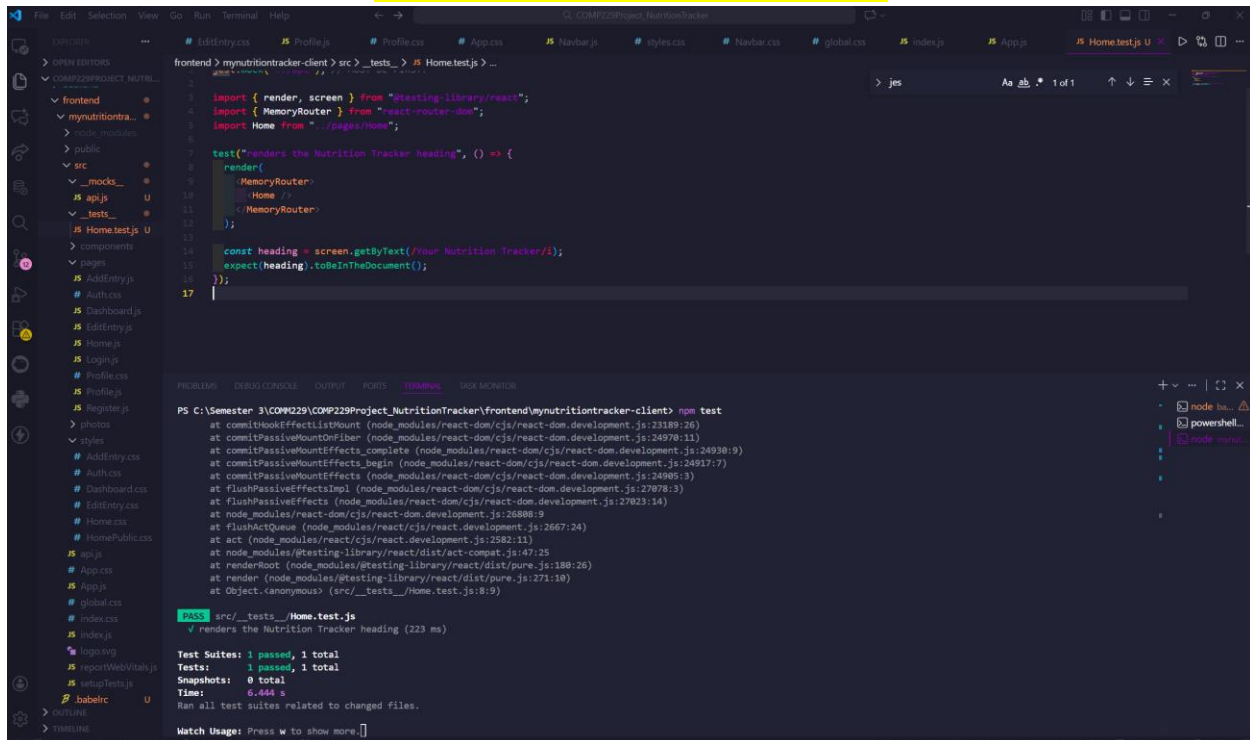


Project Part 4

PART 1 Unit Test: Home Page Rendering Test



```
front> mynutritiontracker-client> src> _tests_> Home.test.js> ...  
1  
2 import { render, screen } from '@testing-library/react';  
3 import { MemoryRouter } from 'react-router-dom';  
4 import Home from '../pages/Home';  
5  
6 test('renders the Nutrition Tracker heading', () => {  
7   render(  
8     <MemoryRouter>  
9       <Home />  
10    </MemoryRouter>  
11  );  
12  
13   const heading = screen.getByText(/Your Nutrition Tracker/i);  
14   expect(heading).toBeInTheDocument();  
15 });  
16  
17  
PROBLEMS DEBUG CONSOLE OUTPUT PORTS TERMINAL TASK MONITOR  
PS C:\Semester 3\COMP229\Project_NutritionTracker\frontend\mynutritiontracker-client> npm test  
at commitHookEffectListMount (node_modules/react-dom/cjs/react-dom.development.js:23189:26)  
at commitPassiveMountOnFiber (node_modules/react-dom/cjs/react-dom.development.js:24978:11)  
at commitPassiveMountEffects_complete (node_modules/react-dom/cjs/react-dom.development.js:24938:9)  
at commitPassiveMountEffects_begin (node_modules/react-dom/cjs/react-dom.development.js:24917:7)  
at commitPassiveMountEffects (node_modules/react-dom/cjs/react-dom.development.js:24905:3)  
at flushPassiveEffectsImpl (node_modules/react-dom/cjs/react-dom.development.js:27078:3)  
at flushPassiveEffects (node_modules/react-dom/cjs/react-dom.development.js:27023:14)  
at node_modules/react-dom/cjs/react-dom.development.js:26888:9  
at flushActQueue (node_modules/react/cjs/react.development.js:2667:24)  
at act (node_modules/react/cjs/react.development.js:2582:11)  
at node_modules/@testing-library/react/dist/act-compat.js:47:25  
at renderRoot (node_modules/@testing-library/react/dist/pure.js:180:26)  
at render (node_modules/@testing-library/react/dist/pure.js:271:10)  
at Object.<anonymous> (src/_tests_/Home.test.js:8:9)  
  
PASS src/_tests_/Home.test.js  
✓ renders the Nutrition Tracker heading (223 ms)  
  
Test Suites: 1 passed, 1 total  
Tests: 1 passed, 1 total  
Snapshots: 0 total  
Time: 6.464 s  
Ran all test suites related to changed files.  
Watch Usage: Press w to show more.
```

