COIT20269 MOBILE WEB APP DEVELOPMENT (HT1, 2025)

Assignment 2 - Full Stack Hybrid App

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Lecturer and Tutor

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Word count: 632 words

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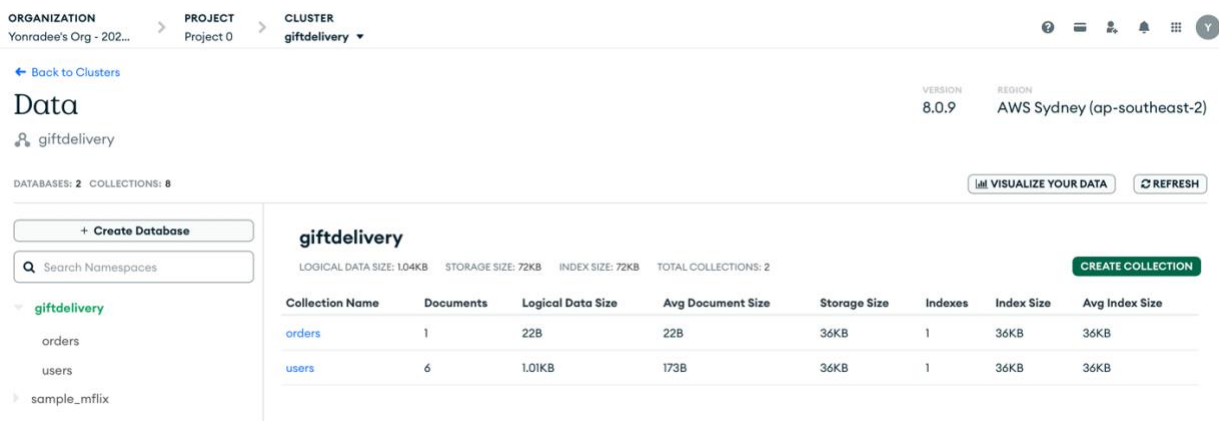# 1. Database Creation

Figure1: MongoDB Atlas dashboard

- Cluster

- Database name: giftdelivery
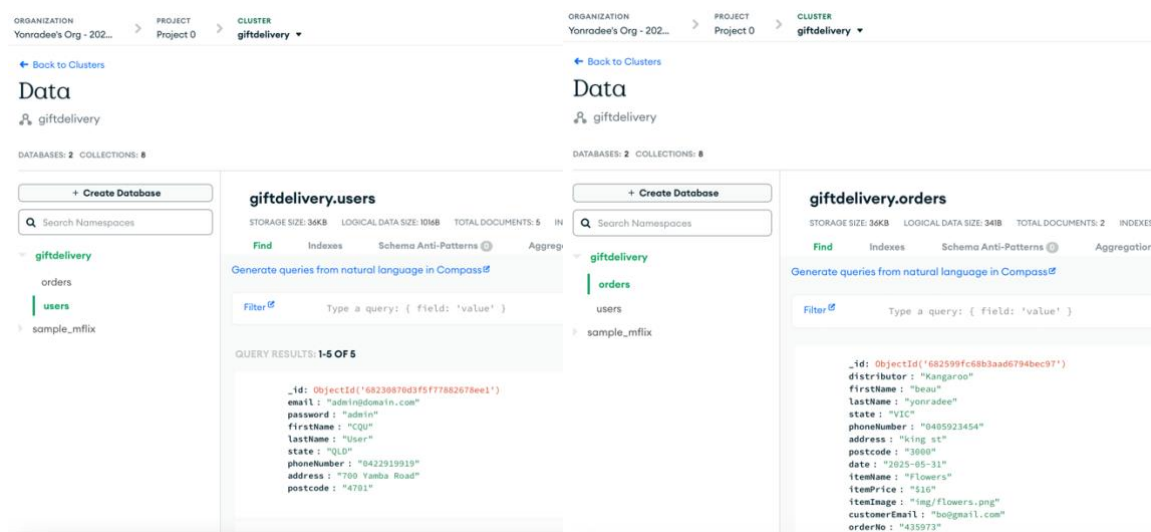
- Collections: users, orders

Figure2: Example of users and orders interface

I created the giftdelivey database on MongoDB and added 2 collections, which are users for account user information and orders for collecting gift orders.

