Use this caption in your report/PPT:

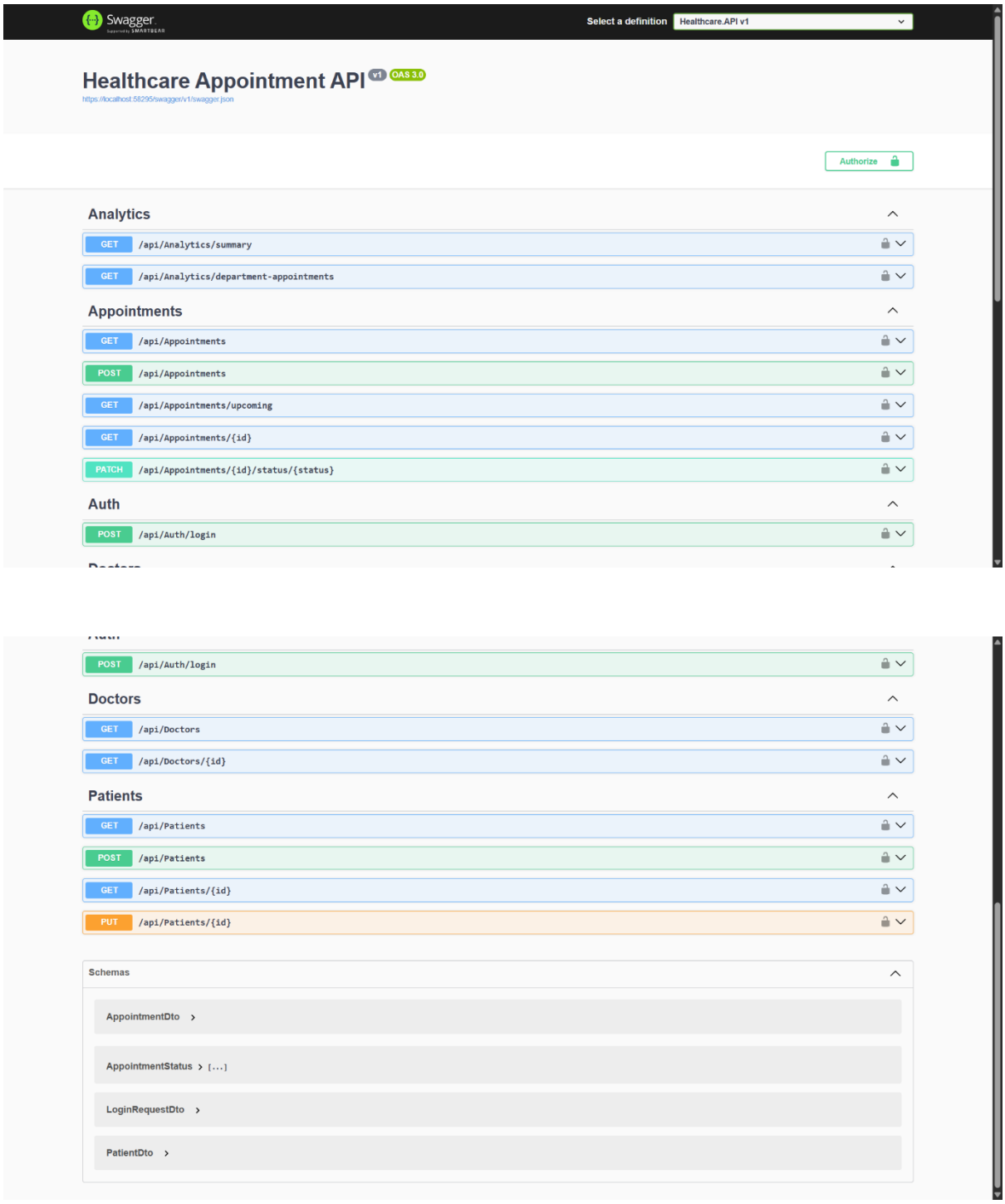


Figure: Healthcare Web API running successfully on localhost.

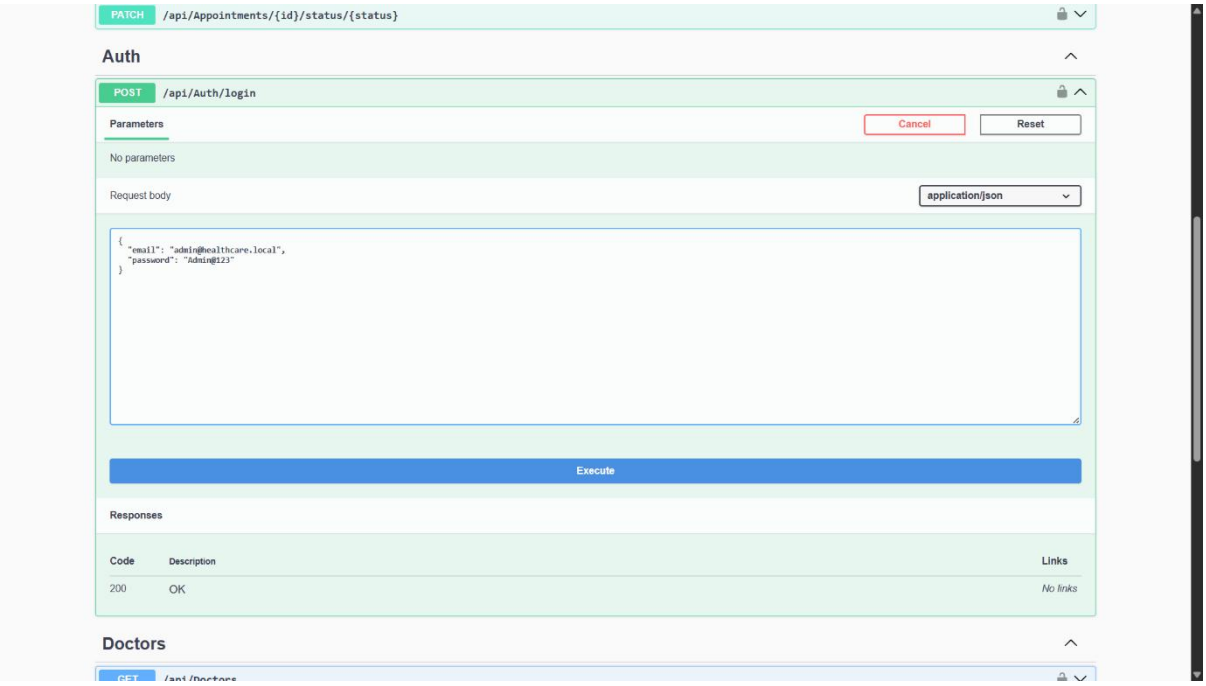


Figure: Login API request with admin credentials.

