OTOT Task B

Name: Erin May Gunawan

Matric No.: A0200765L

GitHub Link: OTOT Task B

Task B1

1. To run the API locally, clone this GitHub repo into your device

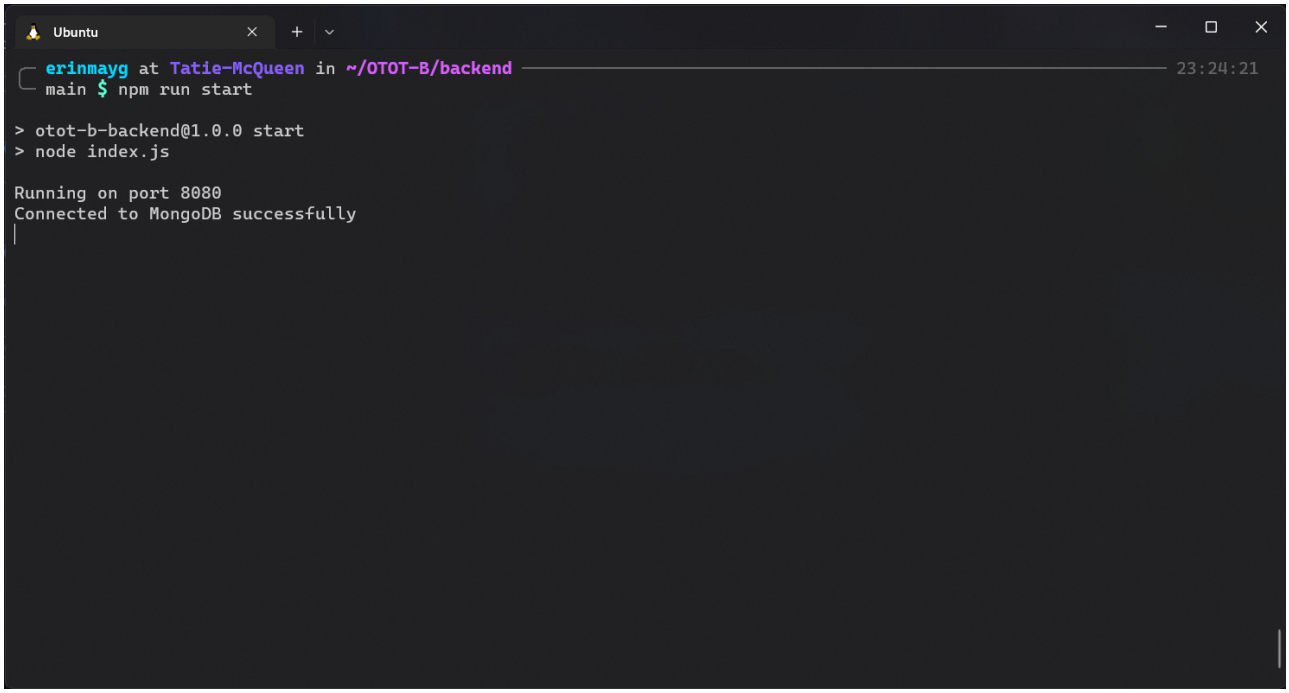
```
git clone https://github.com/erinmayg/OTOT-B
```

Then from the project root, navigate to the `backend` directory to run the backend.

```
# Navigate to backend
cd backend

# Run the backend
npm run start
```

