of the system. Along with easy of use the system needs to be designed in a way that will be easy to extend to other animals and their diets as well.