For Part I of the assignment, I wrote a unit test using **Jest** and **React Testing Library** to verify that the Home page renders the main heading correctly. The test checks whether the text “**Your Nutrition Tracker**” appears when the Home component is rendered inside a React Router environment.

The test file is located in:

src/_tests_/Home.test.js

The test uses:

- render() from React Testing Library
- MemoryRouter to simulate routing
- A mock API module to avoid real network requests

When running the command:

npm test

The results show:

- **Test Suites: 1 passed**
- **Tests: 1 passed**
- No failures or warnings
- Jest successfully executed the unit test and confirmed that the component renders the expected heading.

This confirms that the Home page UI loads correctly, and the component behavior works as intended.

Project Part 4

Deployment using render: BEFORE I CLICKED DEPLOY

My Workspace

New Web Service

Search

+ New

Upgrade

New Web Service

Source Code

Mushfiqul / MyNutritionTracker • 2h ago

Edit

Name
A unique name for your web service.

MyNutritionTracker

Language
Choose the runtime environment for this service.

Node

Branch
The Git branch to build and deploy.

main

Region
Your services in the same region can communicate over a private network.

Virginia (US East)

Root Directory Optional
If set, Render runs commands from this directory instead of the repository root. Additionally, code changes outside of this directory do not trigger an auto-deploy. Most commonly used with a monorepo.

backend

Build Command
Render runs this command to build your app before each deploy.

backend/ \$ npm install

Start Command
Render runs this command to start your app with each deploy.

backend/ \$ npm start

Instance Type

- Zero Downtime
- SSH Access
- Scaling
- One-off jobs
- Support for persistent disks

Pro \$85 / month	4 GB (RAM) 2 CPU	Pro Plus \$175 / month	8 GB (RAM) 4 CPU
Pro Max \$225 / month	16 GB (RAM) 4 CPU	Pro Ultra \$450 / month	32 GB (RAM) 8 CPU

Need a custom instance type? We support up to 512 GB RAM and 64 CPUs.

Environment Variables
Set environment-specific config and secrets (such as API keys), then read those values from your code. [Learn more.](#)

MONGO_URI

.....

JWT_SECRET

.....

PORT

.....

+ Add Environment Variable

Add from env

> Advanced

Deploy Web Service

Project Part 4

Confirmation of successful backend deployment on RENDER:

The screenshot shows the Render dashboard for a project named "MyNutritionTracker". The service is a "WEB SERVICE" running on "Node" with a "Free" plan. The service ID is "srv-d4pmreuk2gs738tan0". The deployment is successful, and the service is live. The logs show the following steps:

- Dec 5 06:52:19 PM: `npm install`
- Dec 5 06:52:31 PM: `npm start`
- Dec 5 06:52:32 PM: `comp229project_nutritiontracker@1.0.0 start`
- Dec 5 06:52:32 PM: `node server.js`
- Dec 5 06:52:36 PM: Server running on port 10000
- Dec 5 06:52:37 PM: MongoDB Connected: `ao-qigedw-shard-00-02.tbqj615.mongodb.net`
- Dec 5 06:52:40 PM: `Your service is live`
- Dec 5 06:52:41 PM: Available at your primary URL: `https://mynutritiontracker.onrender.com`