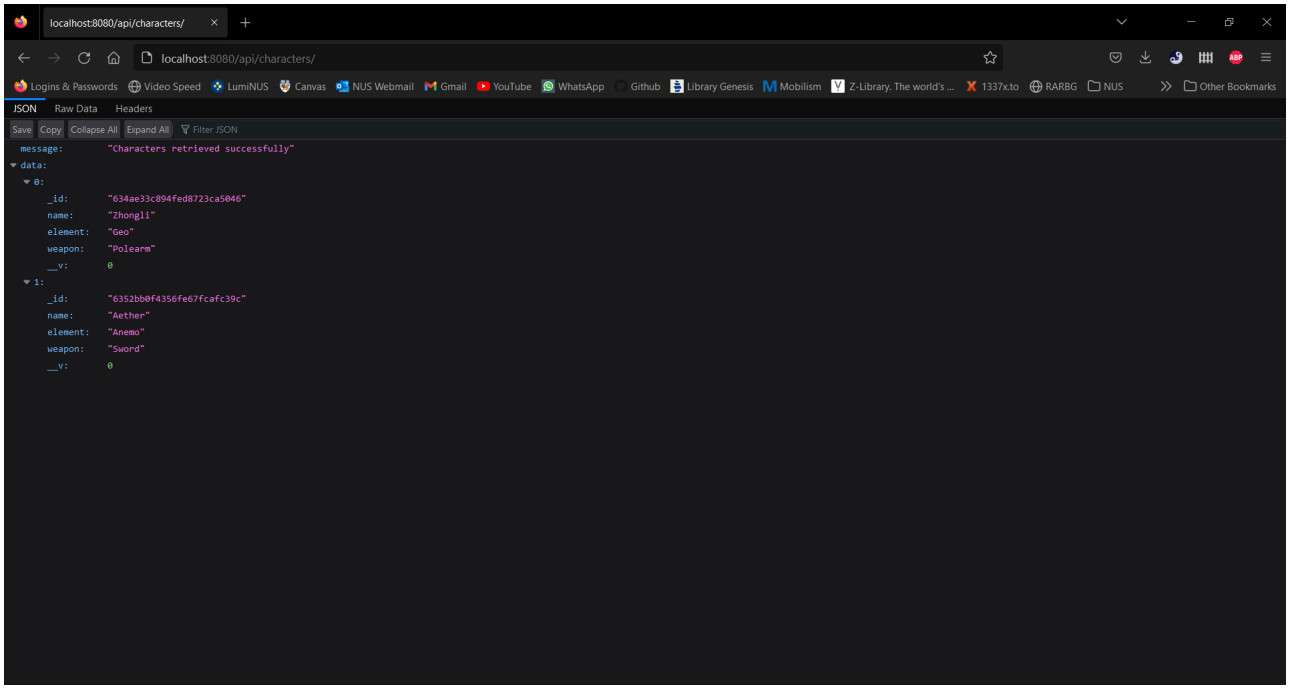
It should produce the following output:



By default, the port is set to `8080`. You can change this by modifying `PORT` variable in `backend/.env` file.

You can check whether the backend is running correctly by opening `https://localhost:8080/api/characters`

It should display the following page.



2. To test whether the API is working correctly, you can open the Postman Collection

> however you may need to change the `base_url` to `http://localhost:8080/api/characters` since it is set to the deployed backend link by default

or you can run test it out manually with the following APIs:

API Requests

GET: http://localhost:8080/api/characters

Retrieves all characters from the DB

Status	Status	Body
SUCCESS	200 OK	`{message: 'Characters retrieved successfully', data: CHARACTER[] }`

POST: http://localhost:8080/api/characters

Creates a new character

Request body example:

```
{
    name: Lumine,
    element: Anemo,
```

```
    weapon: Sword,
}
```

All fields are required, request will fail if there's any missing field.

Status	Status	Body
SUCCESS	200 OK	`{message: 'New character created', data: CREATED_CHARACTER }`
FAILED	400 Bad Request	`{message: 'Missing MISSING_FIELDS'}` or `{message: 'Character with same name already exists'}`

GET: http://localhost:8080/api/characters/:characterName

Retrieves the character with the given name from the DB, and displays its info.

An example of an existing character in the DB is `Zhongli`, so you may replace `:characterName` in the URL with this.

Status	Status	Body
SUCCESS	200 OK	`{message: 'Character retrieved', data: CHARACTER }`
FAILED	404 Not Found	`{message: 'Character not found'}`

PUT: http://localhost:8080/api/characters/:characterName

Updates an existing character from the DB.

If you did the POST request, you may use `Lumine` as the `:characterName`.

Request param example:

```
{
 name: Aether
 // element: Dendro
 // weapon: Polearm
}
```

In this `PUT` request, all fields are optional.

Status	Status	Body
SUCCESS	200 OK	`{message: 'Character updated!', data: UPDATED_CHARACTER }`
FAILED	400 Bad Request	`{message: 'Character not found'}`

DELETE: http://localhost:8080/api/characters/:characterName

Deletes an existing character from the DB

If you did the POST request, and the PUT request, you may use `Aether` as the `:characterName`.

It returns a successful message and the deleted character upon successful request.

