



**Term:** Fall 2025 **Subject:** Computer Science & Engineering (CSE) **Number:** 412

**Course Title:** Database Management (CSE 412)

### **Database Project Manual**

**Project Title:** Costco Order Tracker

**Team Name:** Project Group 46

**Team Members' Names and Student IDs:** Jeshad Rahman 1224959320, Siddarth Prasad 1224782299, Yaswanth Ponugoti 1227189485, Aryan Rai 1218775493

#### **Team Contributions:**

Name	Role / Responsibility	% Contribution
Jeshad Rahman	Created Login, Register, and Calendar view.	25%
Siddarth Prasad	Created Search page, Set up database, and sql script	25%

<b>Yaswanth Ponugoti</b>	<b>Created Cart page, Add items to cart feature, Added nav bar</b>	<b>25%</b>
<b>Aryan Rai</b>	<b>Filled and typed document</b>	<b>25%</b>

## **1. Overview of the Application**

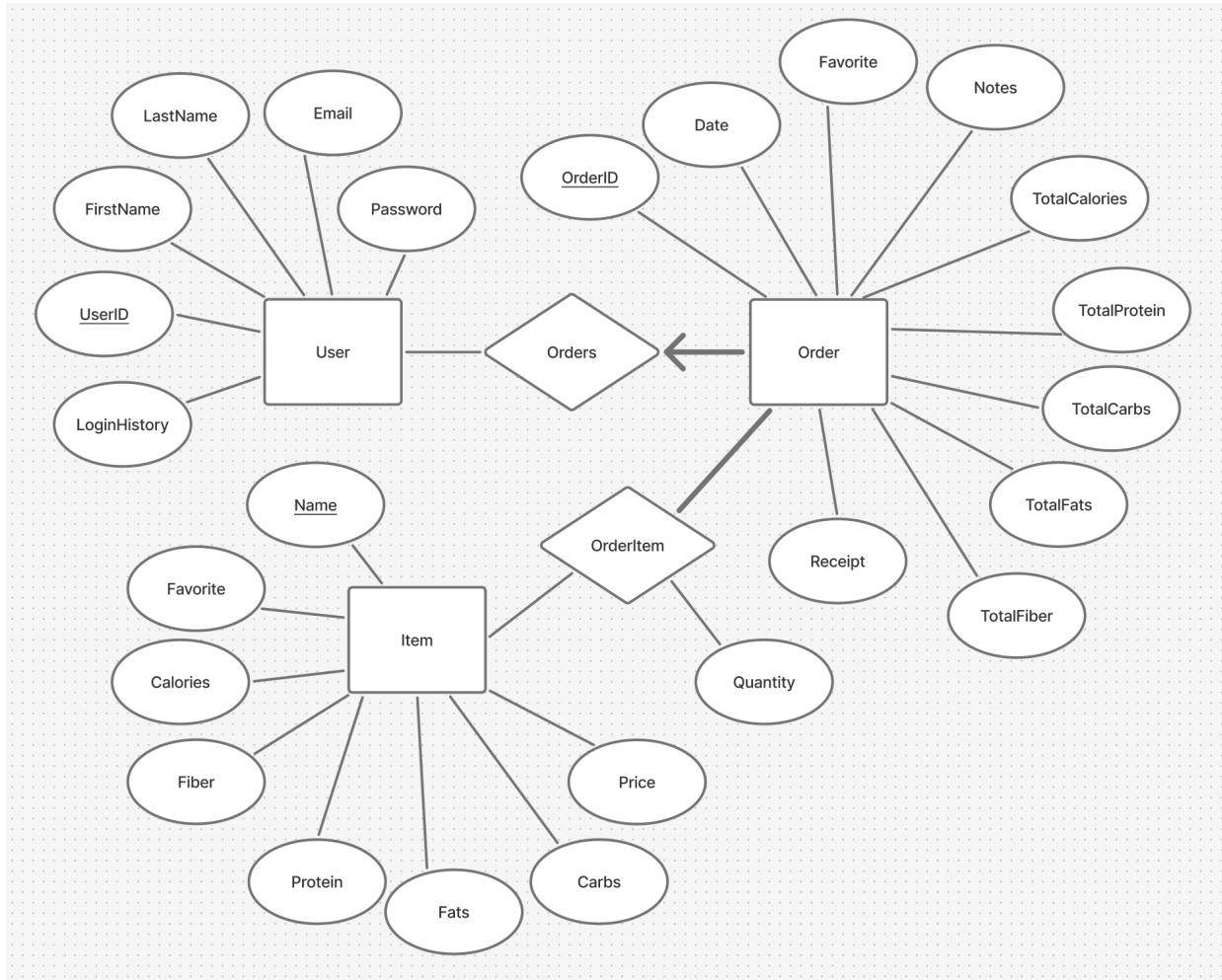
The application that we have created, Costco Order Tracker, will help customers plan and record their grocery shopping as well as get nutritional information about the items that they are buying. The database will keep track of the login information of each user of the app, so each user can log in and see previous saved information like previous purchases and nutritional totals for each visit. After logging in a user will have the option to add items from a Costco database to their cart, see the totals for that cart, and when they check out they can log the cart for future reference. With these features users will be able to have a better understanding of the nutrients they consume and help lead better decision making on the groceries they buy.