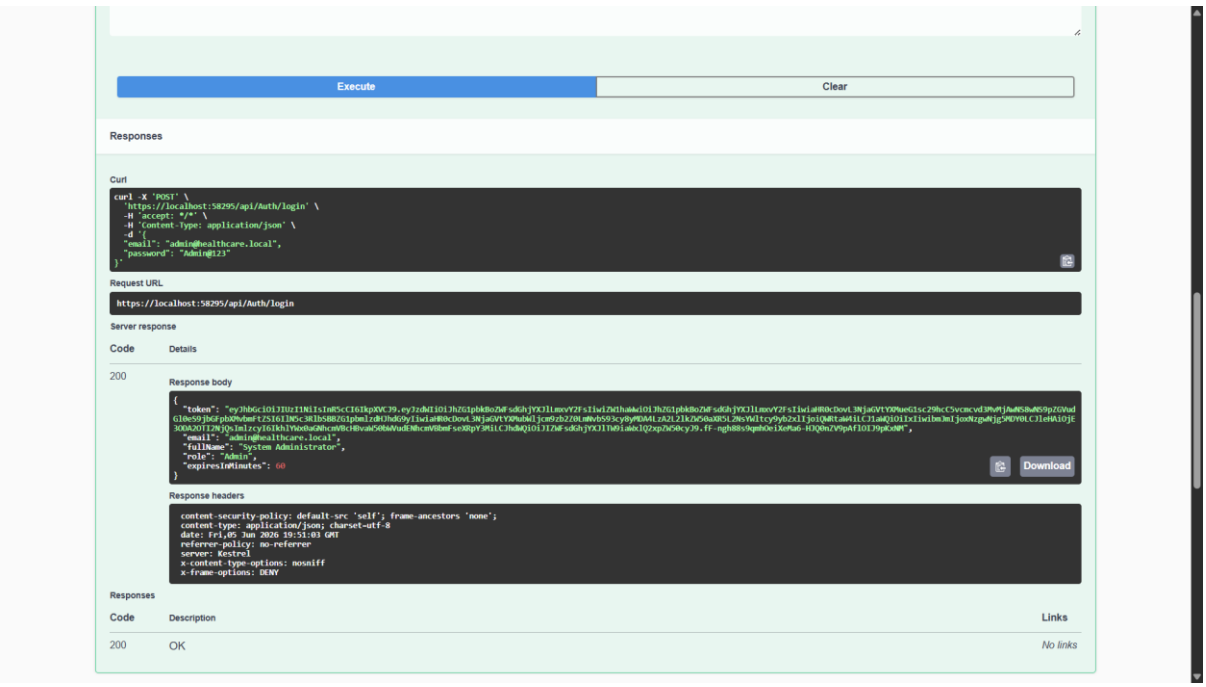


Figure: JWT token generated after successful API login.

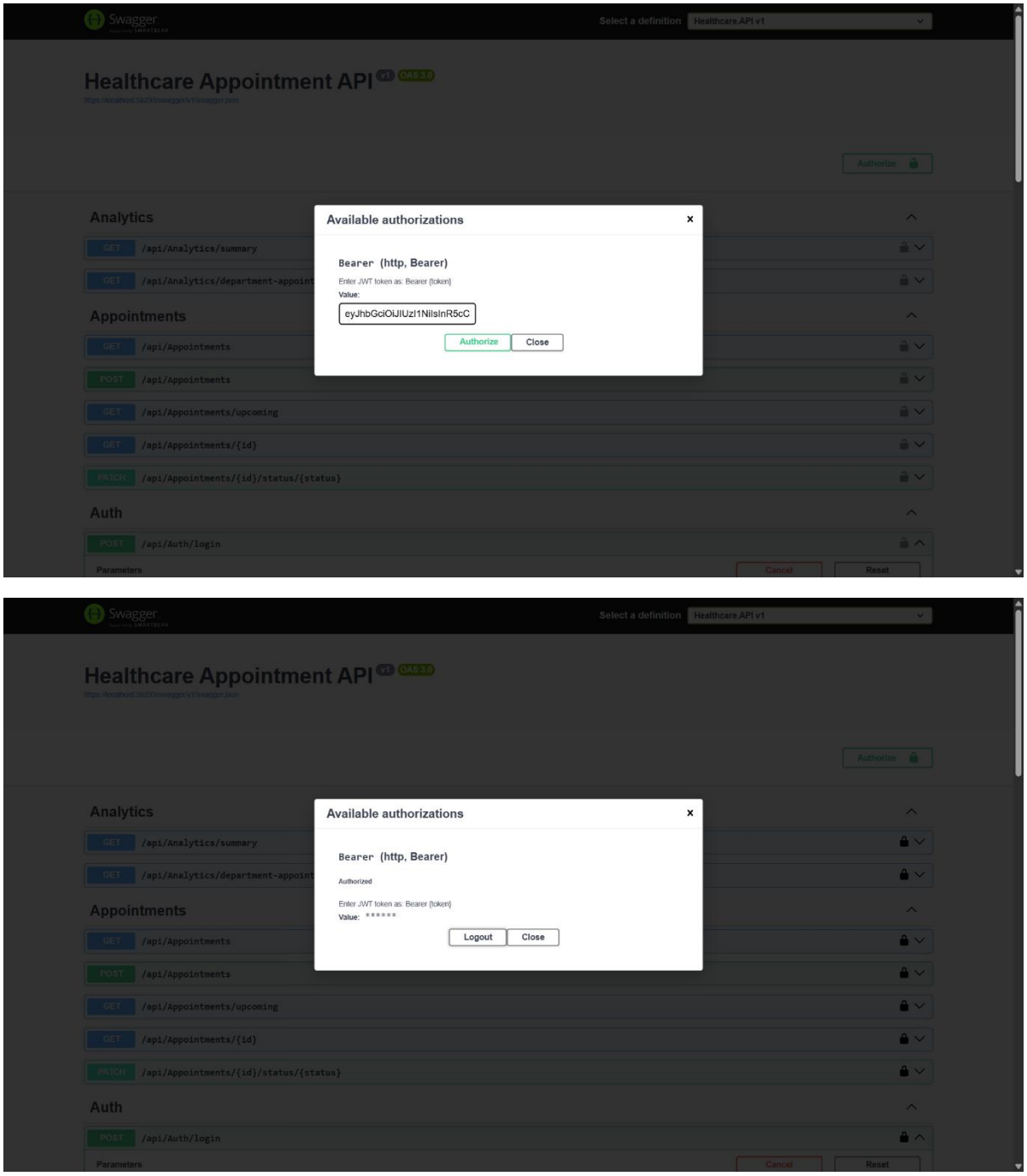


Figure: Swagger authorized using JWT Bearer token.

POST /api/Auth/login

Doctors

GET /api/Doctors

GET /api/Doctors/{id}

Patients

GET /api/Patients

Parameters

Cancel

No parameters

Execute

Responses

Code	Description	Links
200	OK	No links

POST /api/Patients

GET /api/Patients/{id}

PUT /api/Patients/{id}

Schemas

Patients

GET /api/Patients

Parameters

Cancel

No parameters

Execute

Clear

Responses

Curl

```
curl -X 'GET' \
  'https://localhost:58295/api/Patients' \
  -H 'accept: */*' \
  -H 'Authorization: Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiJhZGlpbkBoZWFsdGhjYX3ILmxvY2FsIiwiZWlhaWwiOiJhZGlpbkBoZWFsdGhjYX3ILmxvY2FsIiwiaHR0cDovL3NjaGVtYXMueGlsc29hcC5vcmcvd3MvRjAwMSBwNS9pZGV
```

Request URL

```
https://localhost:58295/api/Patients
```

Server response

Code	Details
200	Response body


```
[
  {
    "id": 1,
    "fullName": "Arun Kumar",
    "email": "arun@example.com",
    "phoneNumber": "9000000001",
    "dateOfBirth": "1997-05-10T00:00:00",
    "gender": "Male",
    "address": "Madurai",
    "bloodGroup": "O+"
  },
  {
    "id": 2,
    "fullName": "Meera Nair",
    "email": "meera@example.com",
    "phoneNumber": "9000000002",
    "dateOfBirth": "1995-08-21T00:00:00",
    "gender": "Female",
    "address": "Chennai",
    "bloodGroup": "A+"
  },
  {
    "id": 3,
    "fullName": "Kithin",
```