2. API Testing

In API testing process, I used Postman to test all RESTful endpoints to check if the server handles data correctly. Each response was verified for correctness.
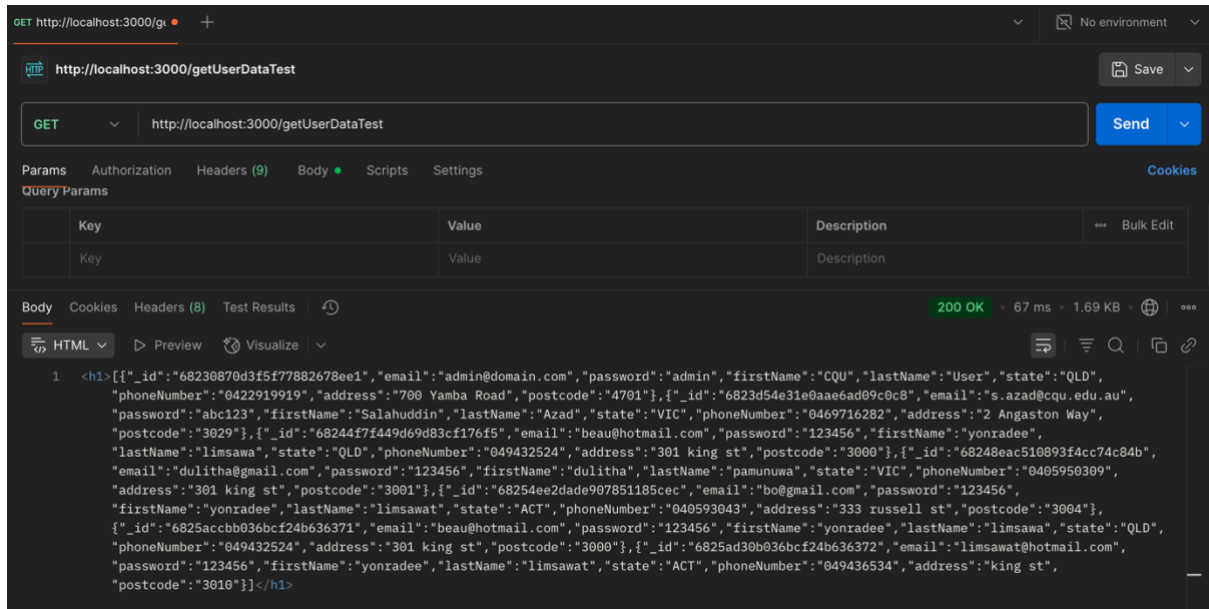
- GET /getUserDataTest

Figure3: Get user data test with GET method
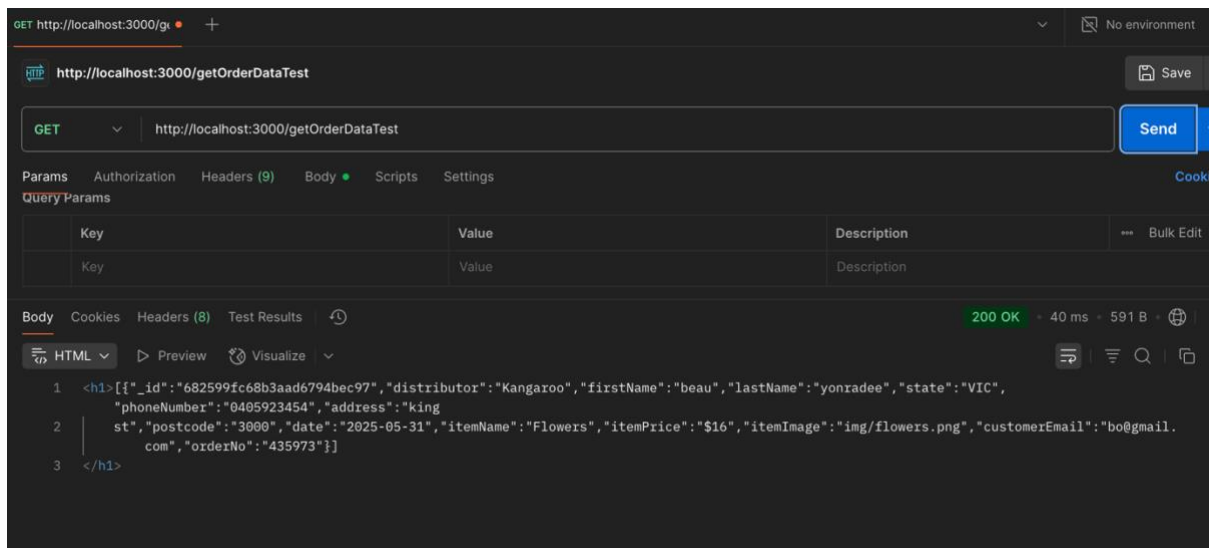
- GET /getOrderDataTest