## **2. Database Design Summary**

This is our schema, which shows how the database is built and by what parameters

```
16 CREATE TABLE Users (
17     UserID INTEGER NOT NULL PRIMARY KEY,
18     FirstName VARCHAR(100) NOT NULL,
19     LastName VARCHAR(100) NOT NULL,
20     Email VARCHAR(255) NOT NULL UNIQUE,
21     Password VARCHAR(255) NOT NULL,
22     LoginHistory TEXT
23 );
24
25 CREATE TABLE Item (
26     Name VARCHAR(255) NOT NULL PRIMARY KEY,
27     Favorite BOOLEAN DEFAULT FALSE,
28     Calories INTEGER NOT NULL,
29     Protein INTEGER NOT NULL,
30     Carbs INTEGER NOT NULL,
31     Fats INTEGER NOT NULL,
32     Fiber INTEGER NOT NULL,
33     Price INTEGER NOT NULL
34 );
35
36 CREATE TABLE Orders (
37     OrderID INTEGER NOT NULL PRIMARY KEY,
38     Date DATE NOT NULL,
39     Favorite BOOLEAN DEFAULT FALSE,
40     Notes TEXT,
41     TotalCalories INTEGER NOT NULL,
42     TotalProtein INTEGER NOT NULL,
43     TotalCarbs INTEGER NOT NULL,
44     TotalFats INTEGER NOT NULL,
45     TotalFiber INTEGER NOT NULL,
46     Receipt INTEGER NOT NULL,
47     UserID INTEGER NOT NULL
48 );
49
50 CREATE TABLE OrderItem (
51     OrderID INTEGER NOT NULL,
52     ItemName VARCHAR(255) NOT NULL,
53     Quantity INTEGER NOT NULL,
54     PRIMARY KEY (OrderID, ItemName)
55 );
```

public	item	public	orders	public	users
❖ public	item	❖ public	orders	❖ public	users
key	name character varying(25 5)	key	orderid integer	key	userid integer
text	favorite boolean	text	date date	text	firstname character varying (100)
text	calories integer	text	favorite boolean	text	lastname character varying (100)
text	protein integer	text	notes text	text	email character varying(25 5)
text	carbs integer	text	totalcalories integer	text	password character varying (255)
text	fats integer	text	totalprotein integer	text	loginhistory text
text	fiber integer	text	totalcarbs integer		
text	price integer	text	totalfats integer		
		text	totalfiber integer		
		text	receipt integer		
		text	userid integer		



### **3. Technology Stack**

The tech stack for our projects consists of Node.js, React Express, PostgreSQL, PGAdmin, JWT, react-router-dom, and Bcrypt. With these tools we were able to build a functional prototype of the Costco Food Tracker app.

### **4. Setup Instructions**

<https://github.com/sidprs/Costco-Calorie-Tracker-/blob/main/README.md>

(Provide step-by-step details for running the project locally, covering the Prerequisites

(e.g., Node.js, Python, DB setup), how to clone and run the application, how to import or initialize the database, and the Expected output)

- **View README for full instructions**

### **5. Feature List**

Some of the features of the product involve seeing nutritional data for each item, the totals when saved to a cart, and previous finalized cart purchases indexed by date. This gives the user full control over logging items as well as pulling up previous logs to compare information and choose certain products again.

Login/Register: Feature allowing users to login and register an account. Inserts user information into the database, and updates last login time.