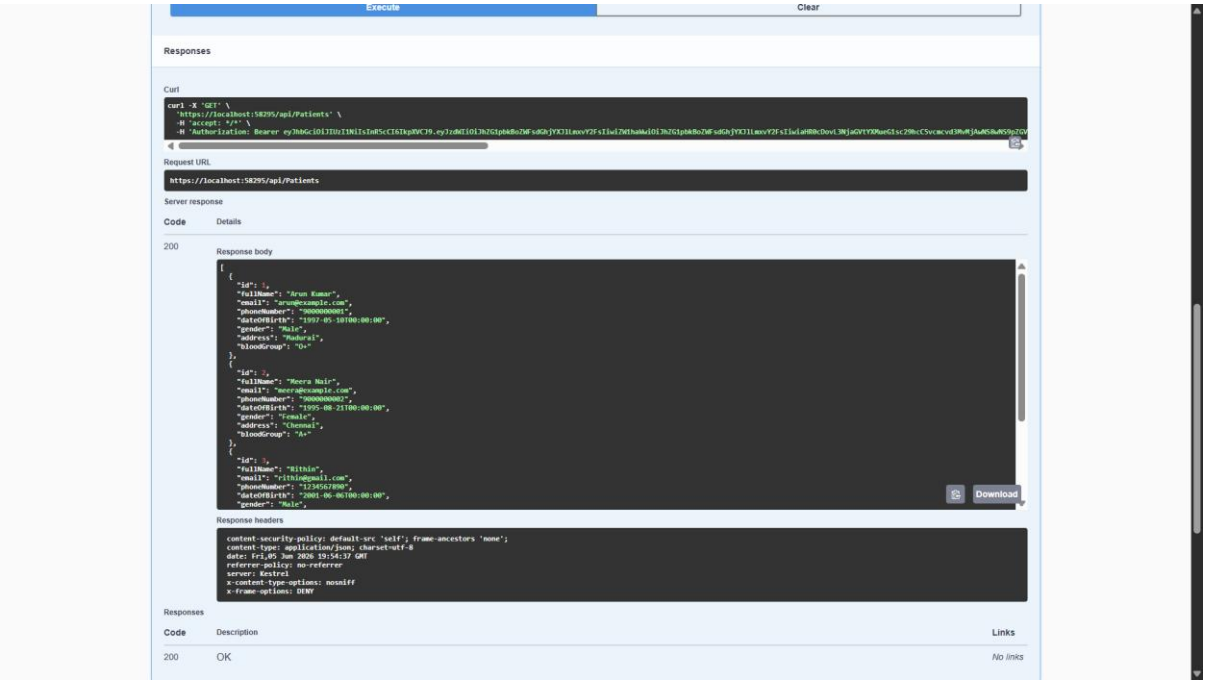
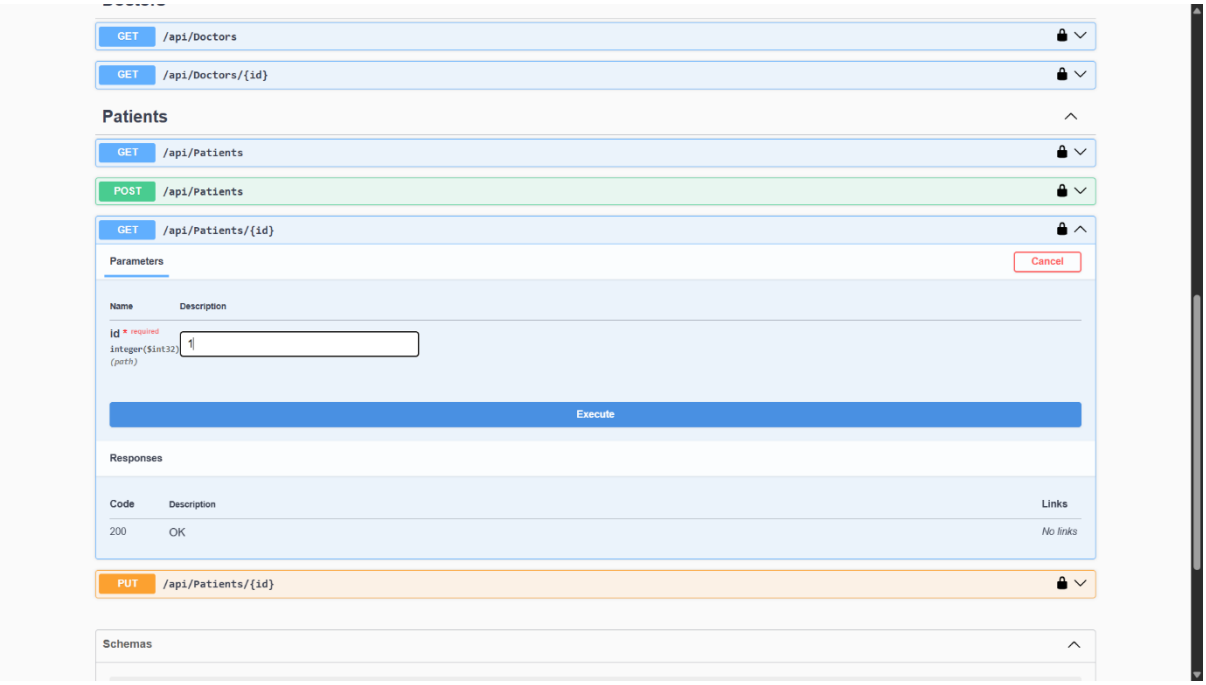


Figure: Patients API returning patient records from SQL Server.