Figure4: Get order test with GET method
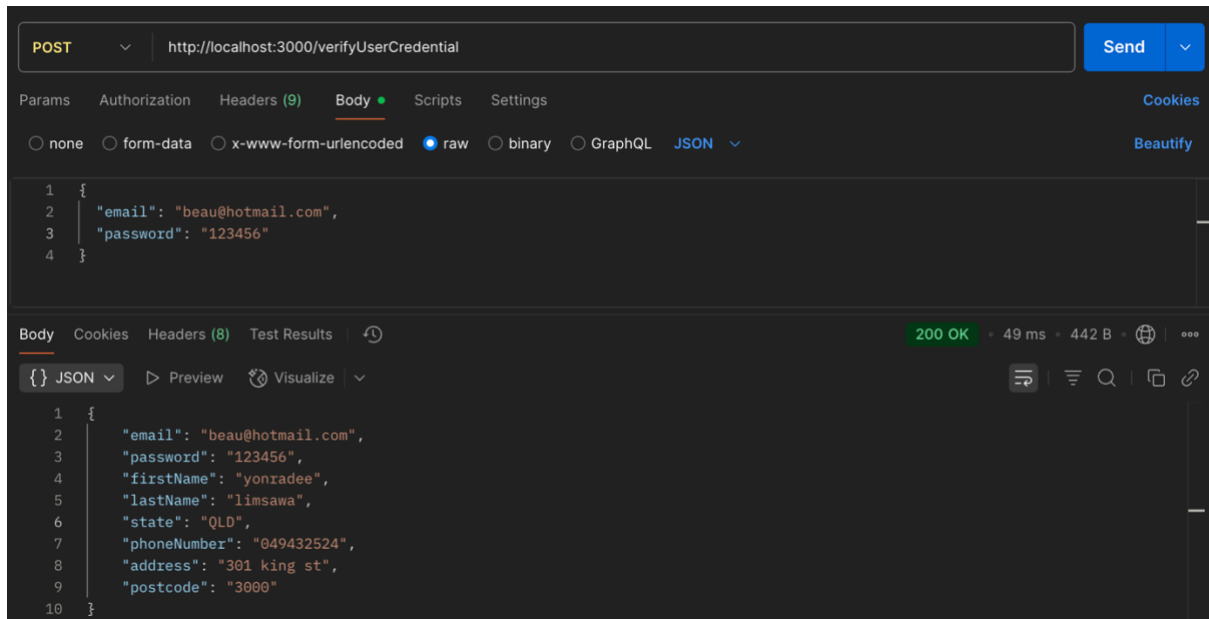
- POST /verifyUserCredential

Figure5: Verify user credential with POST method
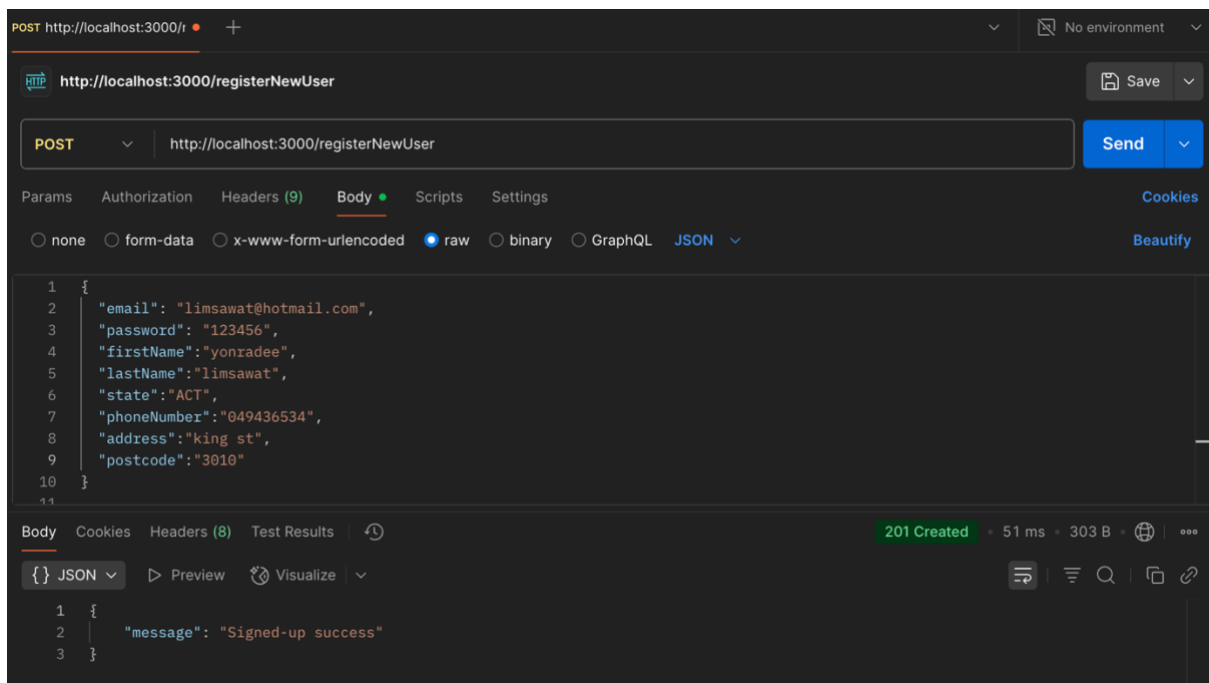
- POST /registerNewUser