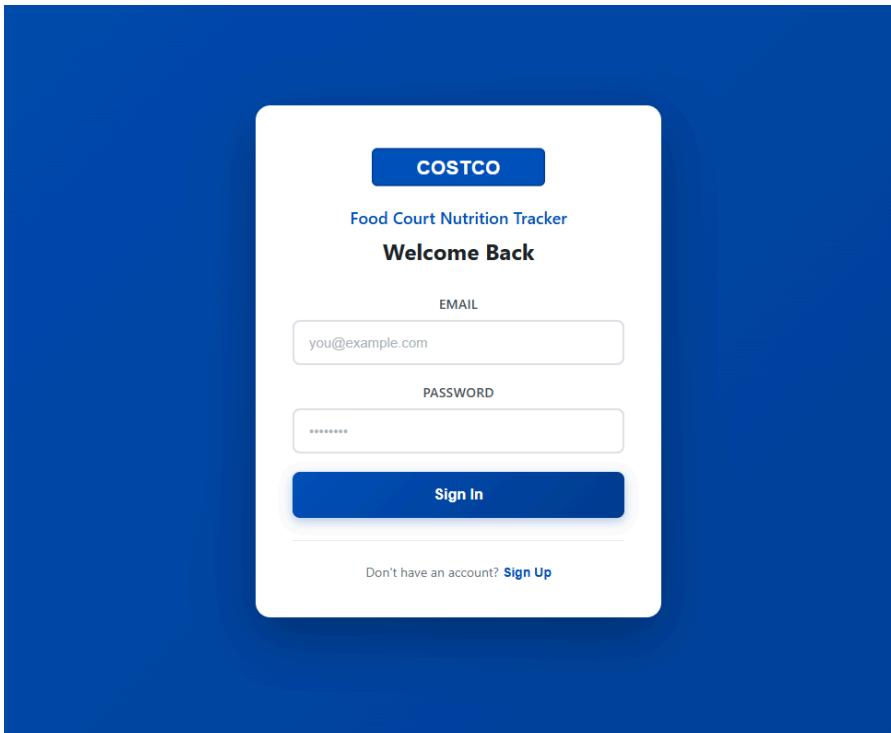
Search (Keyword/Filter): Feature allowing users to search up Costco menu items with the corresponding macronutrients. The filter queries the database and returns the relevant results.

Calendar: Feature allows the user to view all orders in a month view. Users are able to click on days that have an order and it will show them order details.

Cart: Feature allowing users to add items to cart, view total macro and price information, and checkout order. Performs a post api call to insert order to database by adding order to order table and adding items of the order to the orderItem table.

## **6. Screenshot**

## Login and Sign up Page



The create account page features a white central card with a blue header containing the COSTCO logo. Below the logo is the text "Food Court Nutrition Tracker" and "Create Account". There are four input fields: "FIRST NAME" with "John", "LAST NAME" with "Doe", "EMAIL" with "you@example.com", and "PASSWORD" with a redacted password. Below the password field is a "CONFIRM PASSWORD" field with a redacted password. A blue "Create Account" button is at the bottom. At the very bottom of the card, it says "Already have an account? [Sign In](#)". The background is a solid dark blue.

## Search for Food

**COSTCO**

**Food Court Nutrition Tracker**

[Find Food](#)   [Calendar](#)   [Cart](#)