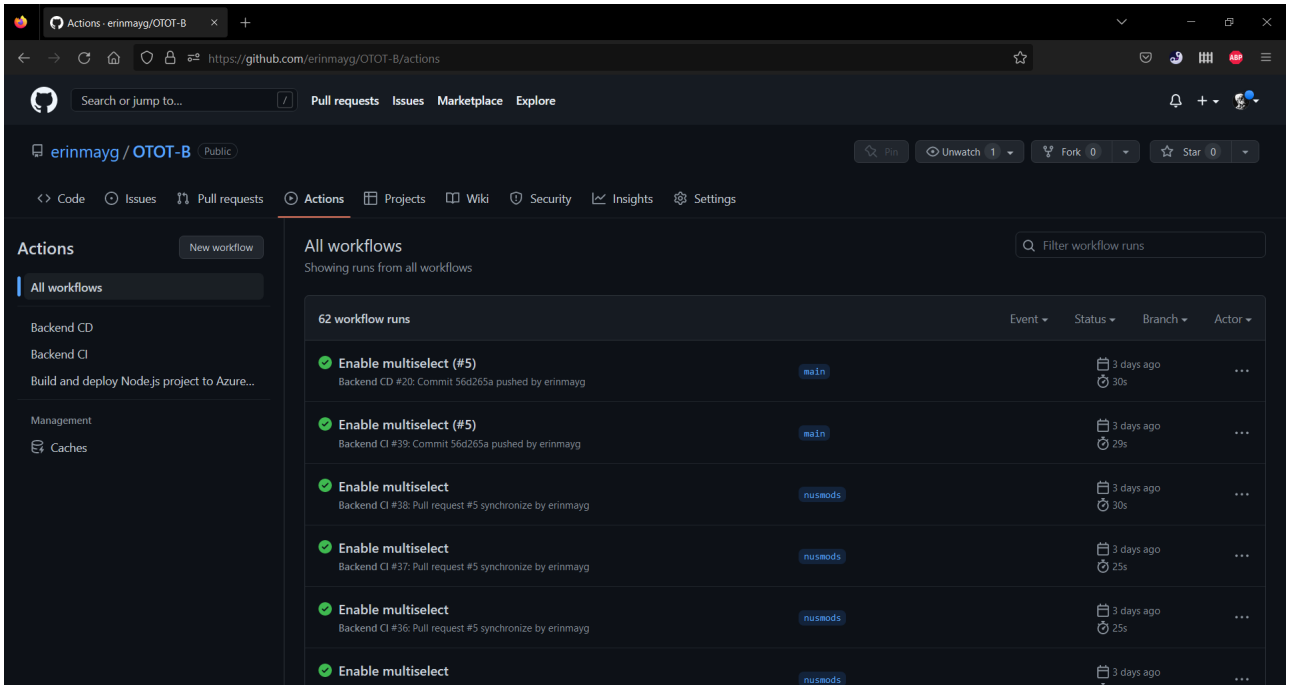
Status	Status	Body
SUCCESS	200 OK	`{message: 'Character deleted', data: DELETED_CHARACTER }`
FAILED	400 Bad Request	`{message: 'Character not found'}`

Task B2.1

1. Tests can be run locally via the command

```
npm run test
```

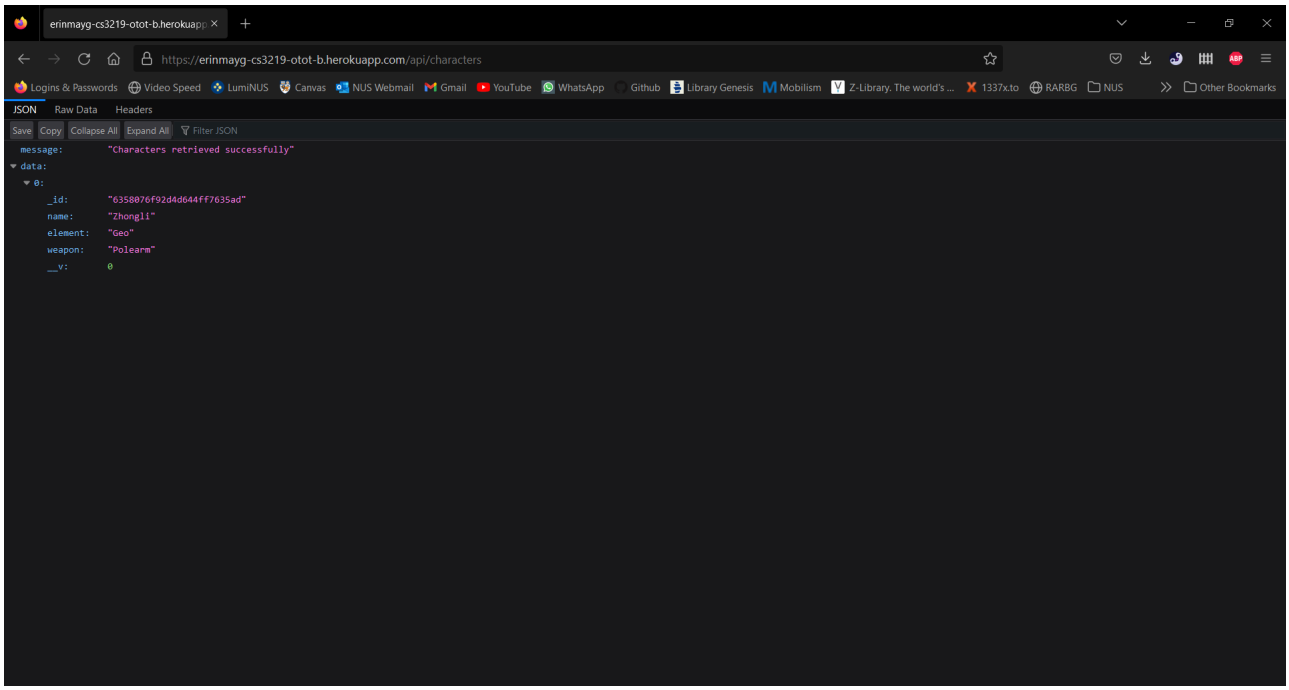
2. It is also done through the CI in GitHub Actions triggered via a Pull Request or a Push to the `main` branch.