Figure6: Register new user with POST method
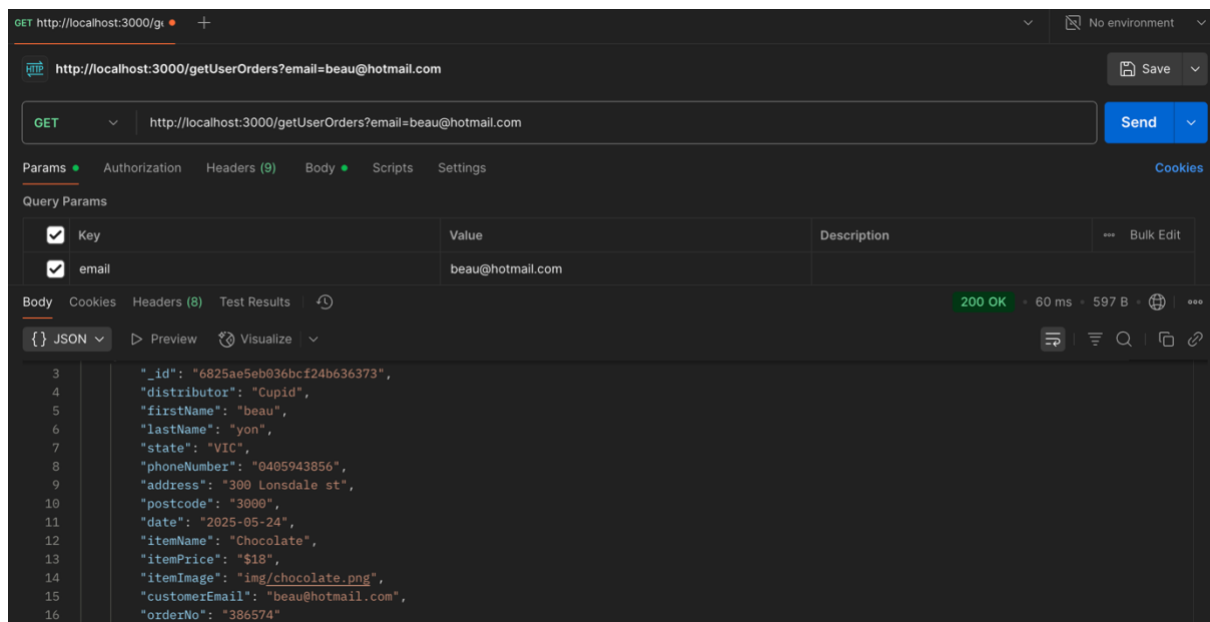
- GET / getUserOrders