SEARCH TYPE

▼

Search

<div style="background-color: #f0f0f0; padding: 5px; border-radius: 5px; margin-bottom: 10px;"><b>Acai Bowl</b> <span style="color: #005a9c; border: 1px solid #005a9c; border-radius: 50%; padding: 2px 5px; margin-left: 10px;">+</span></div> <table border="1" style="width: 100%; border-collapse: collapse;"><tbody><tr><td>Calories</td><td>330</td></tr><tr><td>Protein</td><td>4g</td></tr><tr><td>Carbs</td><td>61g</td></tr><tr><td>Fats</td><td>9g</td></tr><tr><td>Fiber</td><td>8g</td></tr></tbody></table> <p style="text-align: center;"><b>\$5</b></p>	Calories	330	Protein	4g	Carbs	61g	Fats	9g	Fiber	8g	<div style="background-color: #f0f0f0; padding: 5px; border-radius: 5px; margin-bottom: 10px;"><b>Beef Brisket Sandwich</b> <span style="color: #005a9c; border: 1px solid #005a9c; border-radius: 50%; padding: 2px 5px; margin-left: 10px;">+</span></div> <table border="1" style="width: 100%; border-collapse: collapse;"><tbody><tr><td>Calories</td><td>890</td></tr><tr><td>Protein</td><td>52g</td></tr><tr><td>Carbs</td><td>64g</td></tr><tr><td>Fats</td><td>44g</td></tr><tr><td>Fiber</td><td>3g</td></tr></tbody></table> <p style="text-align: center;"><b>\$5</b></p>	Calories	890	Protein	52g	Carbs	64g	Fats	44g	Fiber	3g	<div style="background-color: #f0f0f0; padding: 5px; border-radius: 5px; margin-bottom: 10px;"><b>Berry Smoothie</b> <span style="color: #005a9c; border: 1px solid #005a9c; border-radius: 50%; padding: 2px 5px; margin-left: 10px;">+</span></div> <table border="1" style="width: 100%; border-collapse: collapse;"><tbody><tr><td>Calories</td><td>290</td></tr><tr><td>Protein</td><td>2g</td></tr><tr><td>Carbs</td><td>71g</td></tr><tr><td>Fats</td><td>1g</td></tr><tr><td>Fiber</td><td>5g</td></tr></tbody></table> <p style="text-align: center;"><b>\$3</b></p>	Calories	290	Protein	2g	Carbs	71g	Fats	1g	Fiber	5g
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<div style="background-color: #f0f0f0; padding: 5px; border-radius: 5px; margin-bottom: 10px;"><b>Caesar Salad</b> <span style="color: #005a9c; border: 1px solid #005a9c; border-radius: 50%; padding: 2px 5px; margin-left: 10px;">+</span></div> <table border="1" style="width: 100%; border-collapse: collapse;"><tbody><tr><td>Calories</td><td>650</td></tr><tr><td>Protein</td><td>23g</td></tr><tr><td>Carbs</td><td>20g</td></tr><tr><td>Fats</td><td>52g</td></tr><tr><td>Fiber</td><td>4g</td></tr></tbody></table> <p style="text-align: center;"><b>\$4</b></p>	Calories	650	Protein	23g	Carbs	20g	Fats	52g	Fiber	4g	<div style="background-color: #f0f0f0; padding: 5px; border-radius: 5px; margin-bottom: 10px;"><b>Chicken Bake</b> <span style="color: #005a9c; border: 1px solid #005a9c; border-radius: 50%; padding: 2px 5px; margin-left: 10px;">+</span></div> <table border="1" style="width: 100%; border-collapse: collapse;"><tbody><tr><td>Calories</td><td>770</td></tr><tr><td>Protein</td><td>46g</td></tr><tr><td>Carbs</td><td>70g</td></tr><tr><td>Fats</td><td>26g</td></tr><tr><td>Fiber</td><td>3g</td></tr></tbody></table> <p style="text-align: center;"><b>\$4</b></p>	Calories	770	Protein	46g	Carbs	70g	Fats	26g	Fiber	3g	<div style="background-color: #f0f0f0; padding: 5px; border-radius: 5px; margin-bottom: 10px;"><b>Chicken Caesar Salad</b> <span style="color: #005a9c; border: 1px solid #005a9c; border-radius: 50%; padding: 2px 5px; margin-left: 10px;">+</span></div> <table border="1" style="width: 100%; border-collapse: collapse;"><tbody><tr><td>Calories</td><td>680</td></tr><tr><td>Protein</td><td>32g</td></tr><tr><td>Carbs</td><td>18g</td></tr><tr><td>Fats</td><td>50g</td></tr><tr><td>Fiber</td><td>4g</td></tr></tbody></table> <p style="text-align: center;"><b>\$4</b></p>	Calories	680	Protein	32g	Carbs	18g	Fats	50g	Fiber	4g
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## Calendar Page

**COSTCO**

**Food Court Nutrition Tracker**

Find Food    **Calendar**    Cart

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**November 2025**

SUN	MON	TUE	WED	THU	FRI	SAT
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

● Order Placed

**Saturday, November 1, 2025**

**Order #1001** ★ Favorite

**Items Ordered**

Hot Dog with Bun	×1	552 cal	24g protein	\$2
Pizza Slice Pepperoni	×1	710 cal	31g protein	\$2

CALORIES **1262**   PROTEIN **55g**   TOTAL **\$1001**

"Lunch break"

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**Order #1002** ★ Favorite

**Items Ordered**

Chicken Bake	×1	770 cal	46g protein	\$4
Pizza Slice Pepperoni	×1	710 cal	31g protein	\$2

CALORIES **1480**   PROTEIN **77g**   TOTAL **\$1002**

"My favorite combo"

## Items added to Cart

**COSTCO**

### Food Court Nutrition Tracker

Find Food      Calendar      **Cart**

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#### Current Order

ITEM NAME	CALORIES	PROTEIN (G)	CARBS (G)	FATS (G)	FIBER (G)	PRICE	ACTION
Acai Bowl	330	4	61	9	8	\$5.00	<b>X</b>
Beef Brisket Sandwich	890	52	64	44	3	\$5.00	<b>X</b>
<b>TOTALS</b>	<b>1220</b>	<b>56</b>	<b>125</b>	<b>53</b>	<b>11</b>	<b>\$10.00</b>	

**Checkout**

## **7. Video Demonstration Link**

<https://youtu.be/oIXXDOOgSaE>

## **8. GitHub Repository Link**

• <https://github.com/sidprs/Costco-Calorie-Tracker>

### **References:**

<https://react.dev/reference/react>

<https://www.jwt.io/introduction#how-json-web-tokens-work>