Web API Testing Evidence

Bouldering Gym Management API
Joshua Ashman
Web Application Development
Due: March 2nd 2026

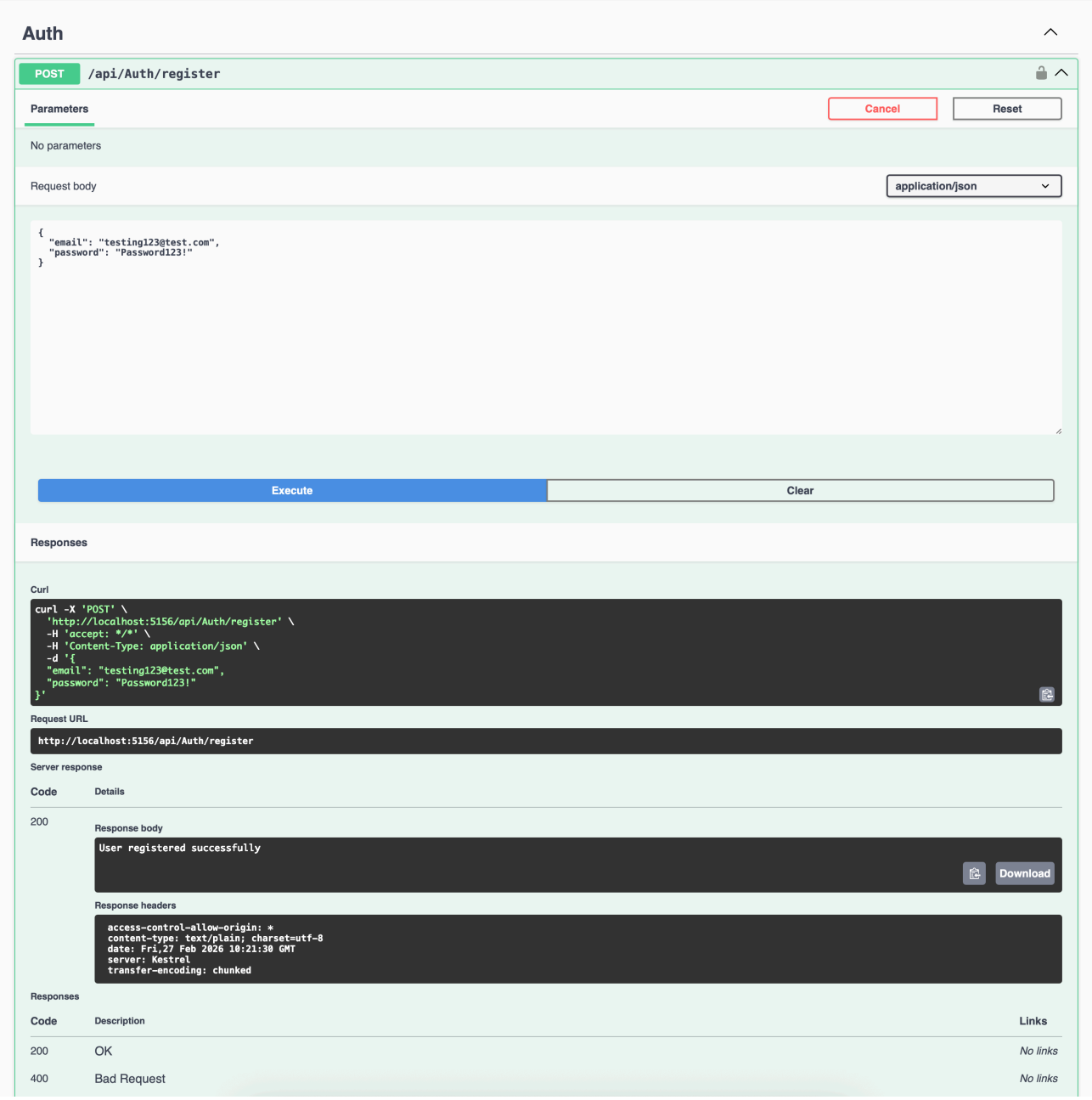
Introduction

Below are the screenshots of testing for the Bouldering Gym Management API developed for the Web Application Development coursework.