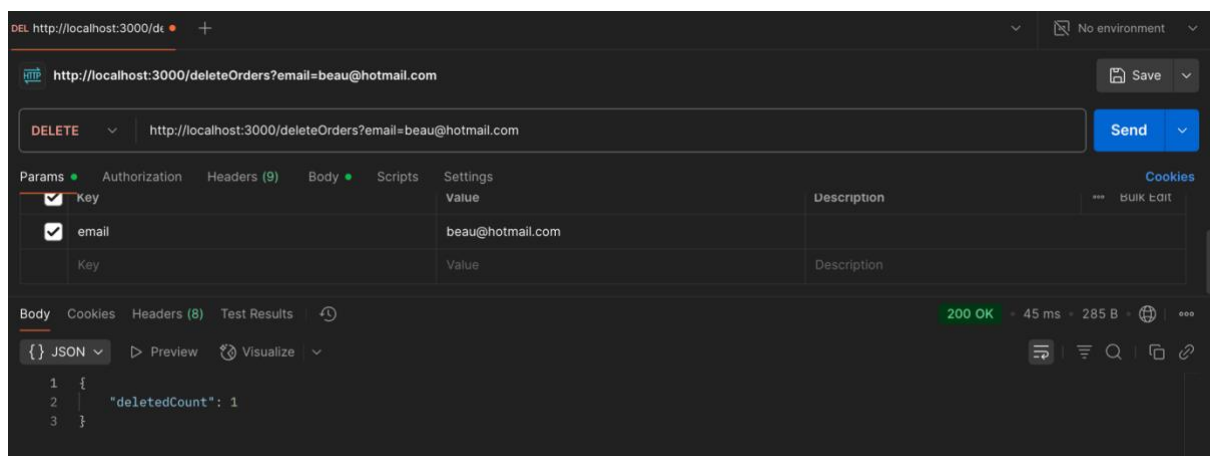Figure7: Get user order with GET method

- DELETE /deleteOrders

Figure8: Delete user order with DELETE method

3. User Acceptance Testing (UAT)

I tested the complete user flow from sign-up to delete order. The steps and results of the testing are explained below.

3.1 Sign Up Page

- Action: Open the app and go to the Sign-Up page.
- Input: Filled all 8 inputs with valid information.
- Validation: Tested form with blank fields and existing email to confirm error message
- Result:
  - Error message displayed correctly for empty input and duplicated email.
  - Successful submission stored user data in database.
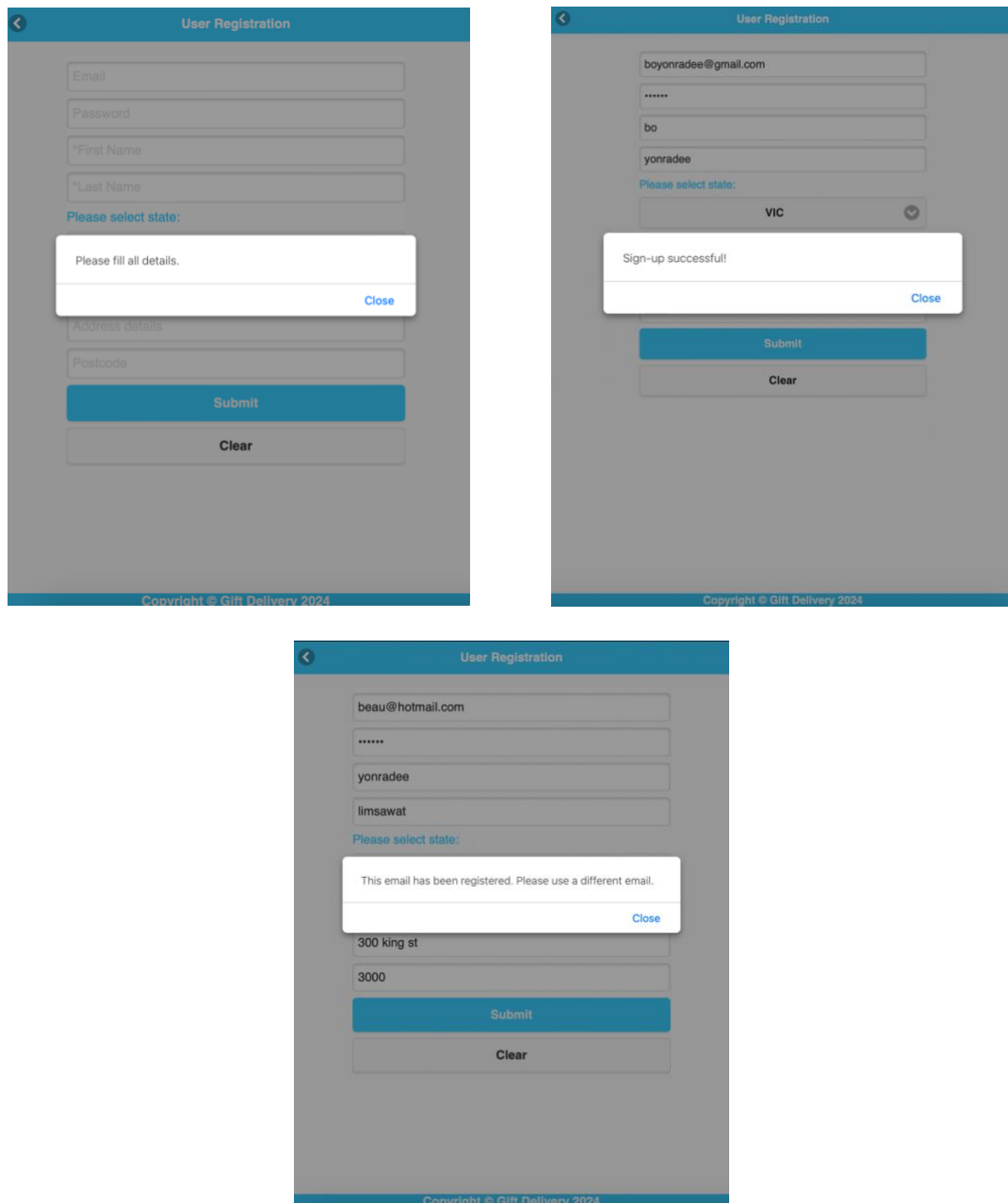 - A success message was shown and redirect to home page.