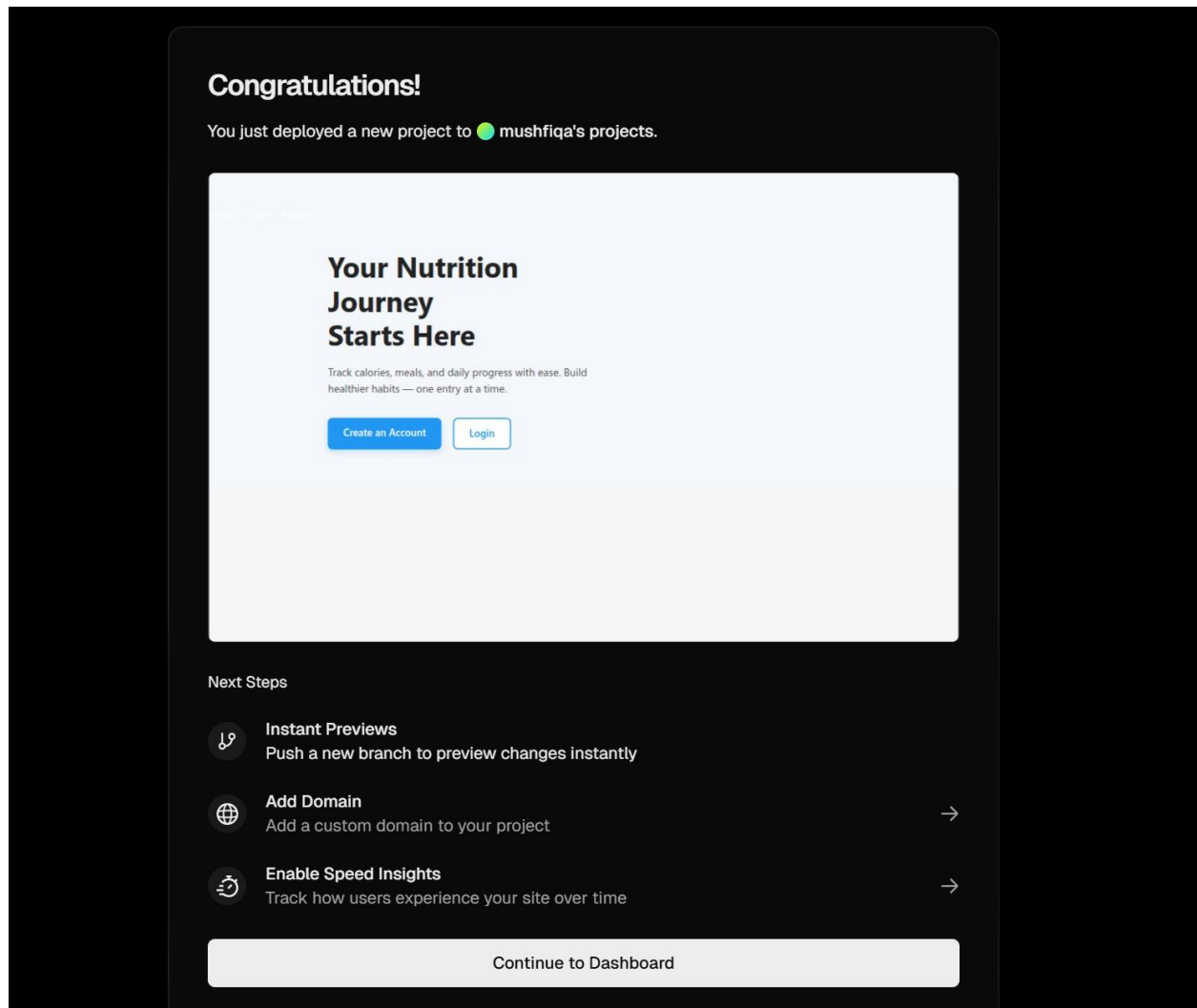
Deployment of frontend on versal:

The screenshot shows the Vercel "New Project" screen. The project is imported from GitHub, specifically from the repository "Mushfiqa1/MyNutritionTracker" at the "main" branch, with the root directory set to "frontend/mynutritiontracker-client". The project name is "my-nutrition-tracker". The framework preset is "Create React App". The root directory is "frontend/mynutritiontracker-client". The environment variables section shows the following configuration:

Key	Value
REACT_APP_API_URL	https://mynutritiontracker.onrender.com

The deployment status is "Deploying..."

