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COSC 412

9/28/20

**Requirements**

**Account Creation:**

Inputs: The player will input their desired username, password, and email address.

Outputs: The user account information should be displayed under the “My Profile” tab and the “Account” sub-tab.

Data that must be stored: All user account and login information must be safely stored. This is important to ensure that the user’s account content and information will not be compromised.

Computations: The website must verify that the username and email inputted are unique.

**Primary Toolbar Navigation:**

Inputs: The user should be able to choose from the following tabs and respective sub-tabs:

* Home Page
* My Profile
  + Sign In
  + Account
  + Change Password
  + Sign Out
* Nutrition
  + Calorie Tracking
  + Weight Tracking
* Workouts
  + Home Workouts
  + Gym Workouts
* Search Tool

The search tool requires user keyboard input for what the user is searching for on the website.

Outputs: the website should redirect users to the appropriate page given their inputted selection. If the user chooses the search tool, the website should accept the user’s input and output related search results that are found on the website.

**Home Page:**

Inputs: The user is able to select the “Get Started” button at the bottom of this page.

Outputs: The website should redirect the user to the sign up/sign in page if they select the “Get Started” button.

**Nutrition Page Requirements:**

Input:

* On the calorie tracking section, the user may choose to calculate their recommended daily caloric intake and track their meals. On the calorie calculator, the user must input their goal bodyweight.
* On the meal tracker, the user must set their daily caloric intake budget and input their meals in the appropriate meal groups. When logging meals, the user inputs each food they eat individually, inputting the macros and calories in the food they are logging.
* On the weight tracker, the user must input their goal weight, and log their weight over time.

Output:

* The calorie calculator must output the user’s recommended daily calorie intake and recommended protein intake based on the given input.
* The meal tracker should take the logged calories the user has inputted and should output a progress wheel to show a visual display of how many calories the user has logged out of their total daily budget. The meal tracker should also output the number of calories the user has remaining in the day, and the summary log of all the meals the user had logged that day.
* The weight tracker should output a graphical display of the weight change over time and display the total weight change. It should also display a table of all the user weight logs that have been entered.

Calculations: The meal tracker should calculate the sum of the calories consumed. It should also calculate the difference between the total calorie budget and the sum of all the logged calories that day.

Calculating the user’s recommended daily protein intake: goal bodyweight\*1= grams of protein recommended

User’s daily calorie budget: goal bodyweight \* 12 = daily calorie budget.

The weight tracker should calculate the total weight change and amount of weight change necessary for the user to reach their weight goal.

Data that should be stored: The meals that the user has logged within the day should be stored so that the information can be displayed when the user is logged into the site. The site should also save all weight logs inputted by the user so that they may track their progress when they are signed in.

**Workout Page Requirements:**

Input:

* On both the home and gym workout pages, the user must select from one of three workout plans. These include push, pull, and leg plans.
* Once the user has inputted their workout plan selection, they must then build their workout using the workout builder forum. They must select the exercises that they wish to do based on the website’s instructions. They will have to choose a certain number from each of the following groups of exercises: compound exercises, accessory exercises, and cardio or core finishing exercises.
* Additionally, on the general workout page, the user will be prompted to select from one of the following four strength goals: chest/triceps/shoulders, back/biceps, legs, or all of these.

Outputs:

* When the user chooses from a push, pull, or leg workout plan builder, the website should redirect the user to the appropriate forum with the exercises for that plan.
* After the user chooses their desired exercises from each section on the plan, the website should output a workout summary of these selections for the user to follow.
* On the general workout page, the website should output a popup with the appropriate workout split based on the user’s strength goal choice.

**Functional Requirements:**

* Only logged in users should be able to access the workout builders, meal tracker, weight tracker, and calorie calculator.
* User logs should be saved so that logged in users may access their weight change logs and meal logs.
* Users should be able to write posts to their profile page about workouts, progress, nutrition and more.
* Users should be able to change their profile image and header image on their own profile and edit their account details with ease.
* The weight and meal trackers should output graphical displays of the user’s inputted logs.
* User account information and logs should be secured.

**Design Constraints:**

* The website must be accessible on a desktop, mobile device, or tablet.
* The website must be developed using free or cheap resources, because the project is not receiving any funding or payments.
* This is my first experiencing developing a website from scratch.
* Different users will likely have different fitness and nutrition goals that should be accounted for. Exercise and nutrition plans are not “one size fits all”.
* I am developing the website entirely on my own.

**Commercial Constraints:**

* The project must be developed and completed by 12/29/2020. This gives a limited time frame to complete the project.
* Developing a website is very costly, and I do not expect to receive any funding or payments for this project. All project aspects must be paid for out of pocket.

**Non-Functional Requirements:**

* All sensitive and personal user information must be protected and secured. This includes any user sign in and account information, any weight logs the user has tracked, and any meals the user has tracked.
* The website must be visually appealing.
* The website’s visual content should be uniform across the site.
* The website should be simple and easy for the user to navigate.