



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%

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

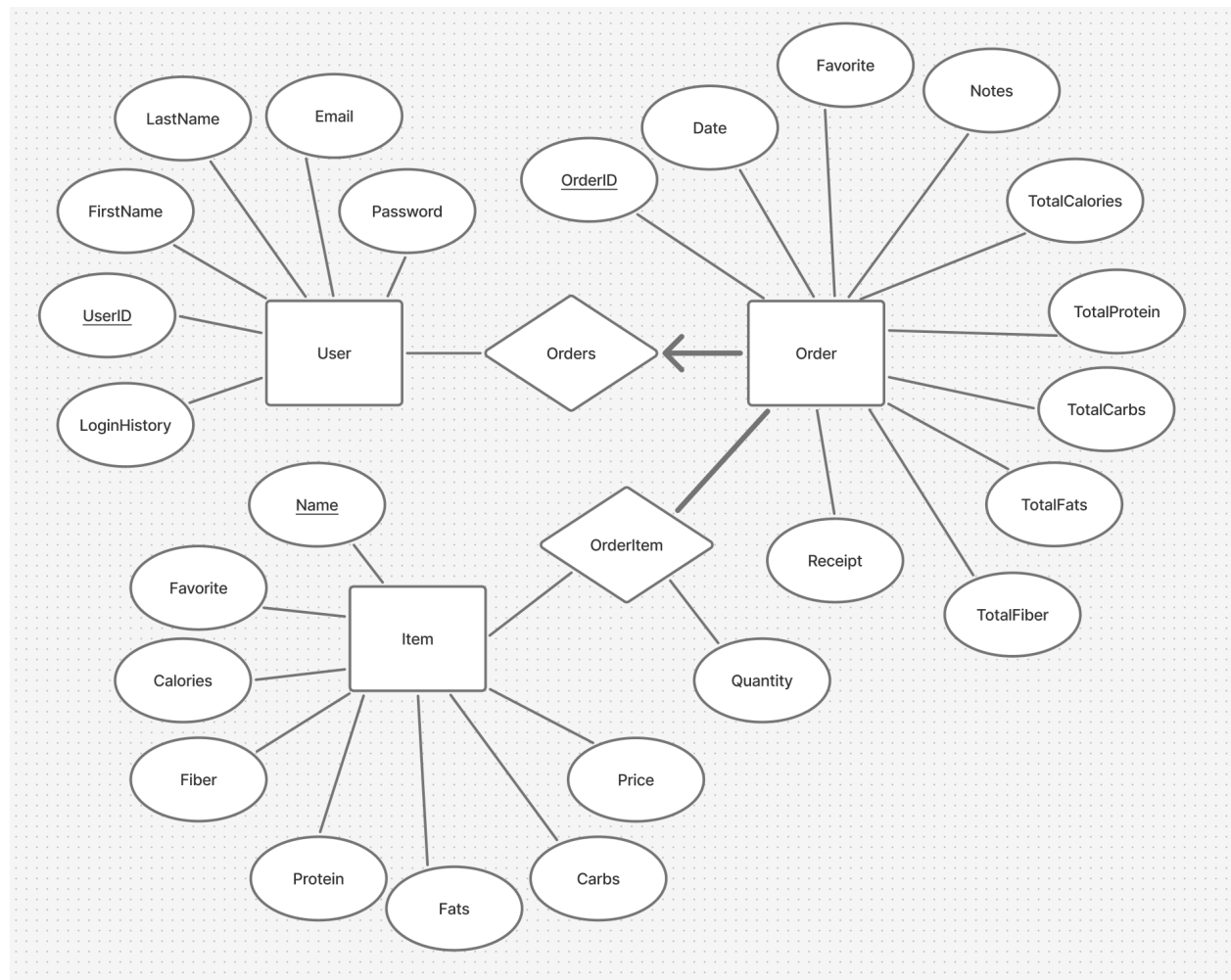
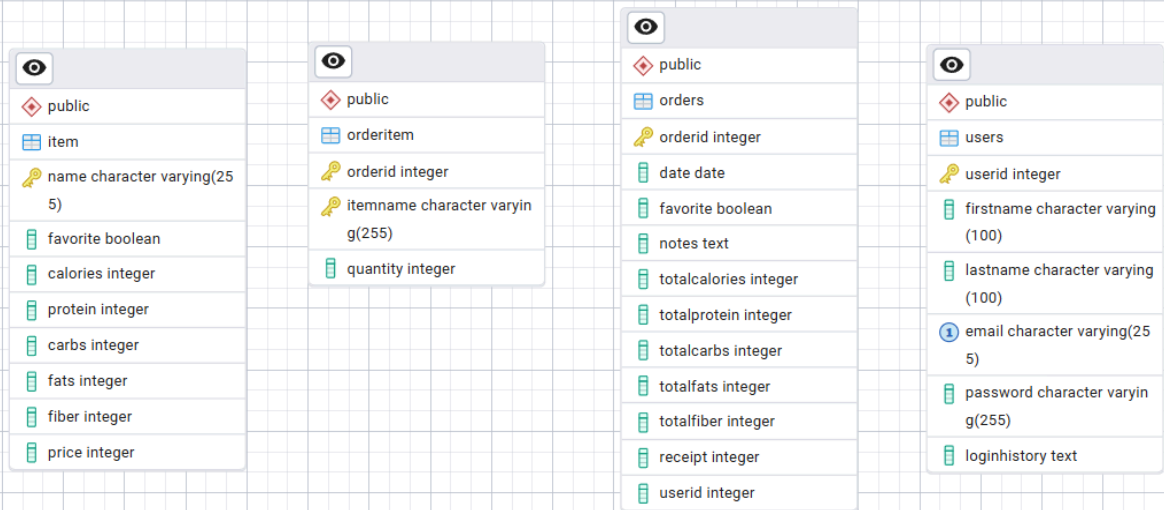
1. Overview of the Application

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 );
```



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

COSTCO

Food Court Nutrition Tracker

Welcome Back

EMAIL

you@example.com

PASSWORD

Sign In

Don't have an account? [Sign Up](#)

COSTCO

Food Court Nutrition Tracker

Create Account

FIRST NAME

John

LAST NAME

Doe

EMAIL

you@example.com

PASSWORD

CONFIRM PASSWORD

Create Account

Already have an account? [Sign In](#)

Search for Food

COSTCO

Food Court Nutrition Tracker

Find Food

Calendar

Cart

SEARCH TYPE

Search Items

Search for items...

Search

Acai Bowl

+

Calories	330
Protein	4g
Carbs	61g
Fats	9g
Fiber	8g

\$5

Beef Brisket Sandwich

+

Calories	890
Protein	52g
Carbs	64g
Fats	44g
Fiber	3g

\$5

Berry Smoothie

+

Calories	290
Protein	2g
Carbs	71g
Fats	1g
Fiber	5g

\$3

Caesar Salad

+

Calories	650
Protein	23g
Carbs	20g
Fats	52g
Fiber	4g

\$4

Chicken Bake

+

Calories	770
Protein	46g
Carbs	70g
Fats	26g
Fiber	3g

\$4

Chicken Caesar Salad

+

Calories	680
Protein	32g
Carbs	18g
Fats	50g
Fiber	4g

\$4

Calendar Page

COSTCO

Food Court Nutrition Tracker

Find Food

Calendar

Cart

◀

November 2025

▶

SUN

MON

TUE

WED

THU

FRI

SAT

1

2

3

4

5

6

7

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25

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27

28

29

30

● Order Placed

Saturday, November 1, 2025

Order #1001

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"

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

Current Order

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

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>