Task B2.2

1. Access the deployed backend API through this link

It should display the following page



2. To test whether the deployed backend is working correctly, you can check via the Postman Collection.

   By default, the `base_url` in the collection is set to the deployed backend link.

   You can open the Postman documentation to see more details on the API requests and repsonses.

Task B3

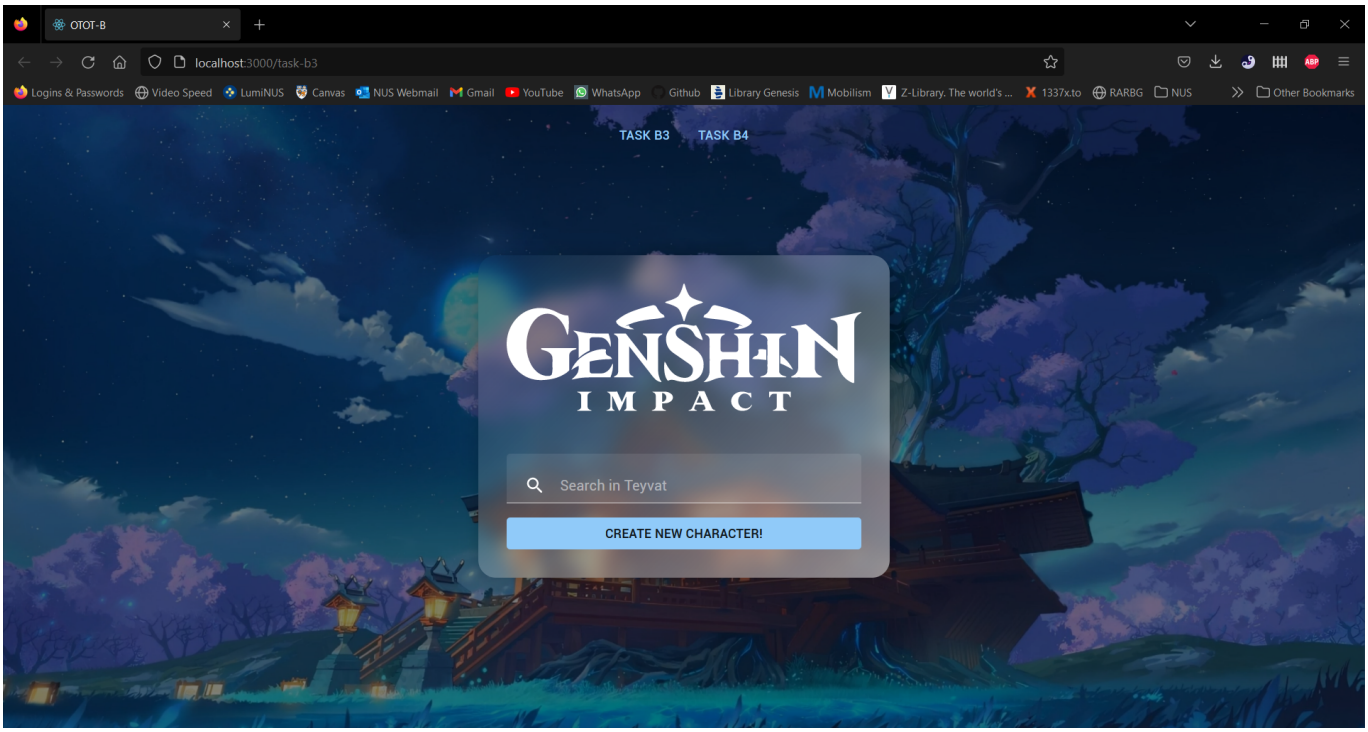
To run the frontend run the following commands:

```
# From the project root
# navigate to the frontend directory
cd frontend

# Start the frontend
npm run start
```

