

# CS3219 OTOT Task C

- **Name:** Ryan Aidan
- **Matric. Number:** A0218327E
- **Repo Link:** <https://github.com/aidanaden/otot-c>

## Tech stack used

- [NextJS](#) (frontend + backend API routes via nextjs' serverless functions)
- [TailwindCSS](#) (frontend styling)
- [Prisma](#) (database ORM)
- MySQL (database used)
- [tRPC](#) (used to set up API routes with end-to-end typesafety)

## Task C: Backend auth

### Requirements

1. MySQL (SQL database used)
2. NodeJS >= v14.19.2
3. [Postman](#) is used to (manually) test CRUD for the API.

### Local Deployment

1. Install docker by clicking [here](#)
2. Install pnpm by clicking [here](#)
3. Copy the `.env-example` file to `.env` and paste the following:

```
# Prisma
DATABASE_URL=mysql://root:root@localhost:3369/mysql

# Next Auth
NEXTAUTH_SECRET=secret

# Calendarific
CALENDARIFIC_API_KEY=00e9be3d9730c3d5504e5c4794788bc428cdeea5
```

4. Run the following commands to deploy the app locally

```
# install packages
pnpm install

# start local mysql db, deploy schema, build source files
pnpm build:local

# run locally
pnpm start
```

### Verify successful deployment

```
# query the /api/activity endpoint
curl http://localhost:3000/api/activity

# expected output
[]
```

## Testing via Postman

### Explanation of HTTP requests:

- Note:

- ## Public role screenshots

[illegible]

### Sign in as user with invalid credentials

Postman interface showing a collection named "cs3219-otot-c" with a sub-collection "Sign in user". The selected request is a POST request to "((API\_URL))/signin". The response status is 500 Internal Server Error, Time: 439 ms, Size: 636 B. The response body is a JSON object:

```
{  "statusCode": 500,  "message": "[\n {\n   \"code\": \"invalid_type\", \n   \"expected\": \"string\", \n   \"received\": \"undefined\", \n   \"path\": [\n     \"email\", \n     ], \n   \"message\": \"Required\", \n   }, \n {\n   \"code\": \"invalid_type\", \n   \"expected\": \"string\", \n   \"received\": \"undefined\", \n   \"path\": [\n     \"password\", \n     ], \n   \"message\": \"Required\", \n   } ]\" }
```

The console shows 6 errors. The first error is a 500 Internal Server Error at http://localhost:3000/api/user/protected. The second error is a 500 Internal Server Error at http://localhost:3000/api/admin/protected. The third error is a 500 Internal Server Error at http://localhost:3000/api/user/signup. The fourth error is a 500 Internal Server Error at http://localhost:3000/api/signin.