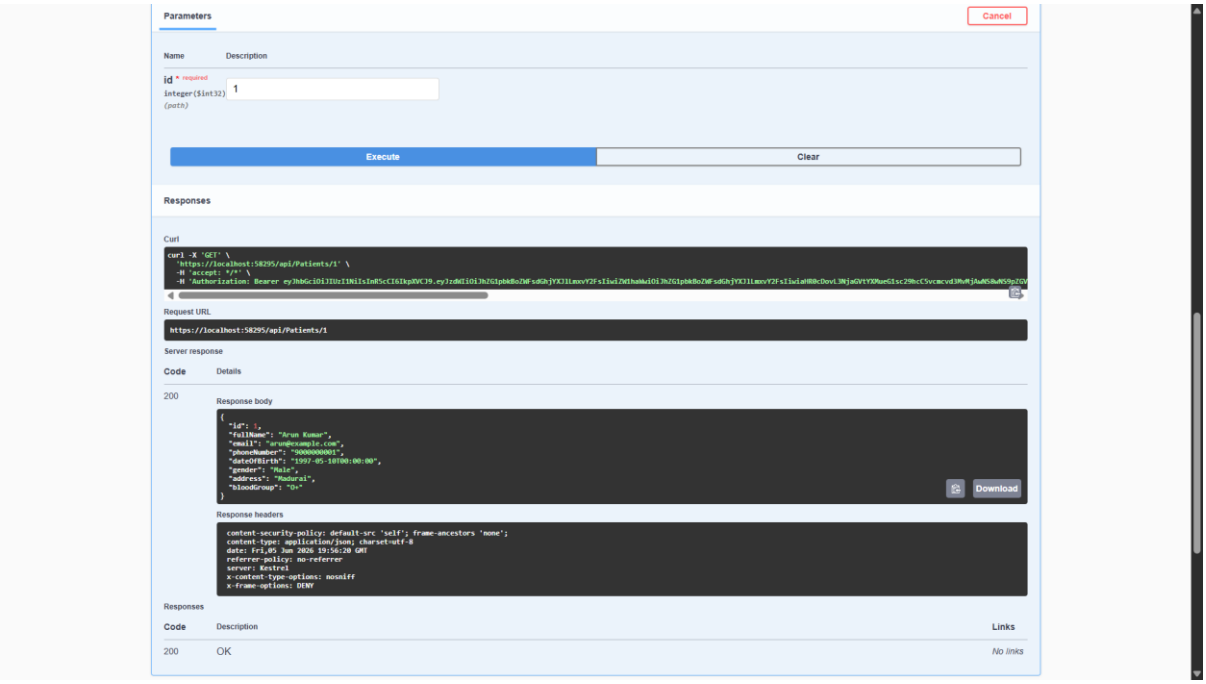
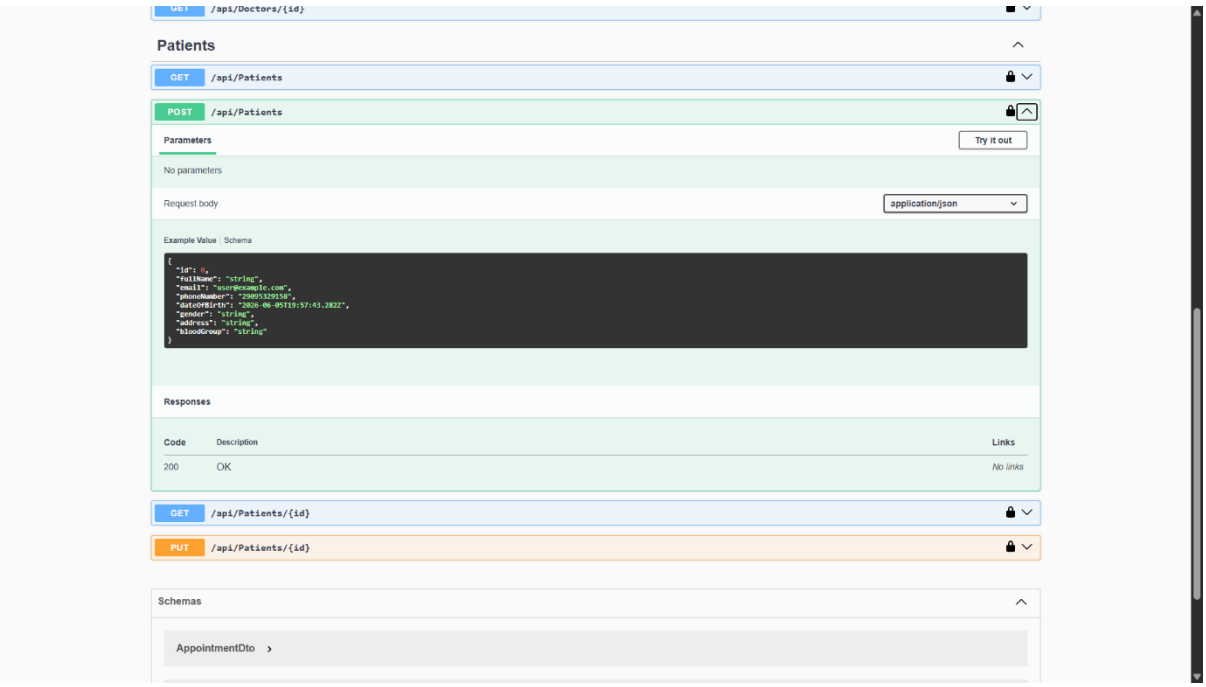
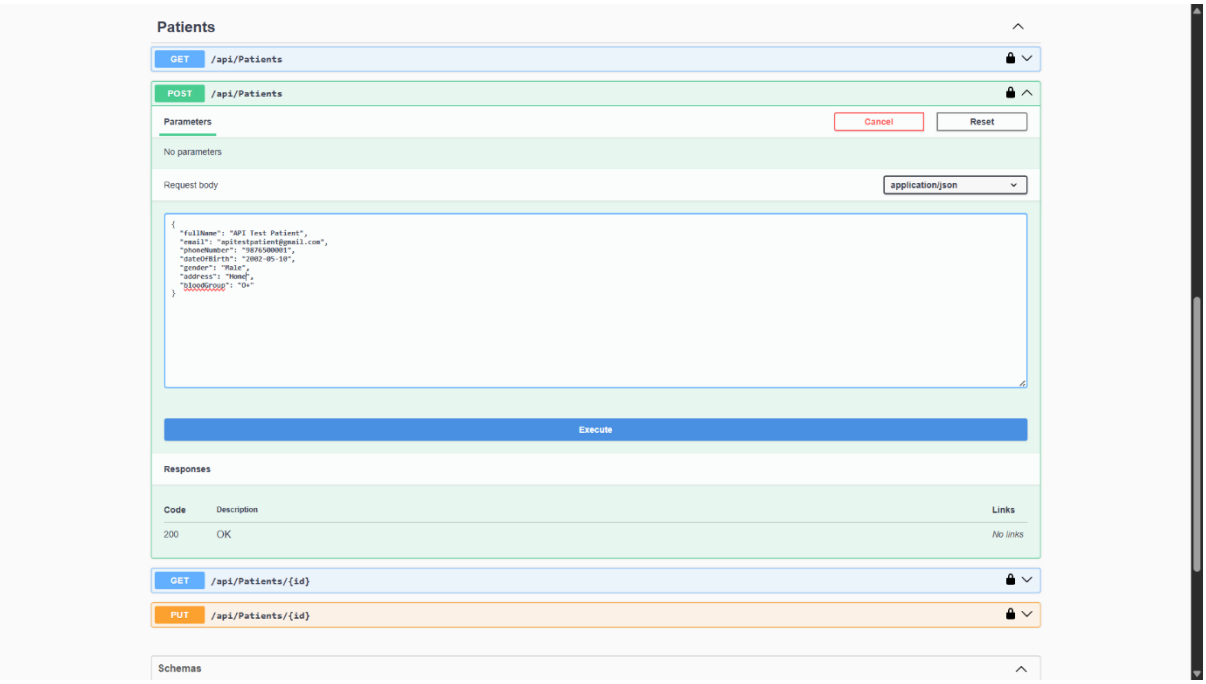


Figure: Patient details retrieved by Patient ID.





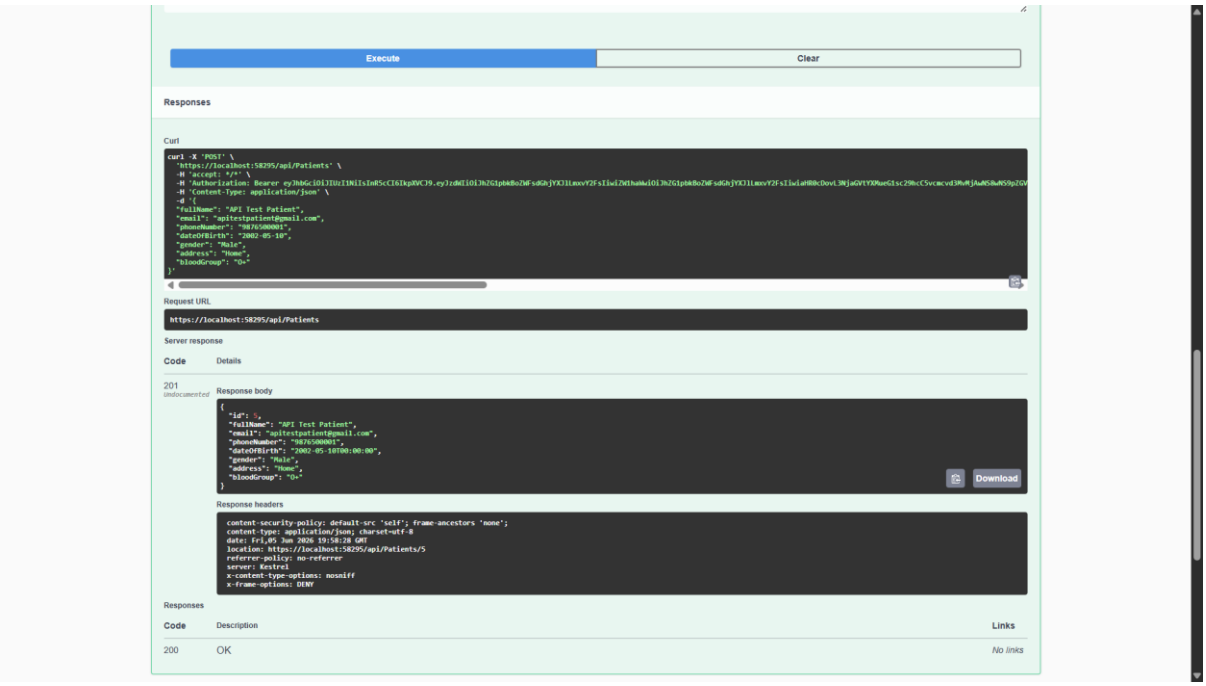
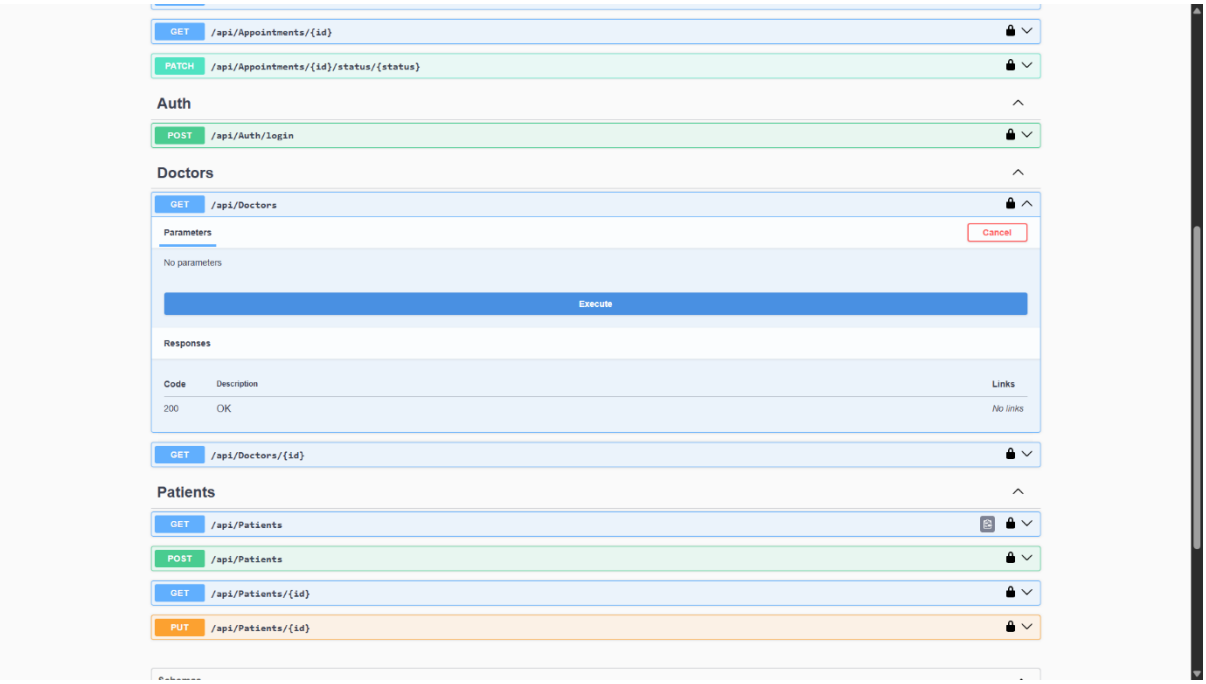