Testing was carried out using Swagger UI to verify:
- Authentication and authorisation
- CRUD operations
- Database functionality
- Error handling
- Logging

Authentication Testing

Successful register attempt:



Failed register attempt:

Auth

POST /api/Auth/register

Parameters

Cancel | Reset

No parameters

Request body

application/json

```
{
  "email": "a",
  "password": "a"
}
```

Execute | Clear

Curl

```
curl -X 'POST' \
  'http://localhost:5156/api/Auth/register' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
  "email": "a",
  "password": "a"
}'
```

Request URL

```
http://localhost:5156/api/Auth/register
```

Server response

Code	Details
400	Error: Bad Request

Response body

```
{
  "type": "https://tools.ietf.org/html/rfc9110#section-15.5.1",
  "title": "One or more validation errors occurred.",
  "status": 400,
  "errors": {
    "Email": [
      "The Email field is not a valid e-mail address."
    ],
    "Password": [
      "The field Password must be a string or array type with a minimum length of '6'."
    ]
  },
  "traceId": "00-9857162957b7a0227a0dae51e33c62ab-7b0521f63caf67c1-00"
}
```

Download

Response headers

```
access-control-allow-origin: *
content-type: application/problem+json; charset=utf-8
date: Fri,27 Feb 2026 10:29:50 GMT
server: Kestrel
transfer-encoding: chunked
```

Successful log-in attempt:

Auth

POST /api/Auth/register

POST /api/Auth/login

Parameters Cancel Reset

No parameters

Request body application/json

```
{
  "email": "testing123@test.com",
  "password": "Password123!"
}
```

Execute Clear

Responses

Curl

```
curl -X 'POST' \
  'http://localhost:5156/api/Auth/login' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
  "email": "testing123@test.com",
  "password": "Password123!"
}'
```

Request URL

```
http://localhost:5156/api/Auth/login
```

Server response

Code	Details
200	Response body


```
{
  "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiJlMGUwNGZmNy05MGE3LTQwN2UtODZmMi1iZTJlZTAxNTU3ZjQiLCJlbWFpbCI6InRlc3RpbmcxMjNAdGVzdC5jb20iLCJodHRwOi8vc2NoZW1hcy5taWNyb3NvZnQuY29tL3dzLzIwMDgvMDYvaWRlbnRpdHkvY2xhaW1zL3JvbGUiOiJVc2VyIiwiZXhwIjoxNzcyMTkxNTI1LCJpc3MiOiJCb3VsZGVyaW5nR3ltQVBJIiwiYXVkIjoiQm91bGRlcmluZ0d5bUFQSVVzZXJzIn0.fezX6Og08Xn6rJsf7UFKkFYgfNAqhEaFi9bK4SqV5N4"
}
```


Download

Response headers

```
access-control-allow-origin: *
content-type: application/json; charset=utf-8
date: Fri,27 Feb 2026 10:25:25 GMT
server: Kestrel
transfer-encoding: chunked
```

Responses

Code	Description	Links
200	OK	*No links*
401	Unauthorized	*No links*

Failed log-in attempt:

POST /api/Auth/register

POST /api/Auth/login

Parameters

Cancel

No parameters

Request body

application/json

```
{
  "email": "user@example.com",
  "password": "string"
}
```

Execute

Clear

Responses

Curl

```
curl -X 'POST' \
  'http://localhost:5156/api/Auth/login' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
  "email": "user@example.com",
  "password": "string"
}'
```