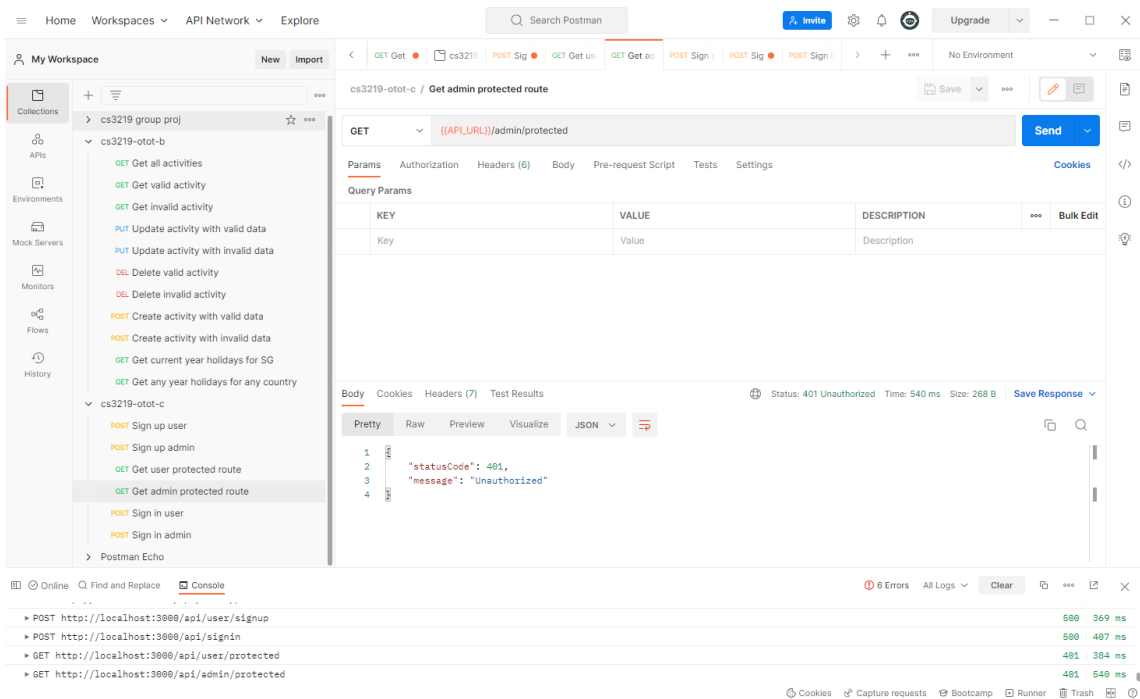
## Test user protected route failure

Postman interface showing a collection named "cs3219-otot-c" with a sub-collection "Get user protected route". The selected request is a GET request to "((API\_URL))/user/protected". The response status is 401 Unauthorized, Time: 364 ms, Size: 268 B. The response body is a JSON object:

```
{  "statusCode": 401,  "message": \"Unauthorized\" }
```

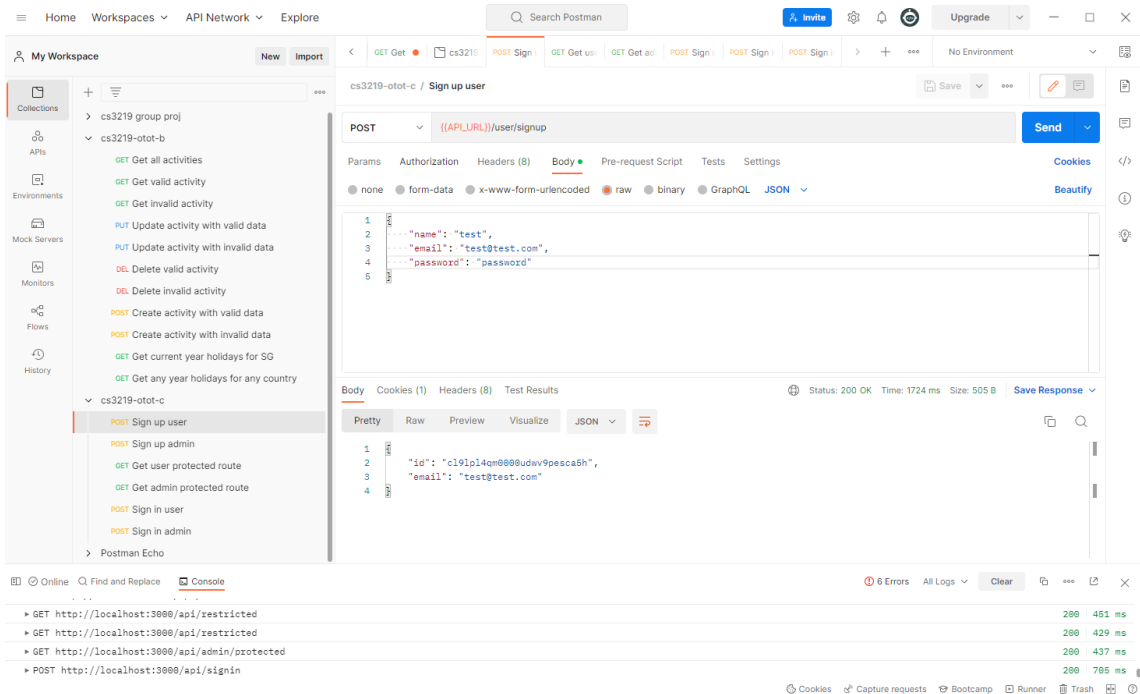
The console shows 6 errors. The first error is a 401 Unauthorized at http://localhost:3000/api/admin/protected. The second error is a 500 Internal Server Error at http://localhost:3000/api/user/signup. The third error is a 500 Internal Server Error at http://localhost:3000/api/signin. The fourth error is a 401 Unauthorized at http://localhost:3000/api/user/protected.

## Test admin protected route failure



## User role screenshots

### Sign up as user with valid credentials



### Sign in as user with valid credentials

Postman interface showing a collection named "cs3219-otot-c" with a sub-collection "Sign in user". The selected request is a POST request to "((API\_URL))/signin". The request body is a JSON object: {"email": "test@test.com", "password": "password"}. The response status is 200 OK, Time: 542 ms, Size: 520 B. The response body is a JSON object: {"role": "USER", "id": "c191p14q000udwv9pesca5h", "email": "test@test.com"}. The console shows the following logs:

```
POST http://localhost:3000/api/signin 200 785 ms
POST http://localhost:3000/api/user/signup 500 652 ms
POST http://localhost:3000/api/user/signup 500 13 ms
POST http://localhost:3000/api/signin 200 642 ms
```