Figure: New patient created successfully through Web API.



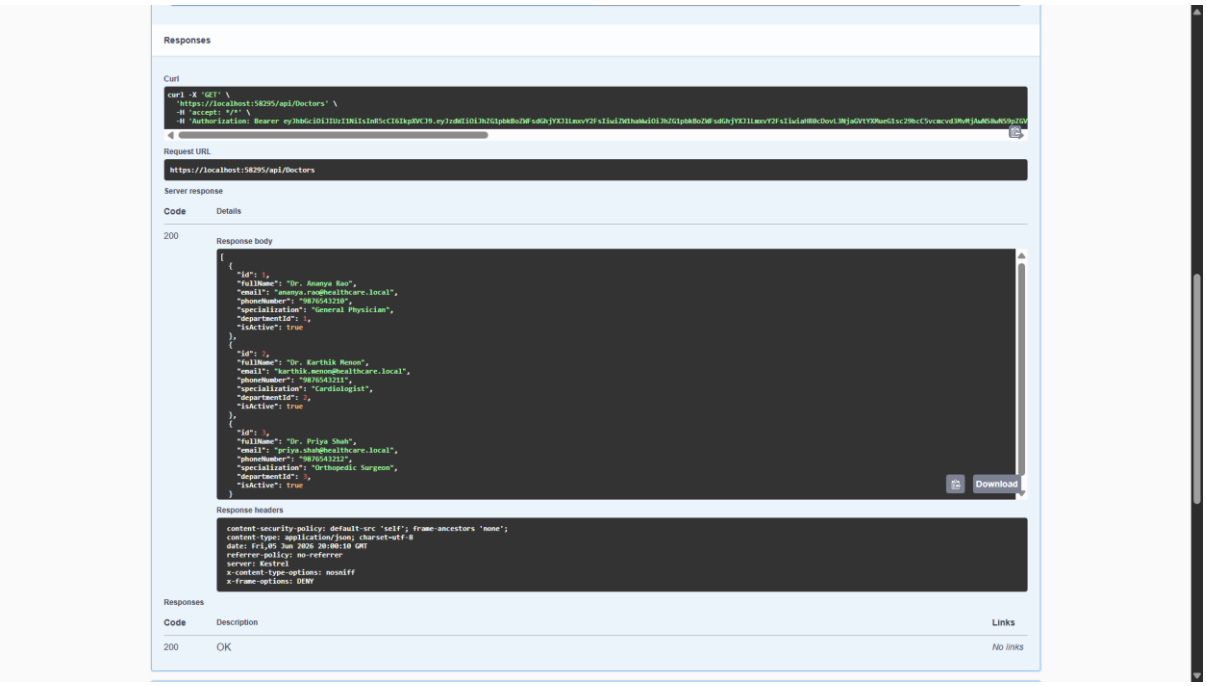
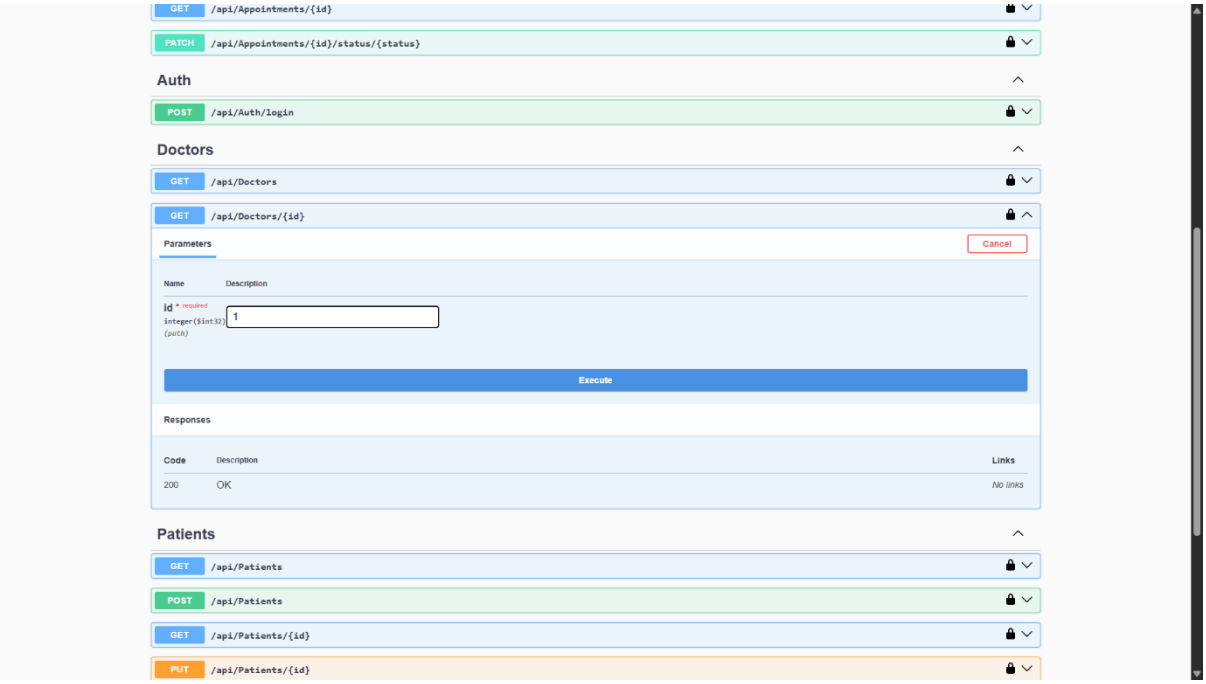


Figure: Doctors API returning doctor records required for appointment booking.