Figure9: Sign-up page

3.2 Login Page

- Action: Entered the registered email and password from step 1.
- Validation:
  - o Tested with incorrect password - "Loging failed"
  - o Tested with correct credentials – "Login success" redirect to the homepage
- Result:
  - o Successful login validated against database
  - o Error message showed after invalid password or email

_id: ObjectId('6825b7c2b036bcf24b636375')
email : "boyonradee@gmail.com"
password : "123456"
firstName : "bo"
lastName : "yonradee"
state : "VIC"
phoneNumber : "0405666888"
address : "300 Little Lonsdale St"
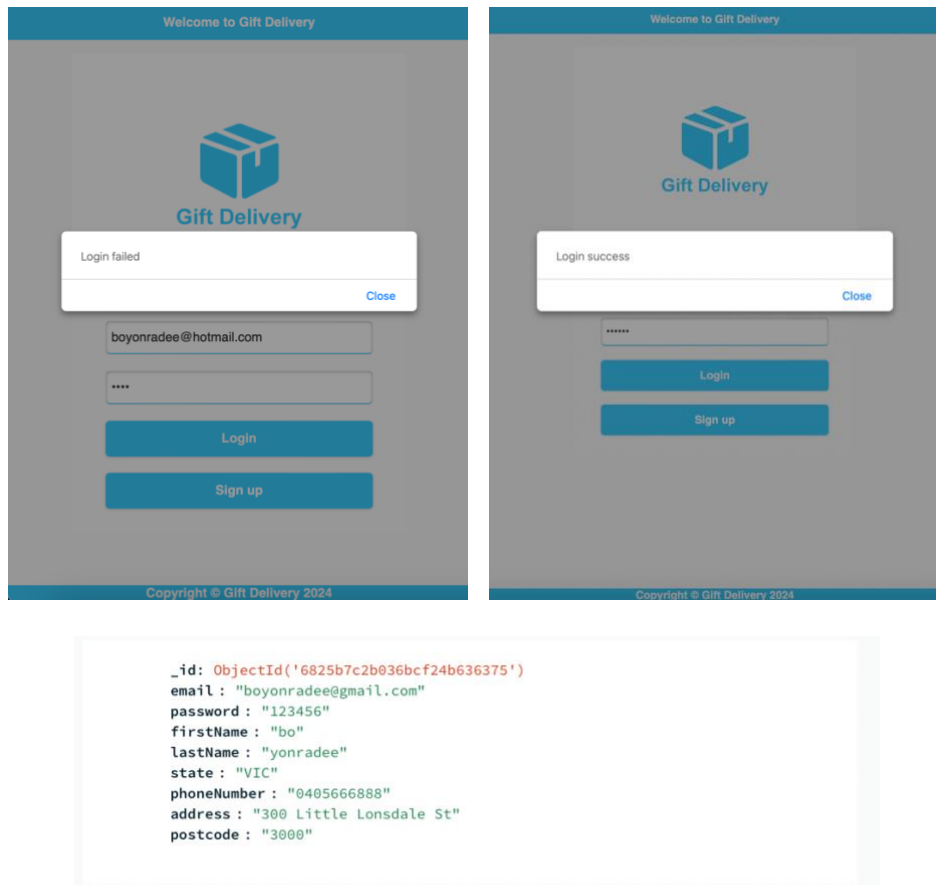postcode : "3000"

Figure10: Login page

3.3 Home page

- Action: home page displayed 3 links with icon and description
    - Order a Gift Item
    - See Past Orders
    - Delete Orders

