# CS374 – Intro to Database Management

# Application Development Project

# Rubric for Second Deliverable

## Group Member #1: Rab

## Group Member #2: Seth

## Group Member #3:

## Group Member #4:

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| --- | --- | --- | --- |
| Name | Requirements | Points | Awarded |
| Description of Application | * An overview of your application * System requirements (e.g. hardware, DBMS, other software) * A detailed description of your application * Are there features that will not be implemented? What are they, and why won’t you fulfill them? | 10 |  |
| Project Management -Schedule | * Detailed schedule of who will do what part of project, by when | 5 |  |
| Logical Diagram | * Logical diagram in UML or E-R * Discussion of how your data model will satisfy the needs of your application * Discussion of alternative designs that you did not do (and why) | 15 |  |
| Queries Required | * Required queries in English (not SQL) * What entities and/or relationships are required for each query? * How will each query satisfy the needs of your application | 15 |  |
| Grammar, punctuation, syntax, and references | * Follow rules from the Penguin handbook on writing * References as appropriate (e.g. if you are modeling your application after an existing application, make note of that) | 5 |  |

Overview:

We are building an inventory system for multiple food banks that has personalized users (based off previous exchanges/donations) through a website.

System Requirements:

We are thinking Access for the moment, using GitHub to share files with one another.

Detailed Description:

To personalize users, they can sign in using a personalized username and password. With this, the password will be salted and hashed using the SHA\_512 hash. For personalization, we are aiming to include recent exchanges, wish lists and checkouts, and specifically for donors, they can see recent donations, and donation suggestions based off low inventories and high demands.

Overall, for the database/inventory design, we will track different food banks (different locations) and their respective different stocks of products. For the website we plan on it being pretty bare bones, primarily with a search bar to look up products and their availability at locations. Unless we have more time, we will focus more on text and getting it functional. We will plan on using Python Django for the website aspect of this project.

Extra Features for Extra Time:

* Locations can exchange product with one another
* Locations have a max inventory that they cannot exceed
* Try to fend of SQL Injection Attacks

Features that will not be implemented:

* Reserving the foods to pickup later – More in store, don’t care about that
* create an internet browser – not in our repertoire, Google Chrome is fine.
* spellcheck (did you mean: ) – Complicated, and modern browsers already include them

Project Management -Schedule

November 23 - Previous work ported to current framework

November 23 - Database set up in access

December 02 - Finished framework of website, ready to have database connected

December 12 - Everything working

December 16 - Presentation finished

Logical Diagram

UML Diagram

Description automatically generated

Location – Buildings where the inventory/products are stored specifically

Users - Encapsulates both Donors and Withdrawers who can donate and withdraw products from the locations

Products – The various items that can be donated or withdrawn from a location (food bank)

Inventory – there are an inventory of products at locations

Amount – Number of products at a given location

Transaction – Users can have a certain transaction with products, be it donating or withdrawing. Users also have a preferred location to enact their transaction.

\*(users can also transact at other locations, but usually occur at their preferred location)

Queries Required

For the website search bar, to find products

* Search Bar: [Product Name] -> Find all products with [product name] in their name, food bank locations where you can find them and how many are in stock (inventory) at that location

(For example, if someone searches “Beans”, every product with the word “beans” in it like string beans, black beans and refried beans will appear, as well as the locations that have them in stock)

* Search Bar: [Product Category] -> Find all products with [product type] as their type, food bank locations where you can find them and how many are in stock at that location
  + (For example, if someone searches “beverages”, every beverage like water, Gatorade, and gamer’s apple juice will appear, as well as the locations that have them in stock)

To keep track of each users past history (to eventually incorporate to provide easy access to more popular exchanges)

* Look up past donations – Find all transactions connected to the user id, sorted by recency
* Look up past transactions – Find all donations connected to the user by id, sorted by recency

To represent transactions and donations, usually done by the moderators/employees

* Add to inventory – Increments the inventory of a product
* Remove from inventory – Decrements the inventory of a product (no less than 0)