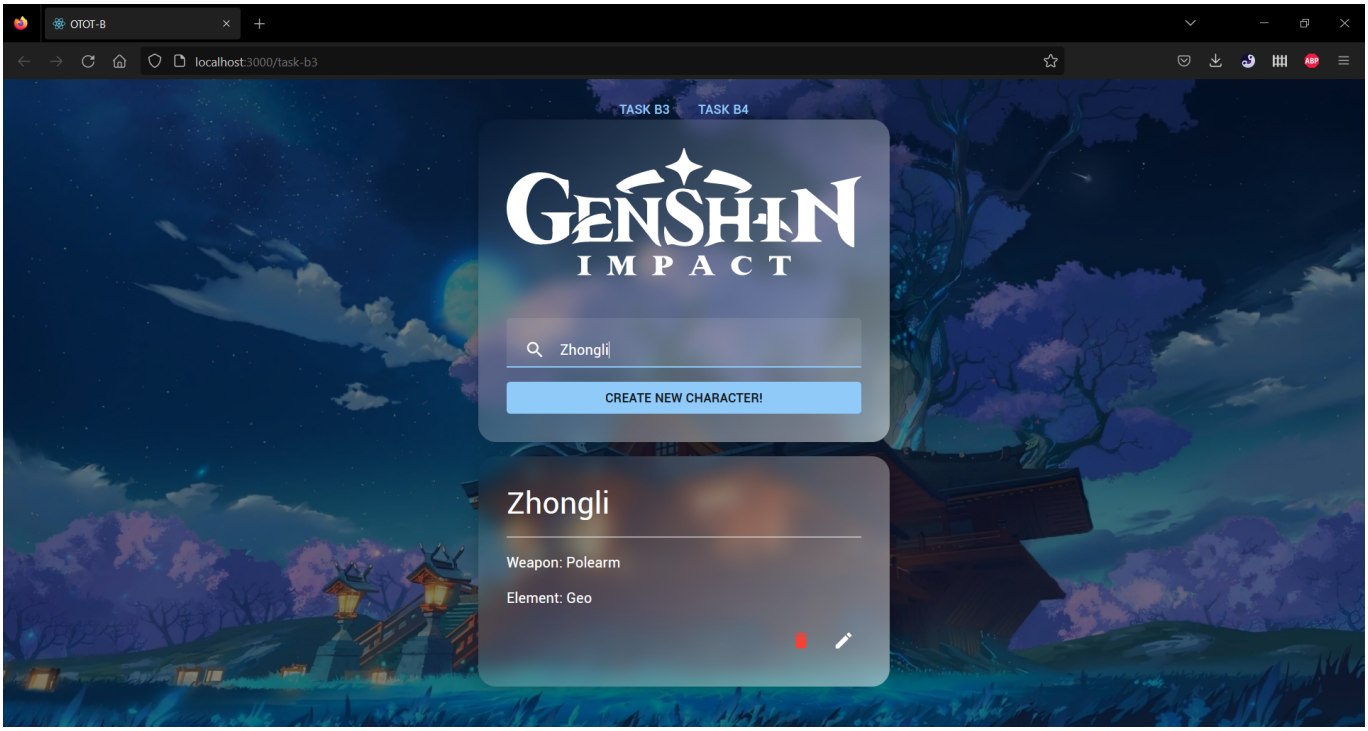
By default, it should run in port `3000`, you can open `http://localhost:3000` from the browser.