Request URL

```
http://localhost:5156/api/Auth/login
```

Server response

Code	Details
401	Error: Unauthorized

Response body

```
Invalid email or password
```

Download

Response headers

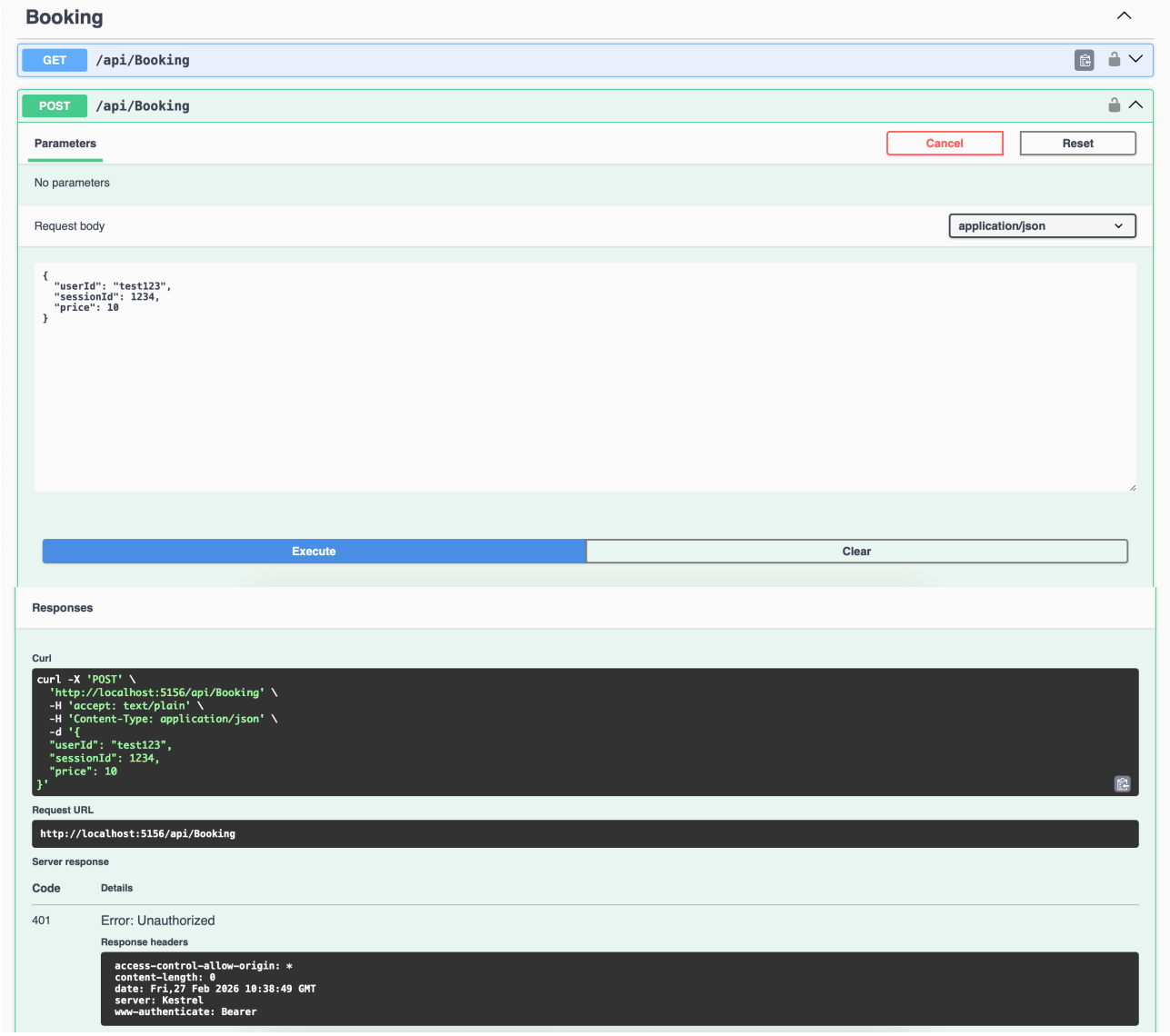
```
access-control-allow-origin: *
content-type: text/plain; charset=utf-8
date: Fri,27 Feb 2026 10:32:09 GMT
server: Kestrel
transfer-encoding: chunked
```

Responses

Code	Description	Links
200	OK	*No links*
401	Unauthorized	*No links*

Authorisation Testing

401 unauthorised:



403 forbidden:

ClimbingRoute

GET /api/ClimbingRoute

POST /api/ClimbingRoute

Parameters

Cancel Reset

No parameters

Request body

application/json

```
{
  "location": "wall1",
  "difficulty": "v0",
  "setByStaffId": "12345",
  "dateSet": "2026-02-27T10:44:34.068Z",
  "stripDate": "2026-03-27T10:44:34.068Z"
}
```

Execute Clear

Responses

Curl

```
curl -X 'POST' \
  'http://localhost:5156/api/Booking' \
  -H 'accept: text/plain' \
  -H 'Content-Type: application/json' \
  -d '{
  "userId": "test123",
  "sessionId": 1234,
  "price": 10
}'
```

Request URL

```
http://localhost:5156/api/Booking
```

Server response

Code	Details
401	Error: Unauthorized

Response headers

```
access-control-allow-origin: *
content-length: 0
date: Fri,27 Feb 2026 10:38:49 GMT
server: Kestrel
www-authenticate: Bearer
```

200 OK:

GET /api/Membership

Parameters

Cancel

No parameters

Execute | Clear

Responses

Curl

```
curl -X 'GET' \
  'http://localhost:5156/api/Membership' \
  -H 'accept: text/plain' \
  -H 'Authorization: Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiI5YTVkM2M4MC03OTZhLTQ1ZDMtOGIyNy00NDlmMjlkNmU0NmIiLCJlbWFpbCI6Im5ld2FkbWluQHRlc3QuY29tIiwiaHR0cDovL3
```

Request URL

```
http://localhost:5156/api/Membership
```

Server response

Code	Details
200	Response body

Download

Response headers

```
content-type: application/json; charset=utf-8
date: Fri,27 Feb 2026 11:19:55 GMT
server: Kestrel
transfer-encoding: chunked
```

CRUD Testing

GET:

(see above - 200 OK)

POST:

ClimbingRoute

GET /api/ClimbingRoute

POST /api/ClimbingRoute

Parameters

Cancel Reset

No parameters

Request body

application/json


```
{
  "location": "Wall1",
  "difficulty": "V0",
  "setByStaffId": "b20b2db0-1001-4cec-9cd3-0f5c5eafdbd7",
  "dateSet": "2026-02-27T11:45:48.490Z",
  "stripDate": "2026-03-27T11:45:48.490Z"
}
```


Execute Clear

Responses

Curl


```
curl -X 'POST' \
  'http://localhost:5156/api/ClimbingRoute' \
  -H 'accept: text/plain' \
  -H 'Authorization: Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiI5YTVkM2M4MC03OTZhLTQ1ZDMtOGIyNy00NDlmMjlkNmU0NmIiLCJlbWFpbCI6Im5ld2FkbWluQHRlc3QuY29tIiwiaHR0cDovL3NjaG
  -H 'Content-Type: application/json' \
  -d '{
  "location": "Wall1",
  "difficulty": "V0",
  "setByStaffId": "b20b2db0-1001-4cec-9cd3-0f5c5eafdbd7",
  "dateSet": "2026-02-27T11:45:48.490Z",
  "stripDate": "2026-03-27T11:45:48.490Z"
}'
```