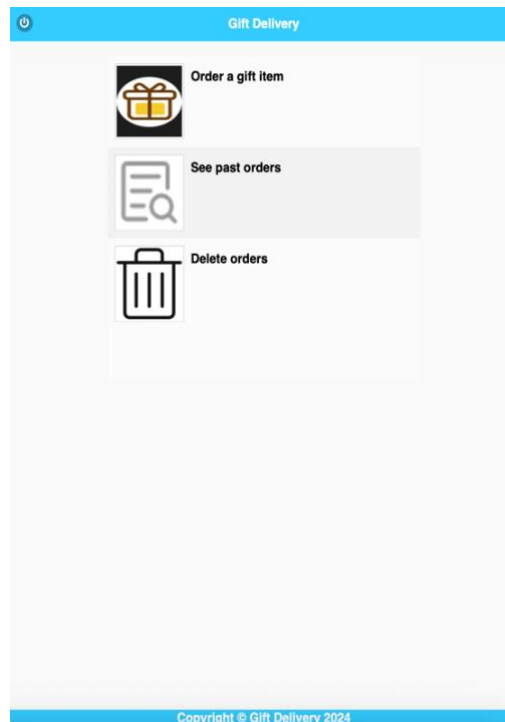- Result: Verified that clicking in each link navigates to the correct page

Figure11: Home page

3.4 Order List Page

- Action: After logging in, clicked "See past orders" link.
- Function: Sent a Post request to the backend to get orders for the current user.
- Result:
  - Displayed only the orders made by the logged-in user.
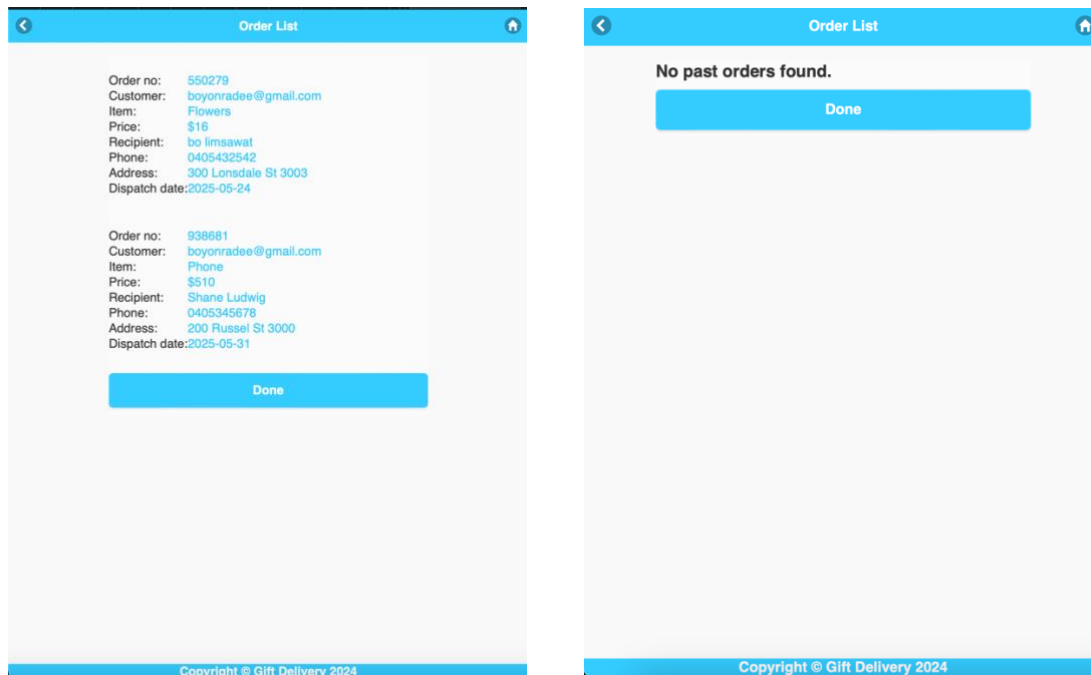 - Message shown if user had no previous orders.