It should display the following page

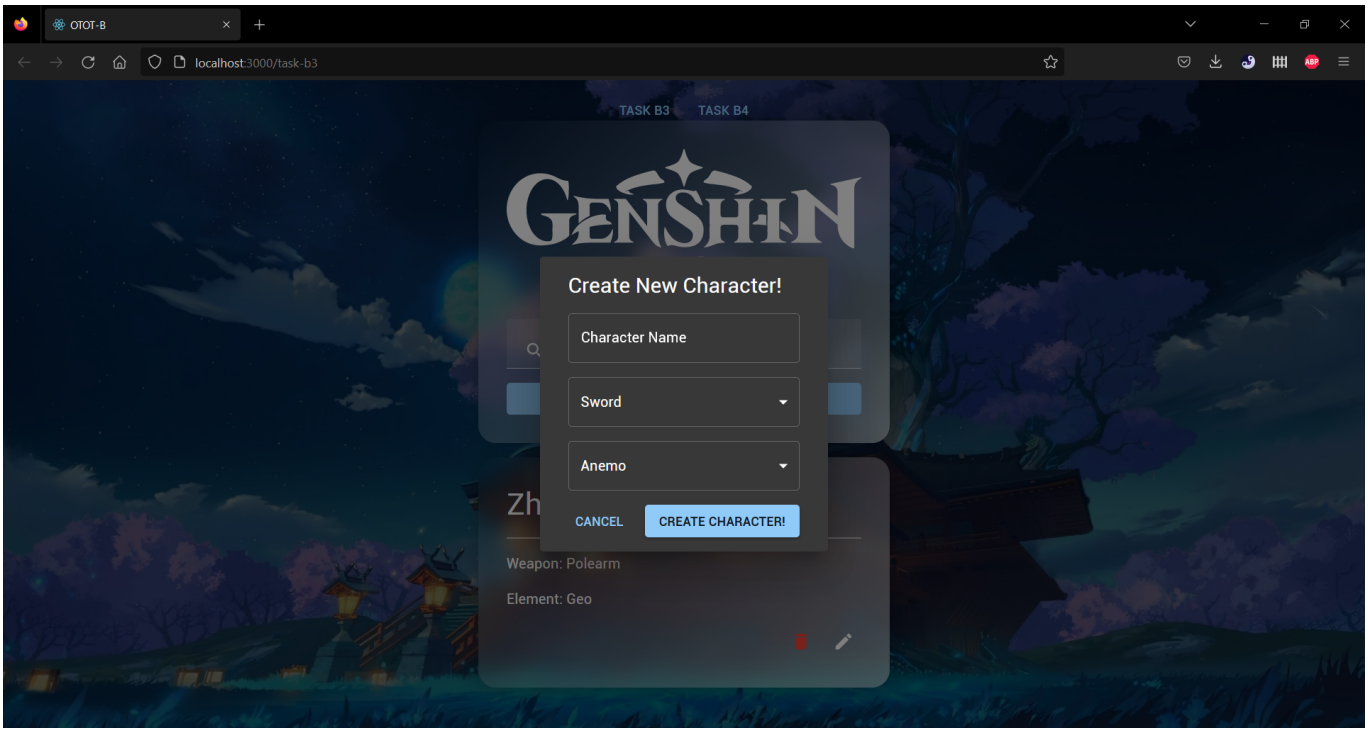


> Note that the search function is case-sensitive

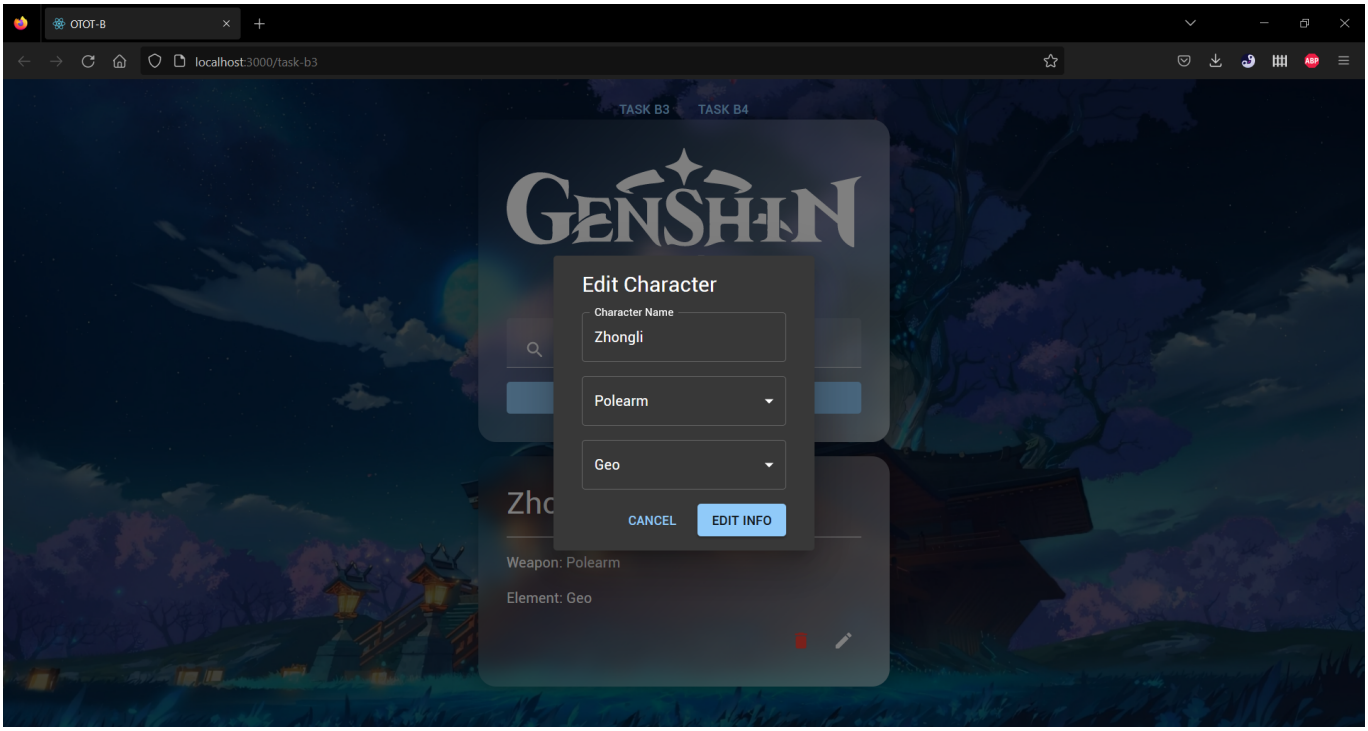
