

CYSE 250 Milestone 1 Project

Brandon Creech

Socket Programming Idea

▶ Nutritional Recipe Program:

- ▶ The main purpose of the program is being able to look up a recipe with instructions and the calories of it.
- ▶ Each recipe will be inputted into a database specific to each one, detailing the instructions and calories.
- ▶ Before the user can access the program, a secure connection will need to be established between the server and the client (user) via an encryption, which is how the login information being inputted by the user will remain secure. There will be three separate scripts that will detail this: the server, client, and encryption script.
- ▶ After a secure connection is established, they will need to either sign in or register first with both a username and password into the terminal.
- ▶ There will be an authentication script that serves as the user login/register system.
- ▶ I will have a notepad file containing of a couple of different users and passwords that can be used to test this system.

Socket Programming Idea

- ▶ After successfully logging in, the Nutritional Recipe program can be used.
- ▶ The terminal will ask for a query necessary to pull the correlated recipe. So, for example, if you wanted to find the calories or recipe for a certain kind of cookies, you would input (GET CALORIES “Cookies” or GET RECIPE “Cookies”).
- ▶ GET CALORIES will reveal the calories per serving of the recipe and GET RECIPE will detail the instructions on how to make it.

Socket Programming Idea

- ▶ Overall, the Nutritional Recipe program will consist of these scripts:
 - ▶ 1. Authentication - Serves as the login/register system that the user will input their username and login on. The inputted information will be encrypted via the given script for encryption, so it remains secure in the connection between the client and the server.
 - ▶ 2. Encryption - This script encrypts the user's information inputted in the authentication system, so it is secure.
 - ▶ 3. Server - Takes in the queries from the client and outputs information from the food database back to the client.
 - ▶ 4. Client - Used to create a connection for the user to the server.
 - ▶ 5. Food Database - All the recipes that have been inputted along with their calories will be encoded into here.

The whole idea of socket programming in this program takes place when the server waits for a connection from the client and the client initiates the connection to the server. This is showcased via the server and client scripts.