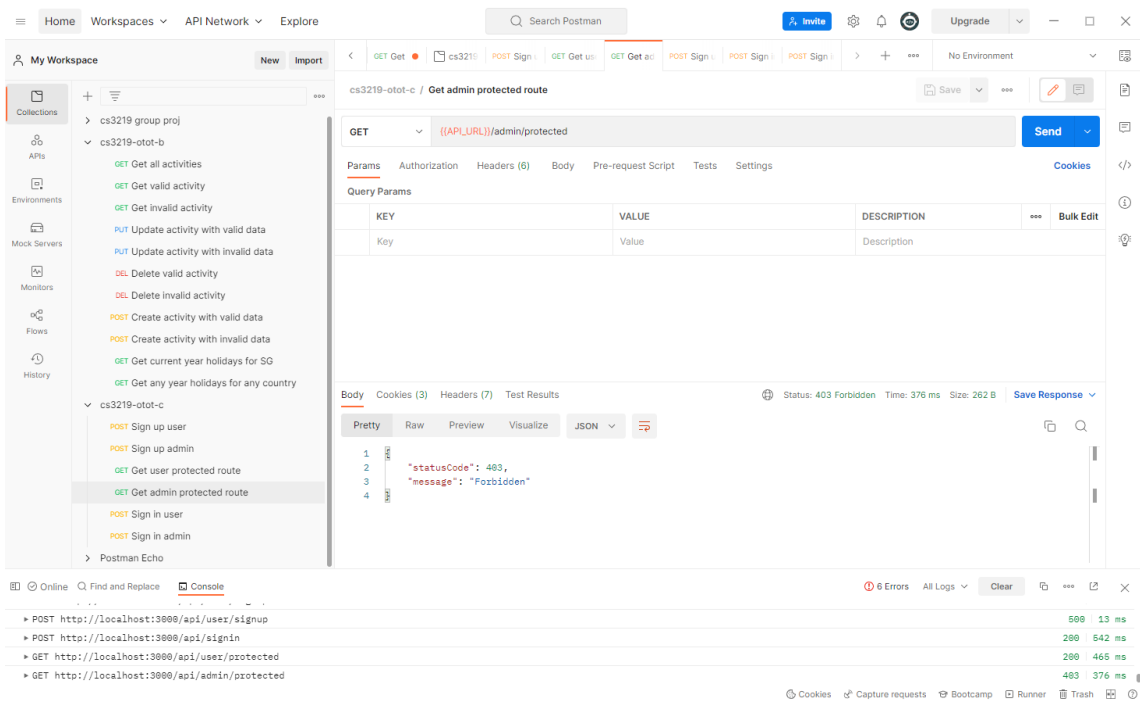
## Test user protected route success

Postman interface showing a collection named "cs3219-otot-c" with a sub-collection "Get user protected route". The selected request is a GET request to "((API\_URL))/user/protected". The response status is 200 OK, Time: 465 ms, Size: 328 B. The response body is a JSON object: {"statusCode": 200, "data": {"id": "c191p14q000udwv9pesca5h", "email": "test@test.com", "role": "USER", "name": "test"}}

The console shows the following logs:

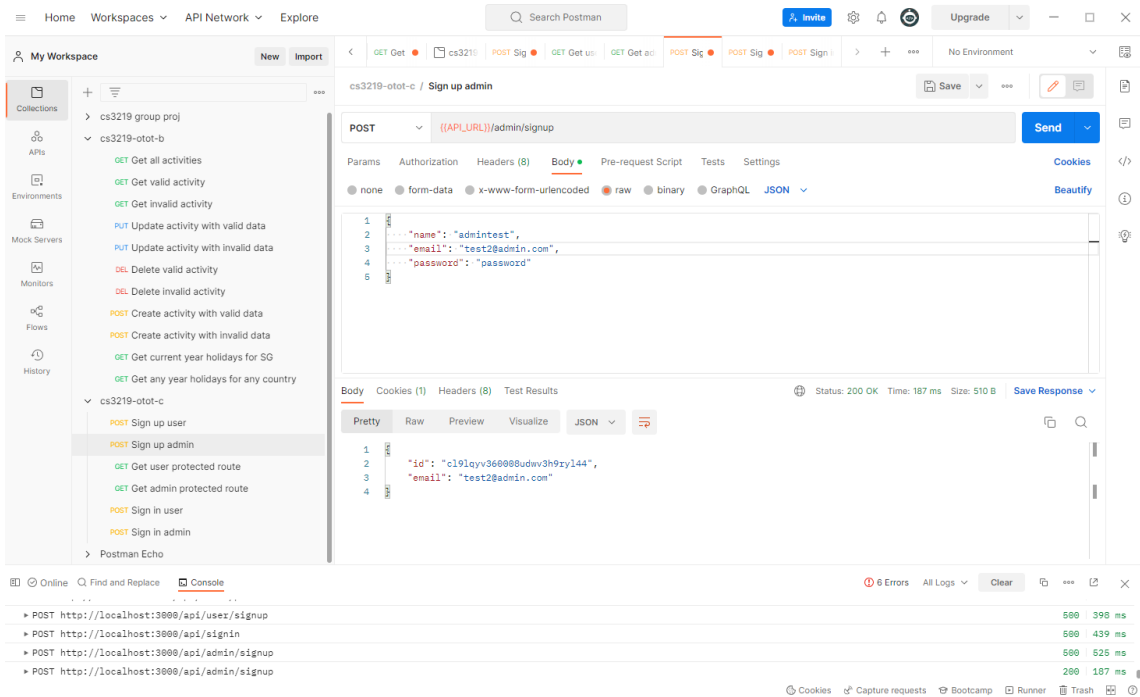
```
POST http://localhost:3000/api/user/signup 500 652 ms
POST http://localhost:3000/api/user/signup 500 13 ms
POST http://localhost:3000/api/signin 200 642 ms
GET http://localhost:3000/api/user/protected 200 465 ms
```