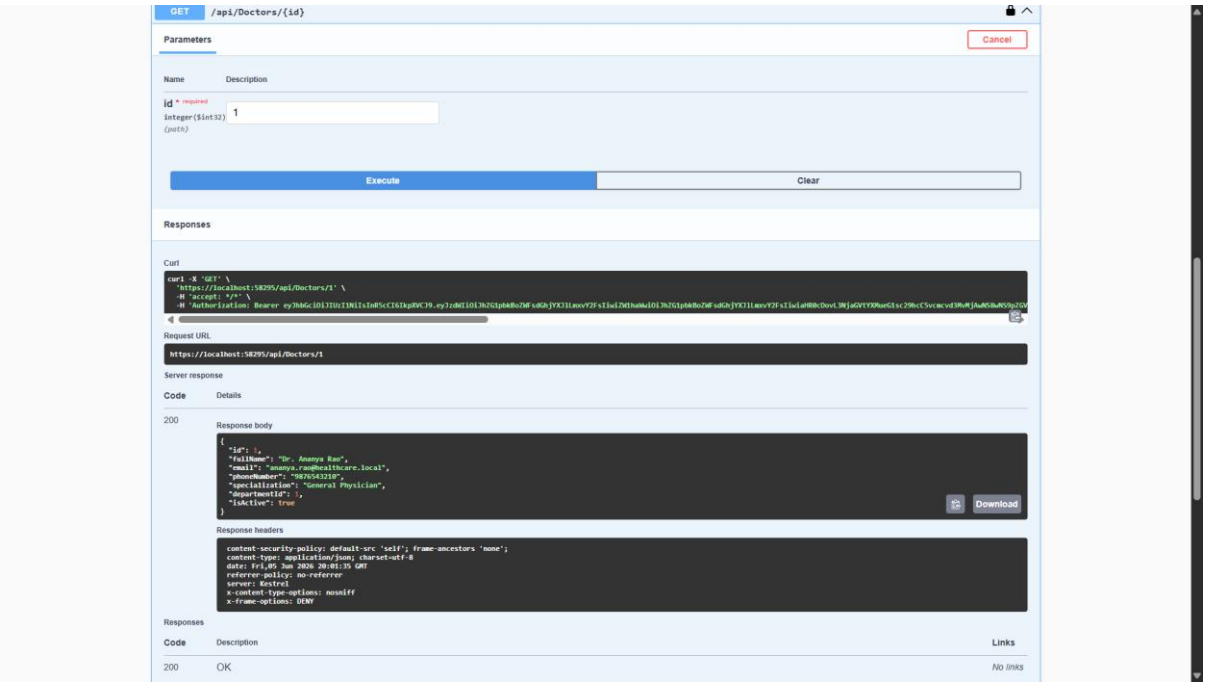
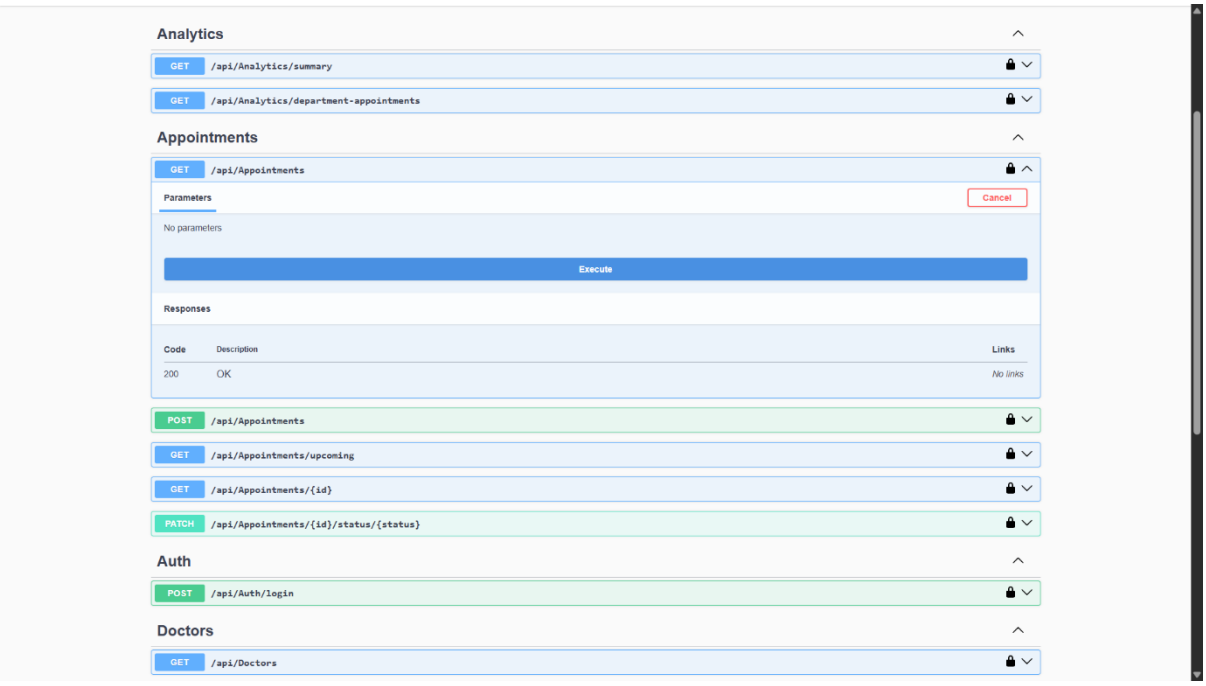


Figure: Doctor details retrieved by Doctor ID.



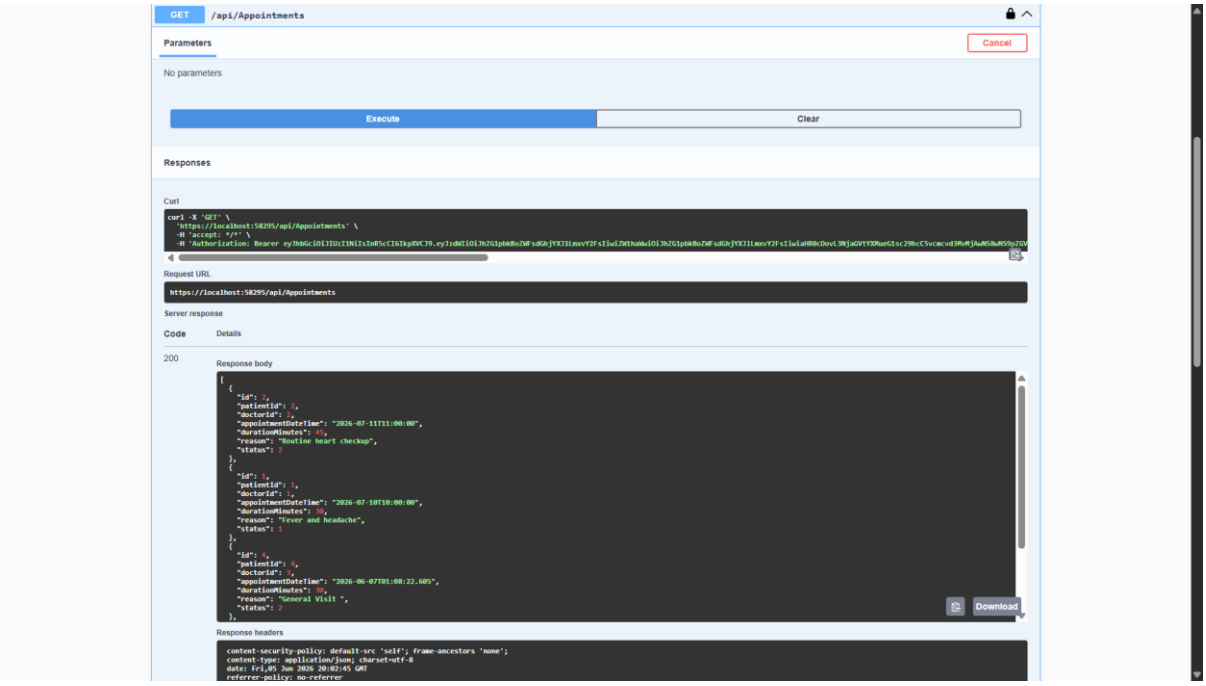
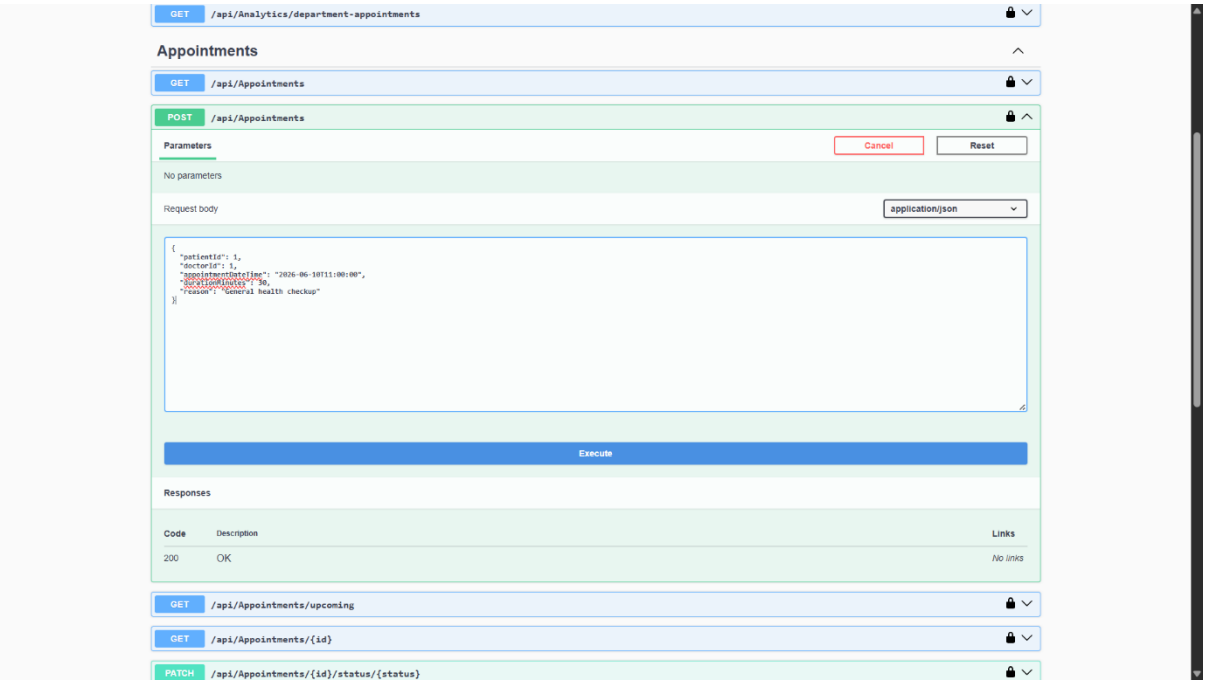