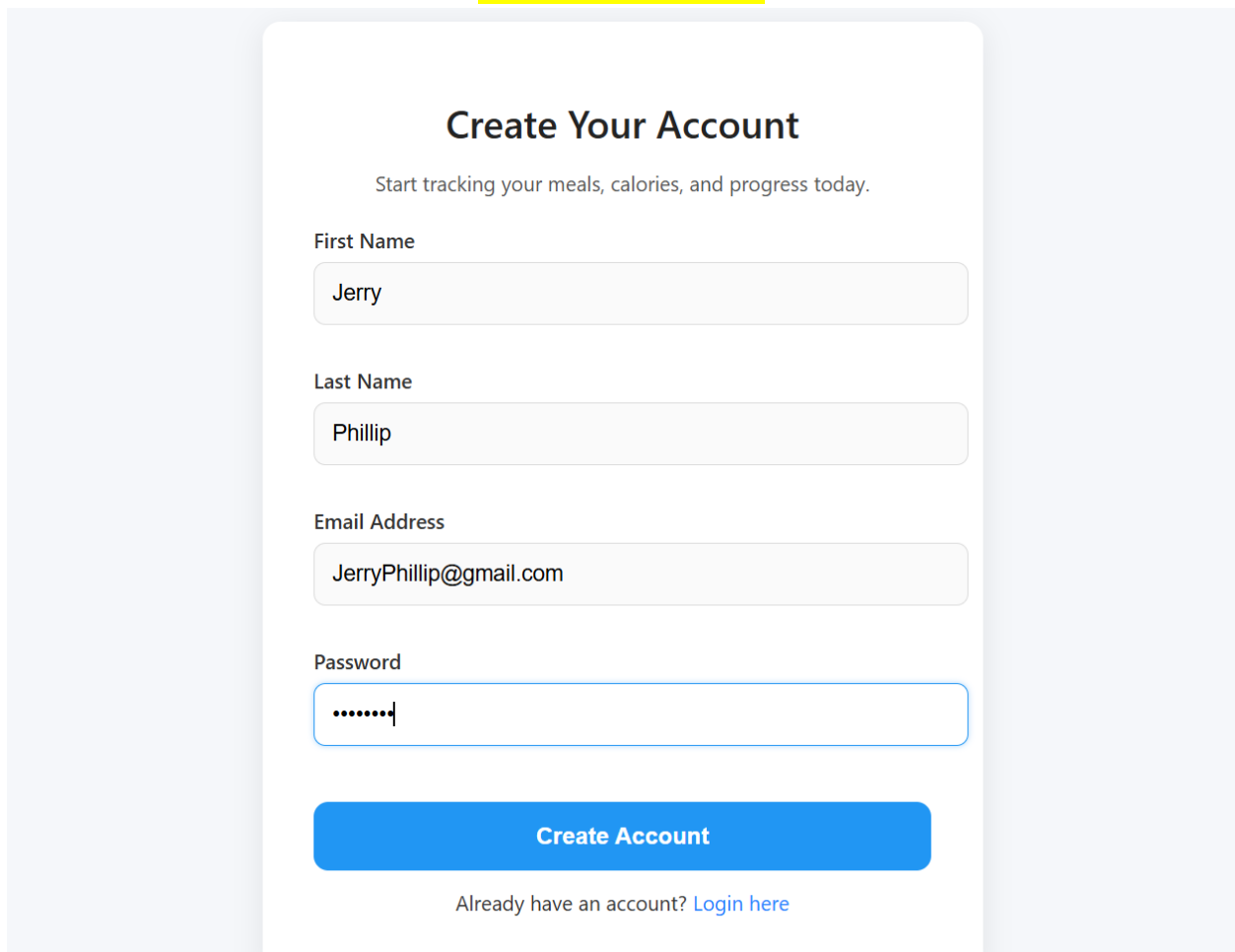
Project Part 4



Link to frontend deployment: <https://my-nutrition-tracker.vercel.app/>

Project Part 4

TESTING SCREENSHOTS:



Create Your Account

Start tracking your meals, calories, and progress today.

First Name

Jerry

Last Name

Phillip

Email Address

JerryPhillip@gmail.com

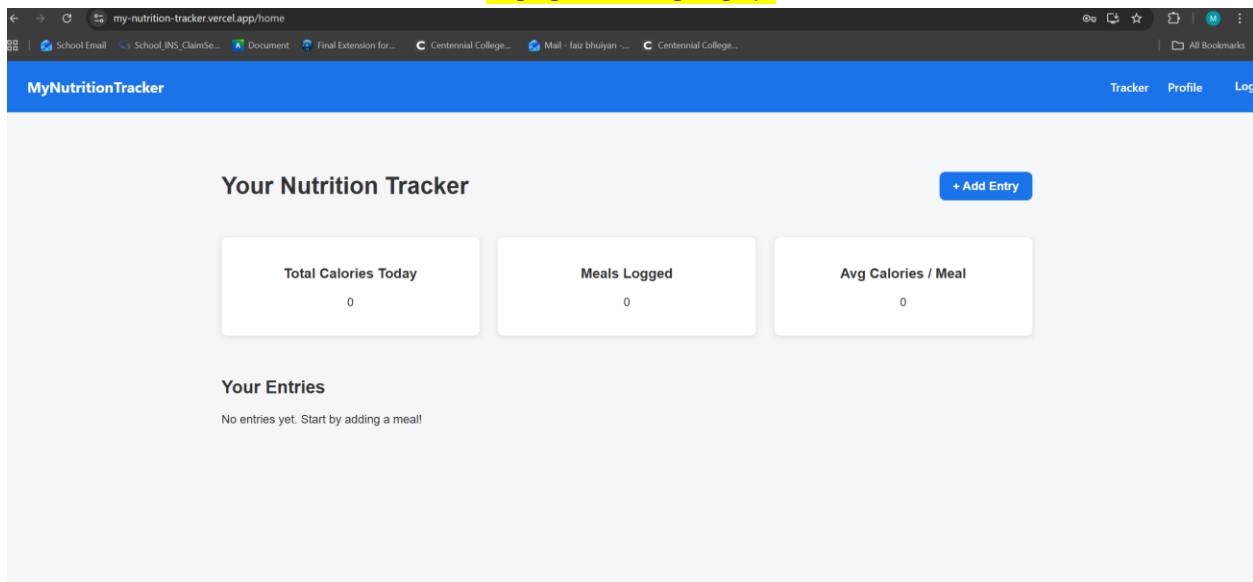
Password

.....