Request URL

http://localhost:5156/api/ClimbingRoute

Server response

Code	Details
201	Response body

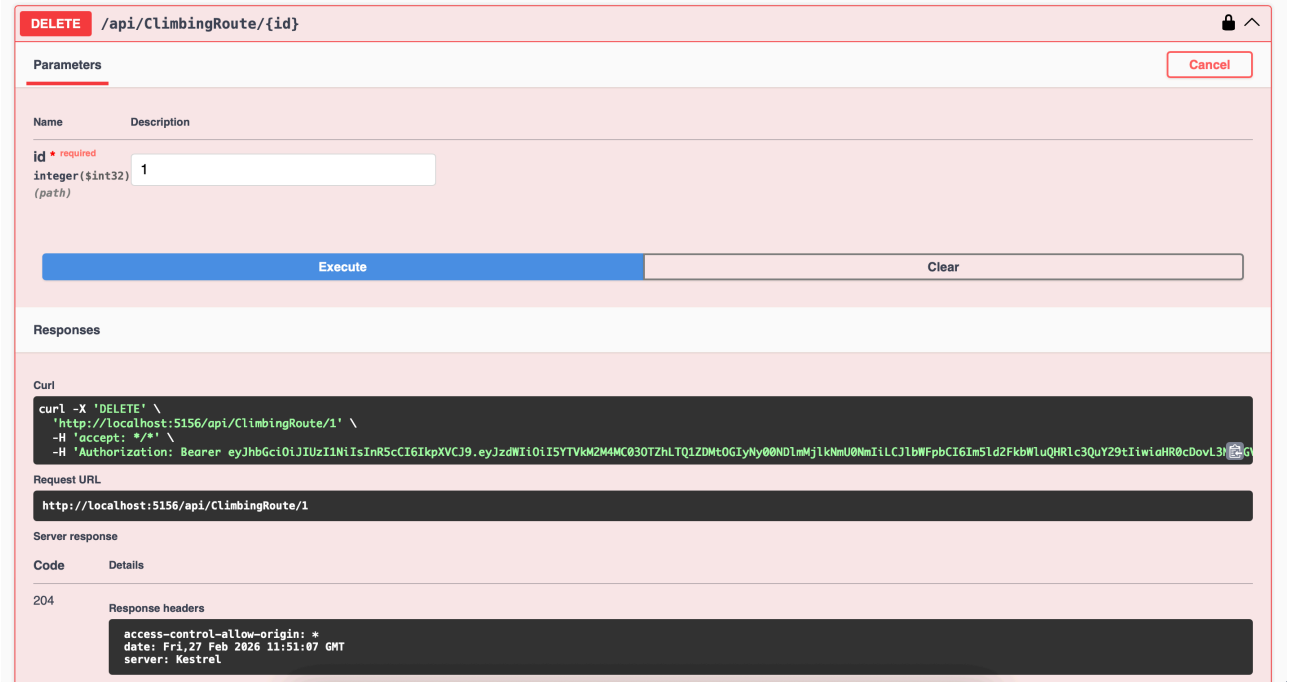

```
{
  "id": 2,
  "location": "Wall1",
  "difficulty": "V0",
  "setByStaffId": "b20b2db0-1001-4cec-9cd3-0f5c5eafdbd7",
  "setByStaff": null,
  "dateSet": "2026-02-27T11:45:48.49Z",
  "stripDate": "2026-03-27T11:45:48.49Z"
}
```