Figure: Appointments API returning appointment records from SQL Server.



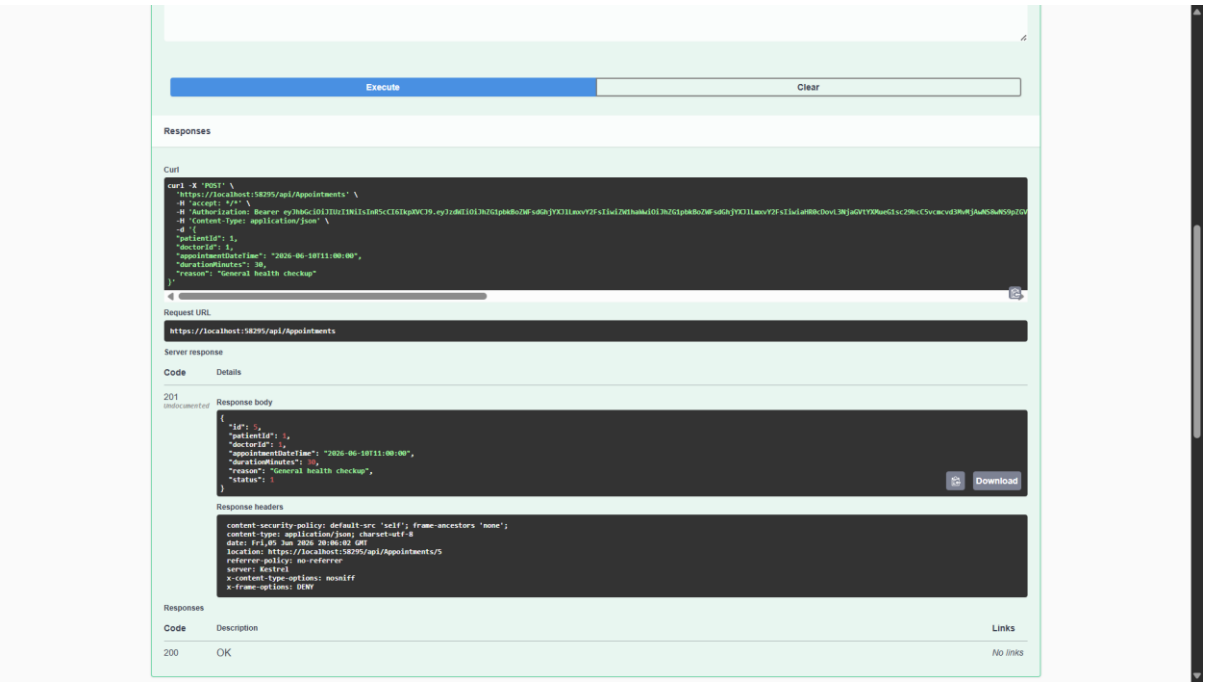


Figure: Appointment created successfully using REST API.

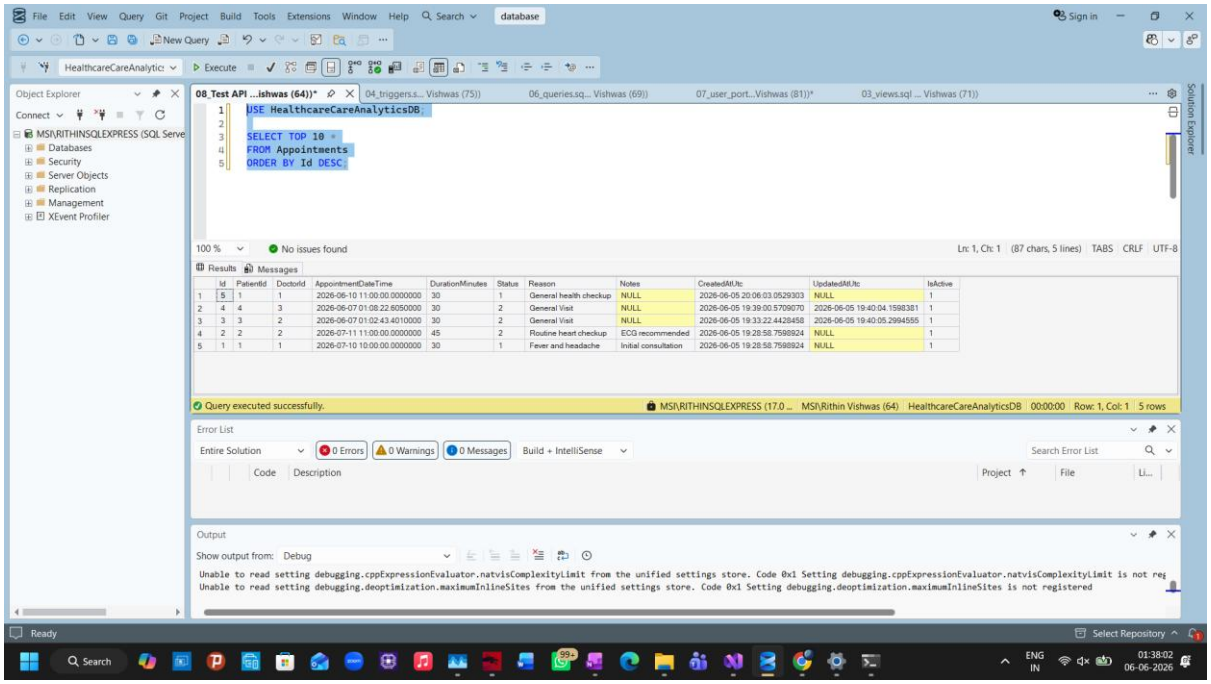


Figure: Appointment record verified in MS SQL Server after API execution.

