

# TIC3001 Task 3

- Name: Ke Yule
- Student Number: A0211495H E0493826
- Github: <https://github.com/keyule/3001-Task3>

View the markdown version for better formatting at:  
<https://github.com/keyule/3001-Task3/blob/main/Report/report.md>

## Task 3 - Authentication & Authorization

*Note: I pretty much just copied the youtube tutorial provided, but added a few things*

### Set up

#### Auth Server: Port 4000

End Point	Type	Description
/users	GET	Returns all users
/register	POST	Creates a new user
/login	POST	Returns a JWT token and refresh token after login
/token	POST	Returns a new token
/logout	DELETE	Deletes the refresh token

#### Server: Port 3000

End Point	Type	Description
/posts	GET	Returns all posts of logged in user
/admin	GET	Admin Page for role: admin

#### Other Information

An Admin account already exists:

```
{
  username: "test",
  password: "$2b$10$ogIIWcYWXJ2h19EDa0tkh.YT9hqFEuh9Y0m0nh6g1jNxpC.9ZnqKS",
  role: "admin"
}
```

There are two posts created:

```
const posts = [  
  {  
    username: 'Kyle',  
    title: 'Post 1'  
  },  
  {  
    username: 'Jim',  
    title: 'Post 2'  
  }  
]
```

## Demo

### Visiting /posts without logging in or without a token

```
GET http://localhost:3000/posts
```

```
HTTP/1.1 401 Unauthorized  
X-Powered-By: Express  
Content-Type: text/plain; charset=utf-8  
Content-Length: 12  
ETag: W/"c-dAuDFQrdjS3hezqxDTNgW7A0lYk"  
Date: Mon, 17 Apr 2023 00:41:36 GMT  
Connection: close
```

Unauthorized

### Visiting /admin without logging in or without a token

```
GET http://localhost:3000/admin
```

```
HTTP/1.1 401 Unauthorized  
X-Powered-By: Express  
Content-Type: text/plain; charset=utf-8  
Content-Length: 12  
ETag: W/"c-dAuDFQrdjS3hezqxDTNgW7A0lYk"  
Date: Mon, 17 Apr 2023 00:50:04 GMT  
Connection: close
```

Unauthorized

## Registering

```
POST http://localhost:4000/register
Content-Type: application/json
{
  "username": "Jim", "password": "password"
}
```

```
HTTP/1.1 201 Created
X-Powered-By: Express
Date: Mon, 17 Apr 2023 00:57:17 GMT
Connection: close
Content-Length: 0
```

## Logging in

```
POST http://localhost:4000/login
Content-Type: application/json
{
  "username": "Jim", "password": "password"
}
```

```
HTTP/1.1 200 OK
X-Powered-By: Express
Content-Type: application/json; charset=utf-8
Content-Length: 344
ETag: W/"158-FnS38v2wtrQ3cDakn8BD1Xr5U64"
Date: Mon, 17 Apr 2023 00:59:06 GMT
Connection: close

{
  "accessToken":
"eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1eW11IjoiSm1tIiwicm9sZSI6ImJhc2ljIiwiaWF0IjoxNjgxNjkzMTQ2LCJleHAiOjE2ODE2OTMyMDZ9.SWBwp79hrdEBVRuRlYG78-DhTeu98D7V2BC6Ooj_pfk",
  "refreshToken":
"eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1eW11IjoiSm1tIiwicm9sZSI6ImJhc2ljIiwiaWF0IjoxNjgxNjkzMTQ2fQ.RQOcov3Zcn5F10oaD4YzT--g00anz6dTisiSAypSdJo"
}
```

## Visiting /posts after login

```
GET http://localhost:3000/posts
Authorization: Bearer
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1eW11IjoiSm1tIiwicm9sZSI6ImJhc2ljIiwiaWF0I
```

```
[
  {
    "username": "Jim",
    "title": "Post 2"
  }
]
```

```
GET http://localhost:3000/admin
Authorization: Bearer
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1bm90aWQiOiJpYXN0Iiwicm9sZSI6ImJhc2ljIiwiaWF0IjoxNjg5NjkzMTQ2LCJleHAiOjE2ODE2OTMyMDZ9.SWBwp79hrdEBVRuRlYG78-DhTeu98D7V2BC6Ooj_pfk
```

```
GET http://localhost:3000/posts
Authorization: Bearer
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1bW11IjoidGVzdCI6InJvbGU0IiwiaWF0IjoiMjAyMjA0MTYyMzQ2NTYzNTI2fQ.psxWvWym47ld3MLMdez3MAYgFl08RON-H-QvqHopmhc
```

```

HTTP/1.1 200 OK
X-Powered-By: Express
Content-Type: application/json; charset=utf-8
Content-Length: 74
ETag: W/"4a-1R4wY2kF/sIFyvoxeh6FQWeGVfI"
Date: Mon, 17 Apr 2023 01:04:44 GMT
Connection: close

```

```

[
  {
    "username": "Kyle",
    "title": "Post 1"
  },
  {
    "username": "Jim",
    "title": "Post 2"
  }
]

```

### Visting /admin after logging in as admin

```

GET http://localhost:3000/admin
Authorization: Bearer
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1bW11IjoidGVzdCI6InJvbGUiOiJhZG1pbiIsIm1hdCI6MTY4MTY5MzQ2NiwiZXhwIjoxNjgxNjgzNTI2fQ.psxWvWym47ld3MLMdez3MAYgFl08RON-H-QvqHopmhc

```

```

HTTP/1.1 200 OK
X-Powered-By: Express
Content-Type: text/html; charset=utf-8
Content-Length: 10
ETag: W/"a-3WyjDh8DbzNxVPewAMCEfnC3Qfc"
Date: Mon, 17 Apr 2023 01:04:49 GMT
Connection: close

```

Admin **Page**

## Appendix

### Other Requests

#### Refreshing token

```

POST http://localhost:4000/token
Content-Type: application/json
{

```

```
{
  "accessToken":
  "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1bW11IjoIc2ltIiwiaWF0IjoxNjgxNjgzNzIwLCJ1eHAiOiJlE2ODE2OTM3ODBD9.AAwCKiz9piCgYv6WBNELEXTppzTNaTNFyrNSbVRtRM4"
}
```

```
DELETE http://localhost:4000/logout
Content-Type: application/json
{
  "token":
    "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1bm90cnkiOiJpdjZlcnR3cXV5A4vXdZa9Q6riEmqCY2louocp7qZWzg"
}
```

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```
restart: on-failure
build: ./authserver
ports:
  - '4000:4000'
```