## Test admin protected route failure



## Admin role screenshots

### Sign up as admin with valid credentials



### Sign in as admin with valid credentials

Postman interface showing a collection named "cs3219-otot-c" with a sub-collection "cs3219-otot-b". The selected item is "Sign in admin" (POST). The request body is JSON:

```
{  "email": "test2@admin.com",  "password": "password"}
```

The response is JSON:

```
{  "role": "ADMIN",  "id": "c191qyv36008udwv3h9ry144",  "email": "test2@admin.com"}
```

Status: 200 OK, Time: 464 ms, Size: 525 B.

Console logs show the following requests:

- POST http://localhost:3000/api/signup 500 439 ms
- POST http://localhost:3000/api/admin/signup 500 625 ms
- POST http://localhost:3000/api/admin/signup 200 187 ms
- POST http://localhost:3000/api/signup 200 464 ms

## Test user protected route success

Postman interface showing a collection named "cs3219-otot-c" with a sub-collection "cs3219-otot-b". The selected item is "Get user protected route" (GET). The request body is empty.

The response is JSON:

```
{  "statusCode": 200,  "data": {    "id": "c191qyv36008udwv3h9ry144",    "email": "test2@admin.com",    "role": "ADMIN",    "name": "adminintest"  }}
```

Status: 200 OK, Time: 486 ms, Size: 336 B.

Console logs show the following requests:

- POST http://localhost:3000/api/admin/signup 500 625 ms
- POST http://localhost:3000/api/admin/signup 200 187 ms
- POST http://localhost:3000/api/signup 200 464 ms
- GET http://localhost:3000/api/users/protected 200 486 ms

## Test admin protected route success

HomeWorkspacesAPI NetworkExplore

Search Postman

invite

Upgrade

My Workspace

NewImport

cs3219 group proj

cs3219-otot-b

GET Get all activities

GET Get valid activity

GET Get invalid activity

PUT Update activity with valid data

PUT Update activity with invalid data

DEL Delete valid activity

DEL Delete invalid activity

POST Create activity with valid data

POST Create activity with invalid data

GET Get current year holidays for SG

GET Get any year holidays for any country

cs3219-otot-c

POST Sign up user

POST Sign up admin

GET user protected route

GET admin protected route

POST Sign in user

POST Sign in admin

Postman Echo

cs3219-otot-c / Get admin protected route

Save

GET

{{APL\_URL}}/admin/protected

Send

Params

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Cookies

Query Params

KEY	VALUE	DESCRIPTION
Key	Value	Description

Body

Cookies (1)

Headers (7)

Test Results

Status: 200 OK Time: 386 ms Size: 336 B Save Response

Pretty

Raw

Preview

Visualize

JSON

```
1 {
2   "statusCode": 200,
3   "data": {
4     "id": "c191qyv360088udwv3h9zy144",
5     "email": "test2@admin.com",
6     "role": "ADMIN",
7     "name": "adminintest"
8   }
9 }
```

6 Errors

All Logs

Clear

POST	http://localhost:3000/api/admin/signup	200	187 ms
POST	http://localhost:3000/api/signin	200	464 ms
GET	http://localhost:3000/api/user/protected	200	486 ms
GET	http://localhost:3000/api/admin/protected	200	386 ms

Cookies

Capture requests

Bootcamp

Runner

Trash