Create Account

Already have an account? [Login here](#)

Logging in after signing up:



my-nutrition-tracker.vercel.app/home

School Email School_INS_ClaimSe... Document Final Extension for... Centennial College... Mail - faiz bhuiyan ... Centennial College... All Bookmarks

MyNutritionTracker Tracker Profile Log

Your Nutrition Tracker + Add Entry

Total Calories Today 0	Meals Logged 0	Avg Calories / Meal 0
----------------------------------	--------------------------	---------------------------------

Your Entries

No entries yet. Start by adding a meal!

Project Part 4

Adding entry:

Add Nutrition Entry

Food Name

Chicken Breast

Calories

400

Protein (g)

30

Carbs (g)

22

Fats (g)

8

+ Add Entry

Entry is added to Dashboard:

MyNutritionTrackerTrackerProfileLog Out

Your Nutrition Tracker

+ Add Entry

Total Calories Today

400

Meals Logged

1

Avg Calories / Meal

400

Your Entries

Chicken Breast

Calories: 400

Protein: g

Carbs: 22g

Fats: g

12/5/2025

EditDelete

Updating entry:

Project Part 4

Edit Nutrition Entry

Food Name

Chicken LEG

Calories

400

Protein (g)

15

Carbs (g)

22

Fats (g)

Update Entry

Updated entry:

MyNutritionTracker

Tracker Profile Log

Your Nutrition Tracker

+ Add Entry

Total Calories Today

400

Meals Logged

1

Avg Calories / Meal

400

Your Entries

Chicken leg

Calories: 400

Protein: 15g

Carbs: 22g

Fats: g

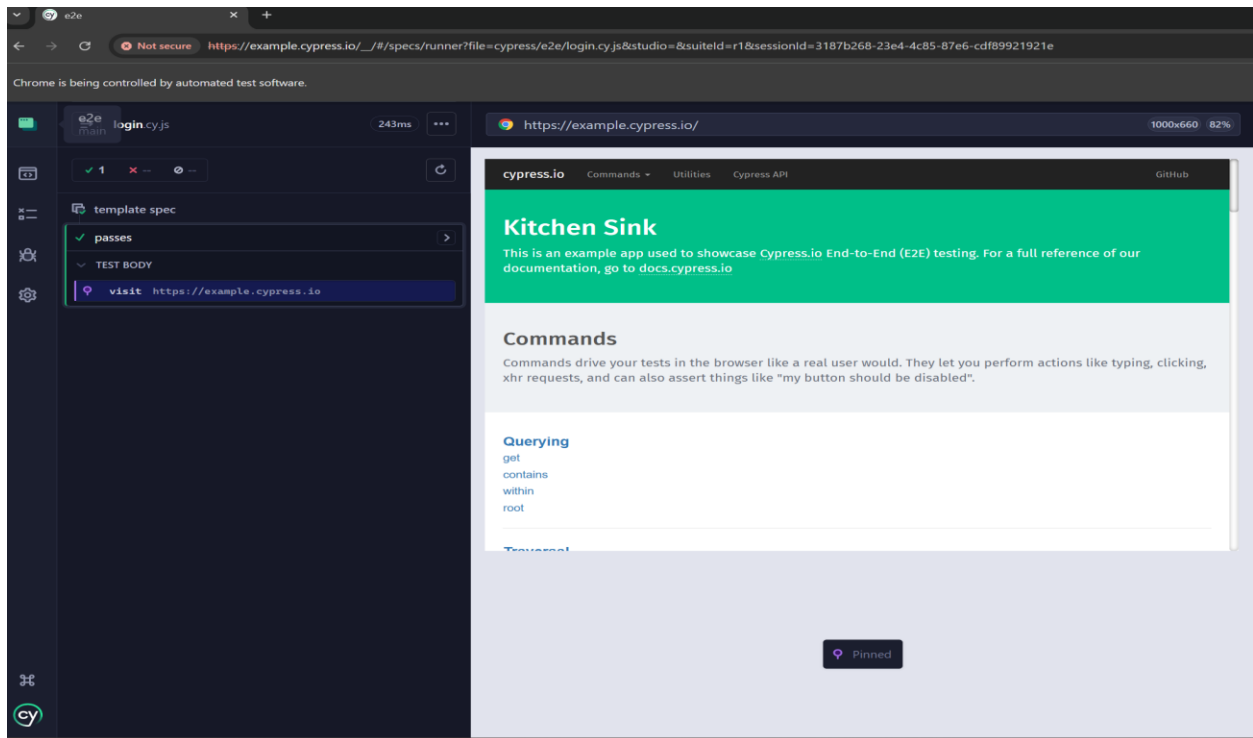
12/5/2025

Edit

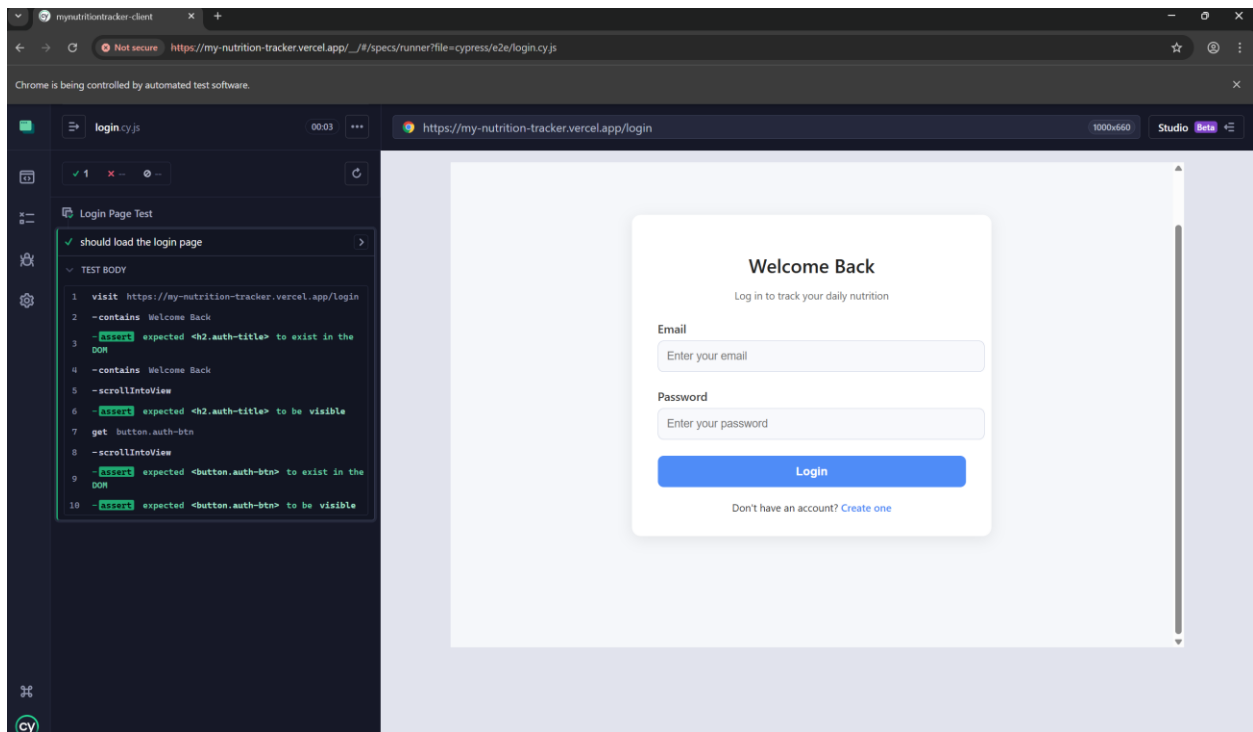
Delete

Project Part 4

E2e TEST:

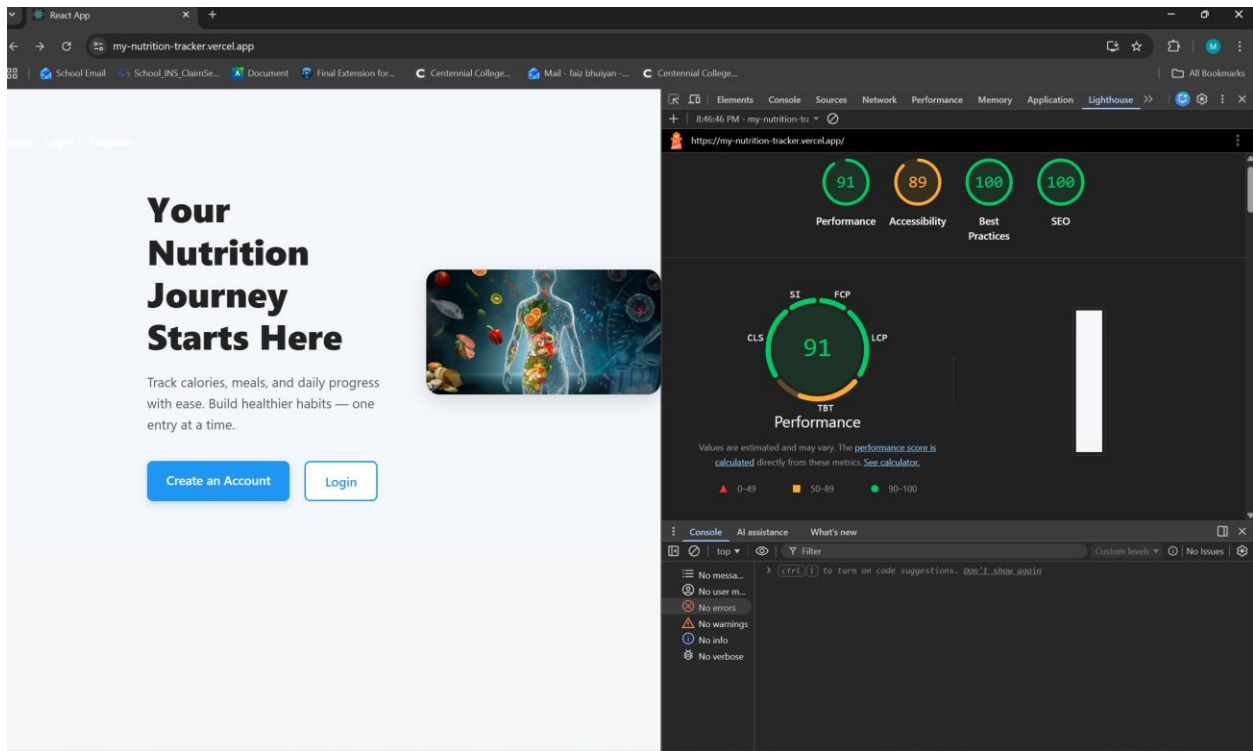


E2e test on deployed app:



Project Part 4

LIGHTHOUSE PERFORMANCE LEVELS: BEFORE

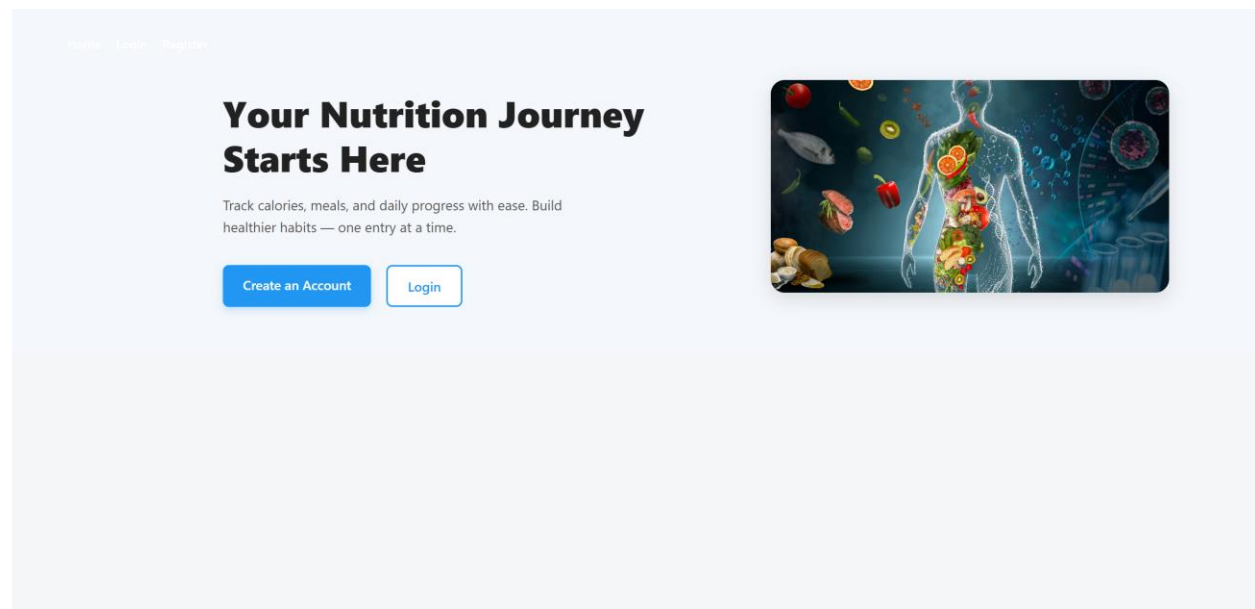


Performance Improvement Suggestions:

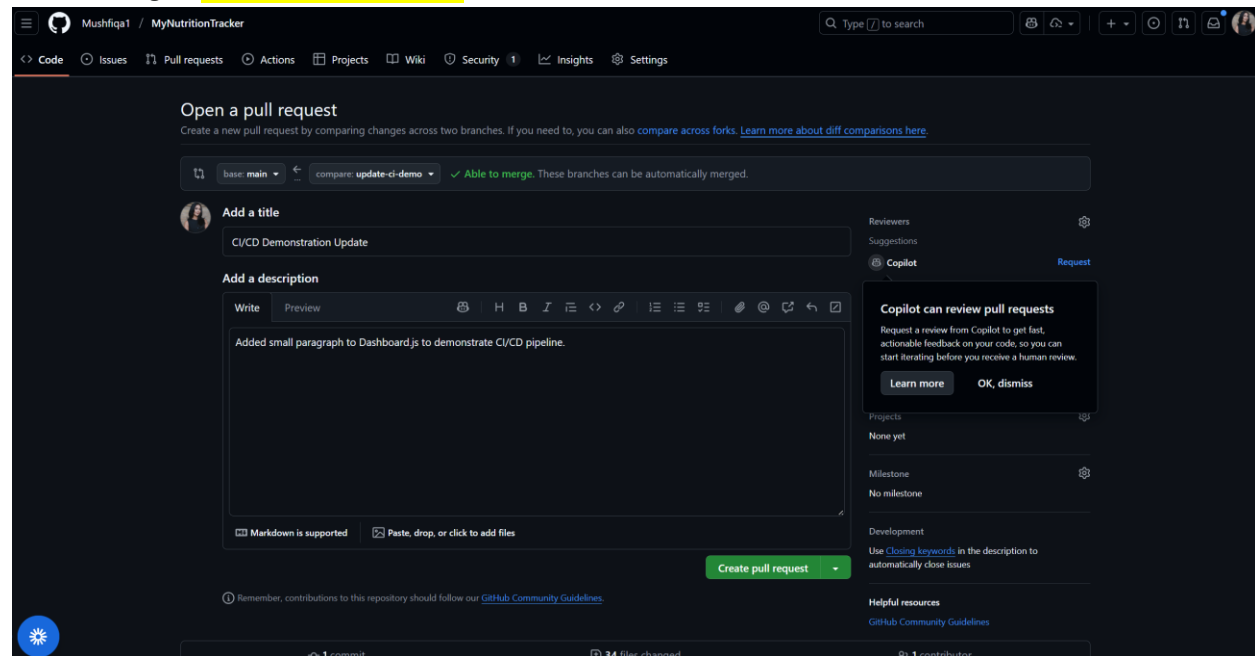
1. Removed unused console logs
Reduced unnecessary console statements in frontend components to speed up JavaScript execution.
2. Minimized image sizes
Ensured the logo and UI images are optimized for faster loading.
3. Enabled React lazy loading for pages
Used `React.lazy()` to load non-critical pages only when needed, improving initial load speed.
4. Optimized API calls
Made sure only required data is fetched on load and removed redundant API calls.
5. Minimized CSS and JS bundle size
Ensured unused imports were removed to reduce total bundle size.

BEFORE changes:

Project Part 4



AFTER changes: **CI/CD Demonstration**



Project Part 4

The screenshot shows the Vercel Deployment Details page for a project named "Your Nutrition Journey Starts Here". The page has a dark theme. At the top, there are buttons for "Share", "Visit", and a menu icon. The main content area is divided into several sections:

- Deployment Summary:** Shows the deployment was created by "Mushfiqal" 2m ago, is in a "Ready Latest" status, took "43s" to complete, and was deployed "1m ago". It lists two domains: "my-nutrition-tracker-git-update-ci-demo-mushfiqas-projects.vercel.app" and "my-nutrition-tracker-e5i9rxjib-mushfiqas-projects.vercel.app". The source is "update-ci-demo" with commit "0c846d5" and a message "Fix missing dependencies and rebuild frontend".
- Deployment Settings:** Shows "3 Recommendations".
- Build Logs:** Shows a warning icon and "43s".
- Deployment Summary:** Shows a "Resources" link.
- Deployment Checks:** Shows a "Skipped" status.
- Assigning Custom Domains:** Shows a "Skipped" status.
- Runtime Logs:** View and debug runtime logs & errors.
- Observability:** Monitor app health & performance.
- Speed Insights:** Performance metrics from real users (Not Enabled).
- Web Analytics:** Analyze visitors & traffic in real-time (Not Enabled).

The screenshot shows the web application "Your Nutrition Journey Starts Here". The page has a light blue background. The title "Your Nutrition Journey Starts Here" is prominently displayed. Below the title, there is a paragraph: "Track calories, meals, and daily progress with ease. Build healthier habits — one entry at a time." Below this paragraph, there is a note: "This project was updated as part of the CI/CD demonstration." At the bottom, there are two buttons: "Create an Account" and "Login". On the right side of the page, there is a large, colorful illustration of a human silhouette filled with various fruits and vegetables, representing nutrition.

CI/CD Demonstration Summary

To demonstrate CI/CD, I made a small update to my project by adding a new paragraph on the Dashboard page. I created a new branch (update-ci-demo), committed the change, and pushed it to GitHub. Then, I opened a Pull Request and merged it into the main branch.

Once the merge happened, Vercel automatically detected the update, rebuilt the project, and deployed a new production version without me needing to manually redeploy anything. After the deployment finished, I visited my live website and verified that the new paragraph appeared, confirming that the CI/CD pipeline was working successfully.

Project Part 4

LINKS:

LINK TO GITHUB: <https://github.com/Mushfiqua1/MyNutritionTracker.git>

LINK TO DEPLOYMENT ON VERSAL: <http://my-nutrition-tracker-e5i9rxrb-mushfiquas-projects.vercel.app/>