GET



POST



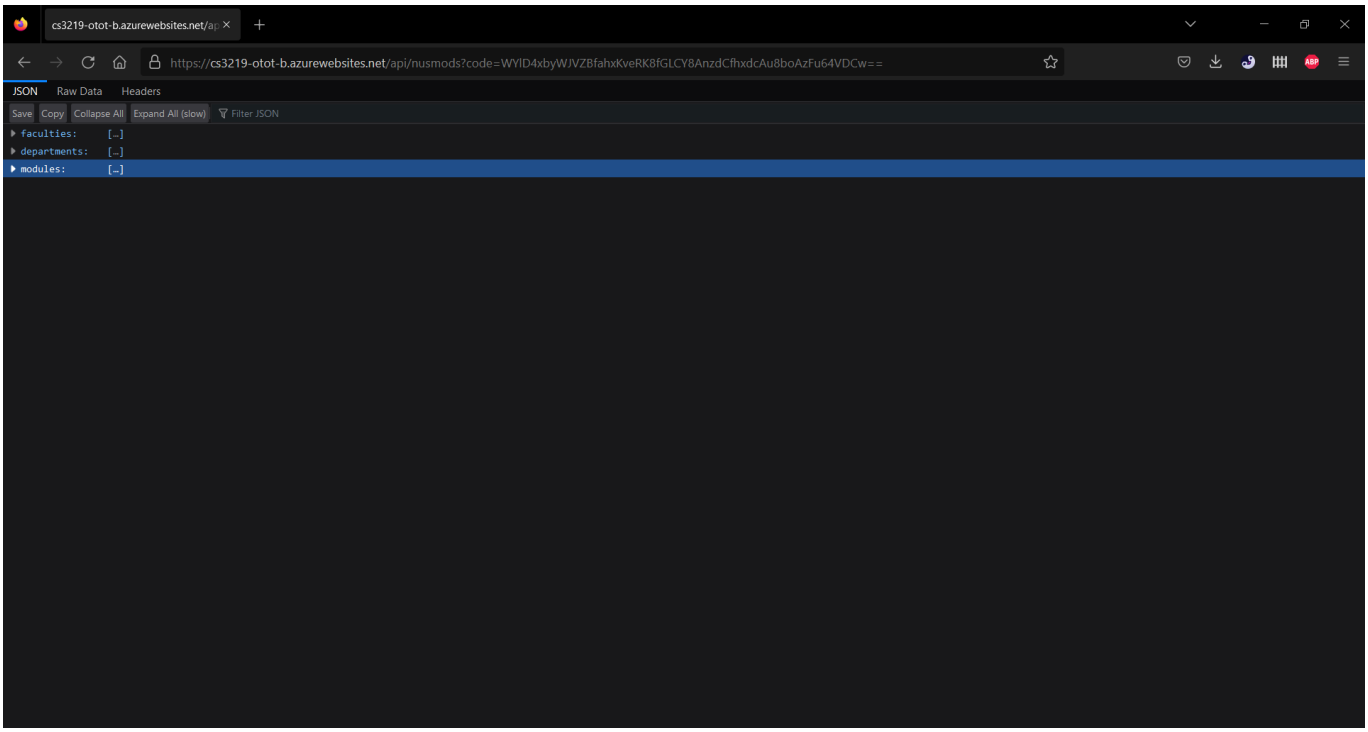
PUT



Task B4

The serverless function is deployed in `Azure Functions` and can be accessed via this link.