Download

Response headers

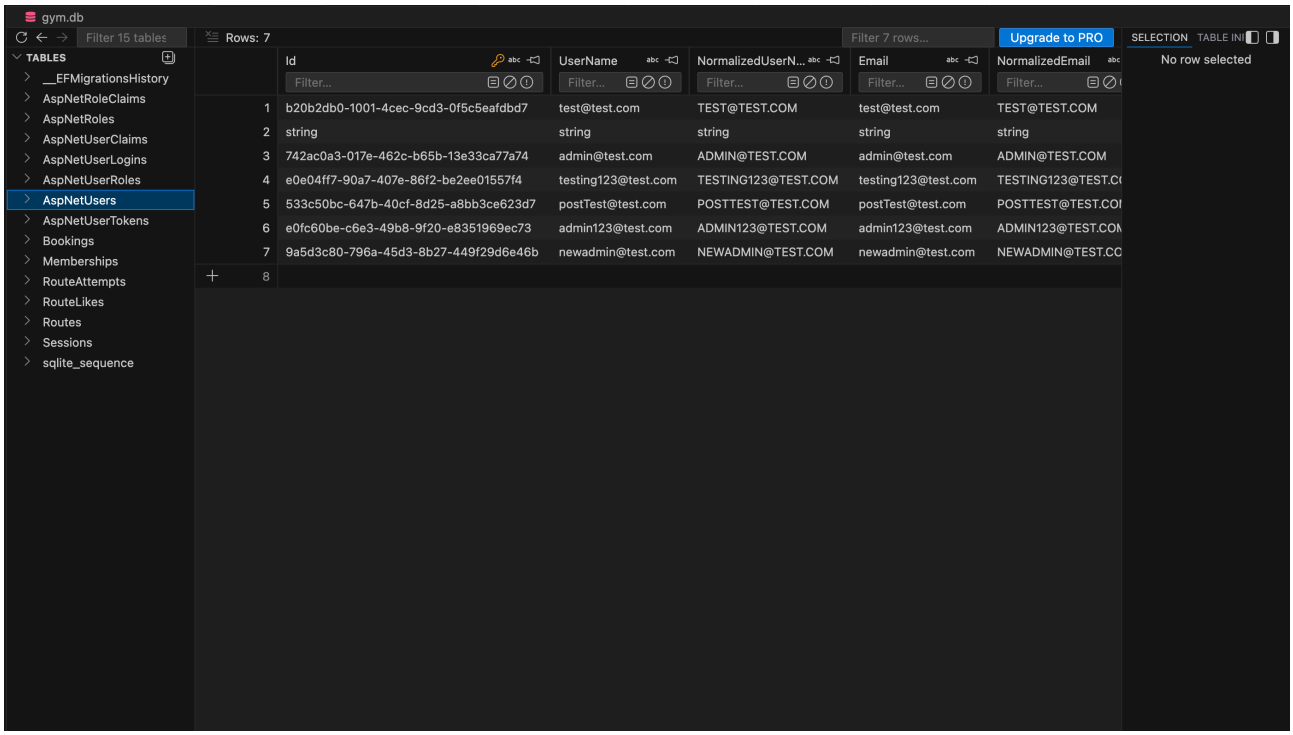
```
access-control-allow-origin: *
content-type: application/json; charset=utf-8
date: Fri,27 Feb 2026 11:49:10 GMT
location: http://localhost:5156/api/ClimbingRoute?id=2
server: Kestrel
transfer-encoding: chunked
```

DELETE:

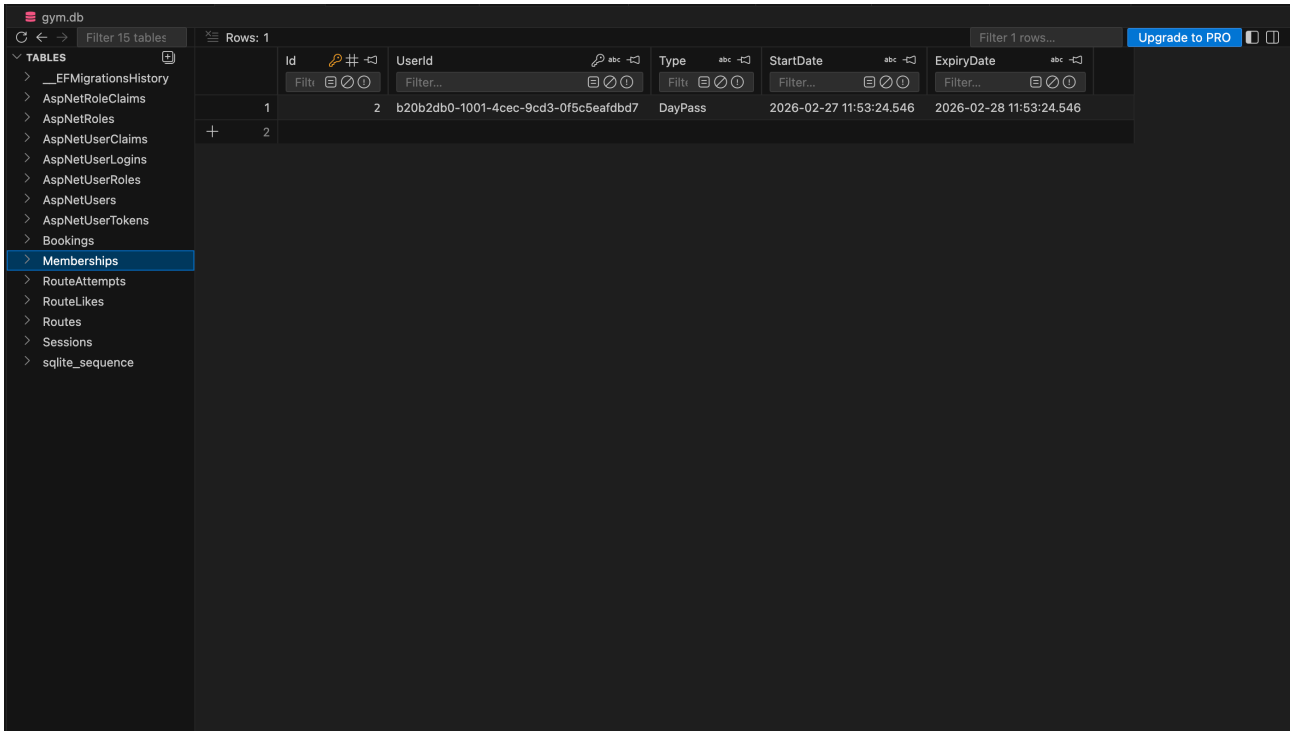

DELETE
/api/ClimbingRoute/{id}
Parameters
Cancel
Name
Description
id * required
integer($int32)
(path)
1
Execute
Clear
Responses
Curl
curl -X 'DELETE' \
'http://localhost:5156/api/ClimbingRoute/1' \
-H 'accept: */*' \
-H 'Authorization: Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiI5YTVkW2M4MC03OTZhLTQ1ZDMtOGIyNy00NDlmMjlkNmU0NmIiLCJlbWFpbCI6Im5ld2FkbWluQHRlc3QuY29tIiwiaHR0cDovL3N
Request URL
http://localhost:5156/api/ClimbingRoute/1
Server response
Code
Details
204
Response headers
access-control-allow-origin: *
date: Fri,27 Feb 2026 11:51:07 GMT
server: Kestrel

Database Testing

Users:



Memberships:



Route attempts:

gym.db

Filter 15 tables

TABLES

- __EFMigrationsHistory
- AspNetRoleClaims
- AspNetRoles
- AspNetUserClaims
- AspNetUserLogins
- AspNetUserRoles
- AspNetUsers
- AspNetUserTokens
- Bookings
- Memberships
- RouteAttempts
- RouteLikes
- Routes
- Sessions
- sqlite_sequence

Rows: 1

Filter 1 rows...

Upgrade to PRO

	Id	UserId	Clim...	AttemptDate	Complet...
1	1	b20b2db0-1001-4cec-9cd3-0f5c5eafdbd7	2	2026-02-27 11:55:01.263	1
2					

Route likes:

gym.db

Filter 15 tables

TABLES

- __EFMigrationsHistory
- AspNetRoleClaims
- AspNetRoles
- AspNetUserClaims
- AspNetUserLogins
- AspNetUserRoles
- AspNetUsers
- AspNetUserTokens
- Bookings
- Memberships
- RouteAttempts
- RouteLikes
- Routes
- Sessions
- sqlite_sequence

Rows: 1

Filter 1 rows...

Upgrade to PRO

	Id	UserId	Clim...
1	1	b20b2db0-1001-4cec-9cd3-0f5c5eafdbd7	2
2			

Routes:

gym.db

Filter 15 tables

TABLES

- __EFMigrationsHistory
- AspNetRoleClaims
- AspNetRoles
- AspNetUserClaims
- AspNetUserLogins
- AspNetUserRoles
- AspNetUsers
- AspNetUserTokens
- Bookings
- Memberships
- RouteAttempts
- RouteLikes
- Routes
- Sessions
- sqlite_sequence

Rows: 1 | Filter 1 rows... | Upgrade to PRO

	Id	Location	Difficulty	SetByStaffId	DateSet	StripDate
1	2	Wall1	V0	b20b2db0-1001-4cec-9cd3-0f5c5eafdbd7	2026-02-27 11:45:48.49	2026-03-27 11:45:48.49
2						