Figure12: Order List page

3.5 Delete Confirmation Page

- Action: Clicked on "Delete Orders" link
- Function: sent a DELETE request to backend for that user's order
- Result:
  - Message shown to confirm the user's request.
  - Orders were deleted from database.
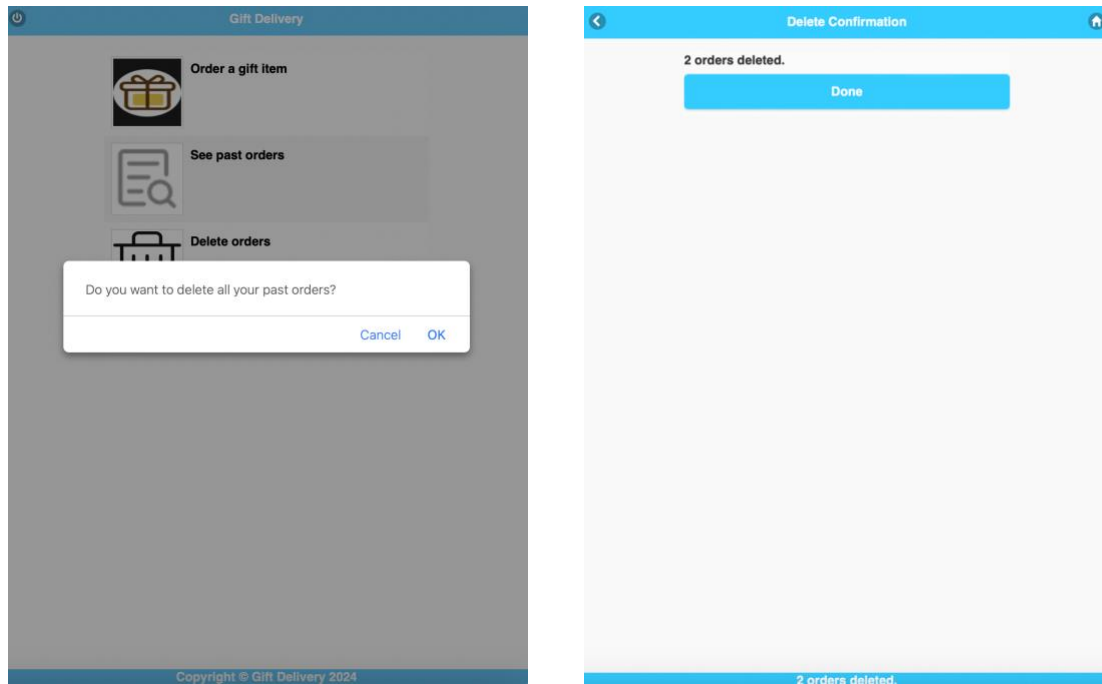 - The number of deleted orders were displayed.

Figure13: Delete Confirmation page

4. Hybrid app

The Gift Delivery was developed as a hybrid app using Apache Cordova, which were supported both browser and Android platforms.
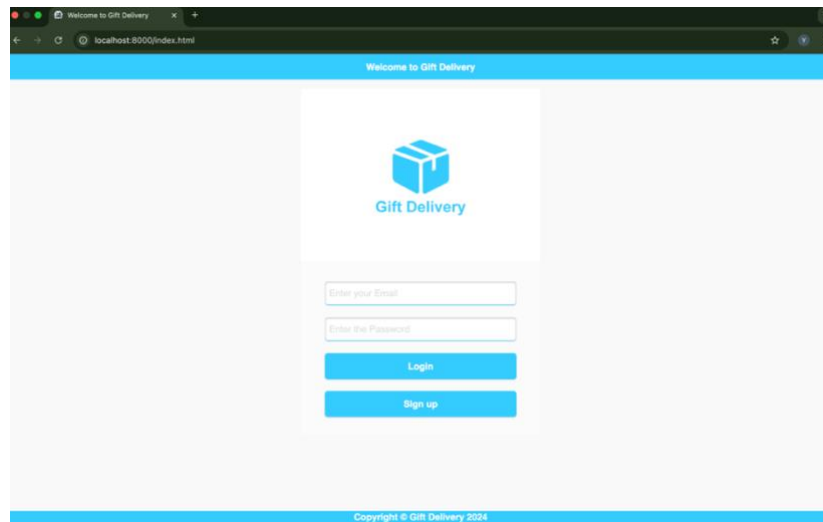
- **Browser**

Figure14: Launch app with Cordova on browser

- The app launched successfully in the browser.
- All main features – sign up, login, view orders and delete orders, were tested and confirmed to be working in the browser environment.
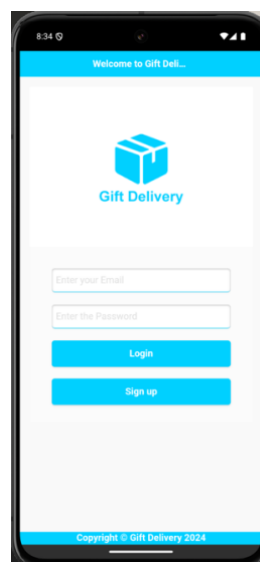
- **Android emulator**

Figure15: Launch app with Cordova on android emulator

- The app was successfully built and deployed on the Android emulator.
- However, functionalities were not working on the emulator as I expected.

5. Feature Summary

5.1 Successfully Implemented

- Sign-up and login with validation
- MongoDB integration via RESTful APIs
- View orders for logged-in user
- Delete past orders by logged-in user
- Cordova hybrid app deployment on browser and Android

5.2 Unsuccessfully Implemented

- Android emulator functionality issue

I successfully launched android emulator on virtual device. However, I was unable to login or sign-up on the emulator. I tried changing the API server IP address to match my local WiFi IP, but the emulator still could not connect to the server.