It should display the following website



It displays all faculties, departments, and modules in NUS (retrieved via the NUSMods API) in the AY 2022-2023 (set by default).

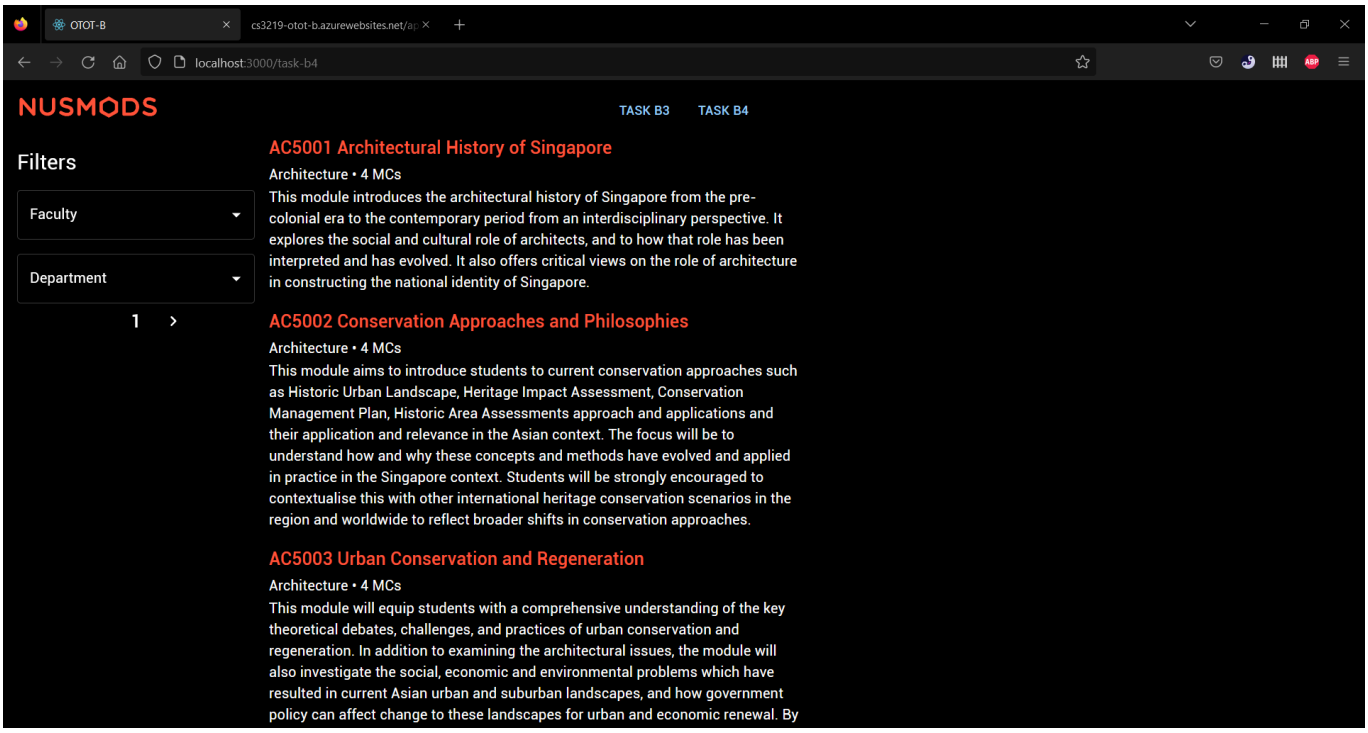
And it is able to filter the modules via the department and/or faculties. It employs `AND` filtering between params, and `OR` filtering within it.

A query example would be: `<azure_functions_link>&faculty=Computing,Science`

Frontend

To run the frontend, follow the steps listed in Task B3. Once done, you can navigate to the following link to view the Frontend for the serverless function.

It should display the following webpage



You can use the drop down to filter the modules