Sessions:

gym.db

Filter 15 tables

TABLES

- __EFMigrationsHistory
- AspNetRoleClaims
- AspNetRoles
- AspNetUserClaims
- AspNetUserLogins
- AspNetUserRoles
- AspNetUsers
- AspNetUserTokens
- Bookings
- Memberships
- RouteAttempts
- RouteLikes
- Routes
- Sessions
- sqlite_sequence

Rows: 1 | Filter 1 rows... | Upgrade to PRO

	Id	InstructorId	MaxCap...	StartTime	EndTime	Descript...
1	1	b20b2db0-1001-4cec-9cd3-0f5c5eafdbd7	5	2026-02-27 11:55:36.583	2026-02-27 13:55:36.583	test
2						

Logging testing:

Auth

POST /api/Auth/register

POST /api/Auth/login

Parameters

Cancel Reset

No parameters

Request body

application/json

```
{
  "email": "testing123@test.com",
  "password": "Password123!"
}
```

Execute Clear

Responses

Curl

```
curl -X 'POST' \
  'http://localhost:5156/api/Auth/login' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
  "email": "testing123@test.com",
  "password": "Password123!"
}'
```

Request URL

```
http://localhost:5156/api/Auth/login
```

Server response

Code	Details
200	Response body


```
{
  "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiJlMGUwNGZmNy05MGE3LTQwN2UtODZmMi1iZTJlZTAxNTU3ZjQiLCJlbWFpbCI6InRlc3RpbmcxMjNAdGVzdC5jb20iLCJodHRwOi8vc2NoZW1hcy5taWNyb3NvZnQuY29tL3dzLzIwMDgvMDYvaWRlbnRpdHkvY2xhaW1zL3JvbGUiOiJVc2VyIiwiZXhwIjoxNzcyMTkxNTI1LCJpc3MiOiJCb3VsZGVyaW5nR3ltQVBJIiwiYXVkIjoiQm91bGRlcmluZ0d5bUFQSVVzZXJzIn0.fezX6Og08Xn6rJsf7UFKkFYgfNAqhEaFi9bK4SqV5N4"
}
```


Download

Response headers

```
access-control-allow-origin: *
content-type: application/json; charset=utf-8
date: Fri,27 Feb 2026 10:25:25 GMT
server: Kestrel
transfer-encoding: chunked
```

Responses

Code	Description	Links
200	OK	*No links*
401	Unauthorized	*No links*

Exception Middleware Testing

DELETE /api/ClimbingRoute/{id}

Parameters

Cancel

Name	Description
id * required integer($int32) (path)	999

Execute | Clear

Responses

Curl

```
curl -X 'DELETE' \
  'http://localhost:5156/api/ClimbingRoute/999' \
  -H 'accept: */*' \
  -H 'Authorization: Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiI5YTVkM2M4MC03OTZhLTQ1ZDMtOGIyNy00NDlmMjlkNmU0NmIiLCJlbWFpbCI6Im5ld2FkbWluQHRlc3QuY29tIiwiaHR0cDovL3N
```

Request URL

```
http://localhost:5156/api/ClimbingRoute/999
```

Responses

Curl

```
curl -X 'DELETE' \
  'http://localhost:5156/api/ClimbingRoute/999' \
  -H 'accept: */*' \
  -H 'Authorization: Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiI5YTVkM2M4MC03OTZhLTQ1ZDMtOGIyNy00NDlmMjlkNmU0NmIiLCJlbWFpbCI6Im5ld2FkbWluQHRlc3QuY29tIiwiaHR0cDovL3N
```

Request URL

```
http://localhost:5156/api/ClimbingRoute/999
```

Server response

Code	Details
404	Error: Not Found

Response body

```
{
  "type": "https://tools.ietf.org/html/rfc9110#section-15.5.5",
  "title": "Not Found",
  "status": 404,
  "traceId": "00-9000b2ffa877737a1ef5fa18cddcb725-4837dfccacea22cc-00"
}
```

Download

Response headers

```
access-control-allow-origin: *
content-type: application/problem+json; charset=utf-8
date: Fri,27 Feb 2026 11:59:10 GMT
server: Kestrel
transfer-encoding: chunked
```