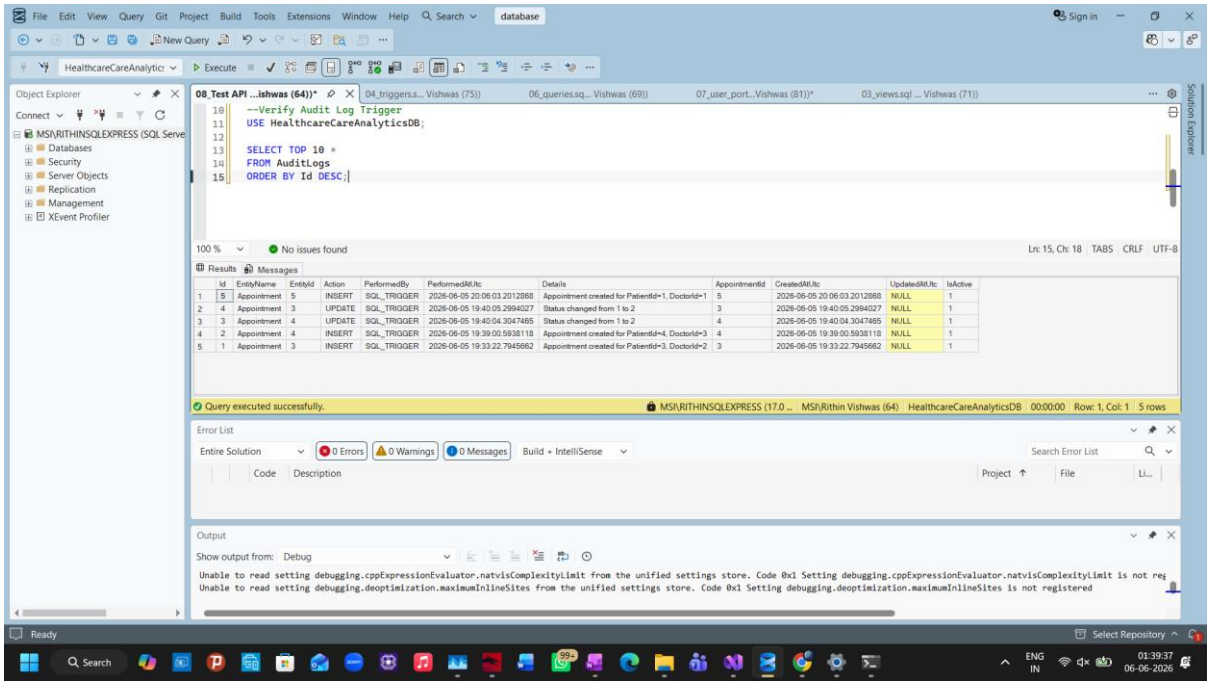
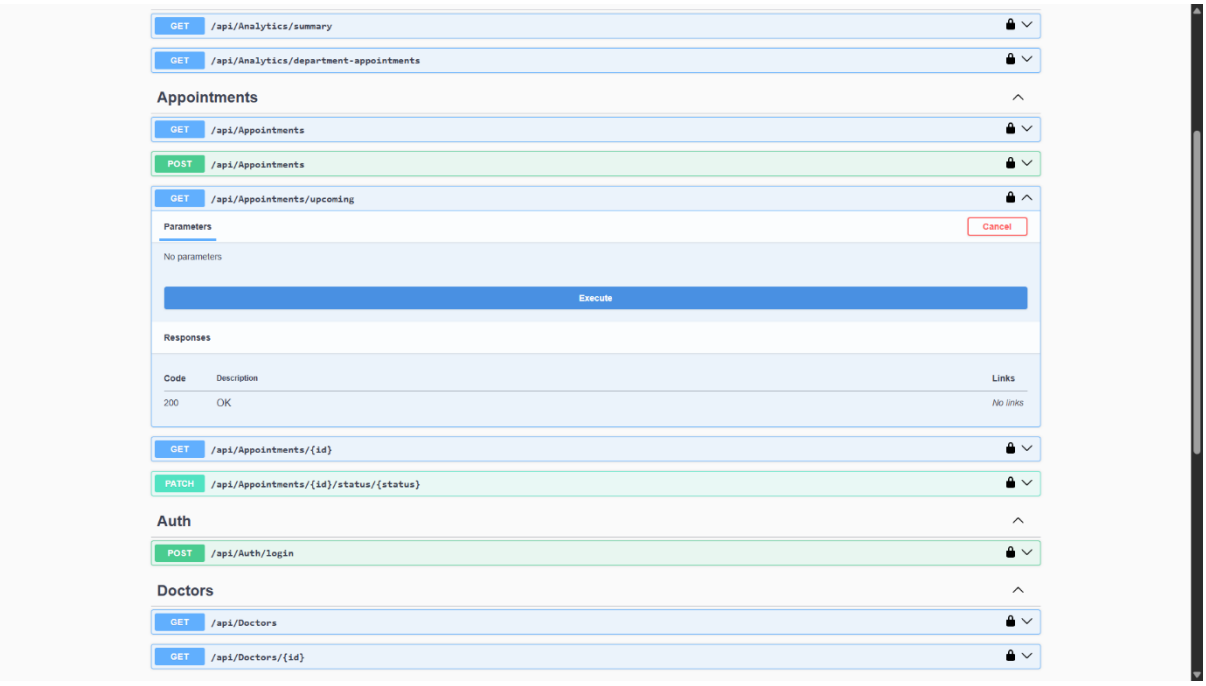


Figure: SQL trigger created an audit log after appointment insertion.



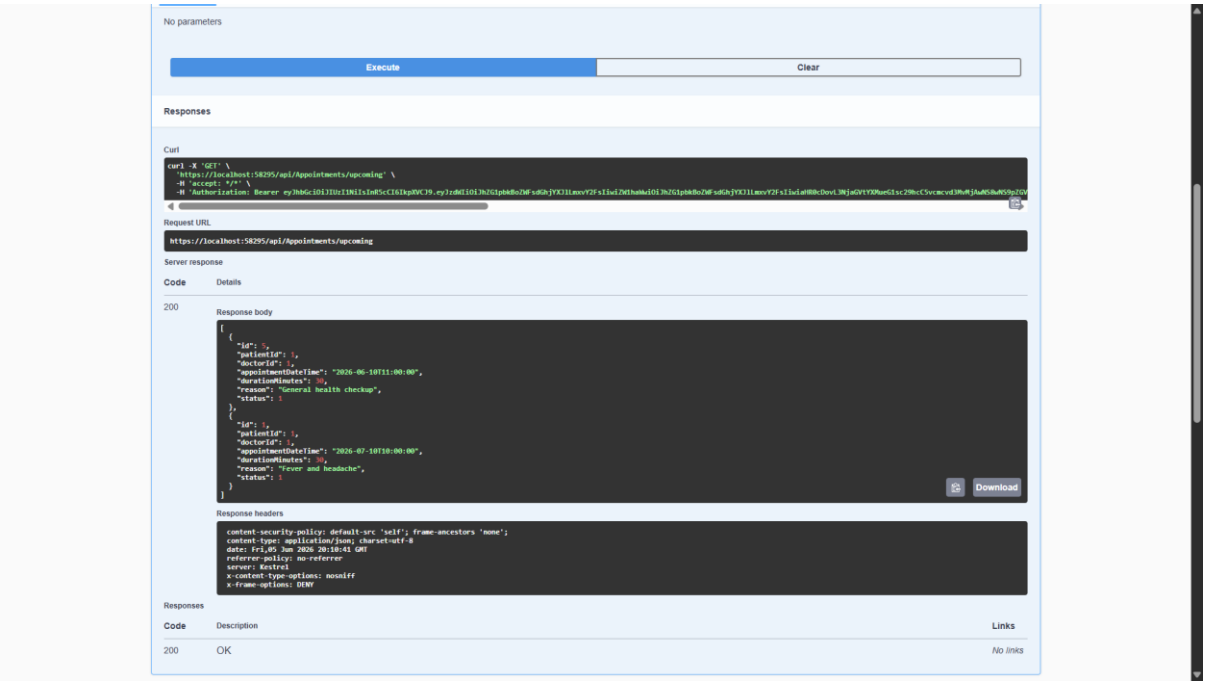
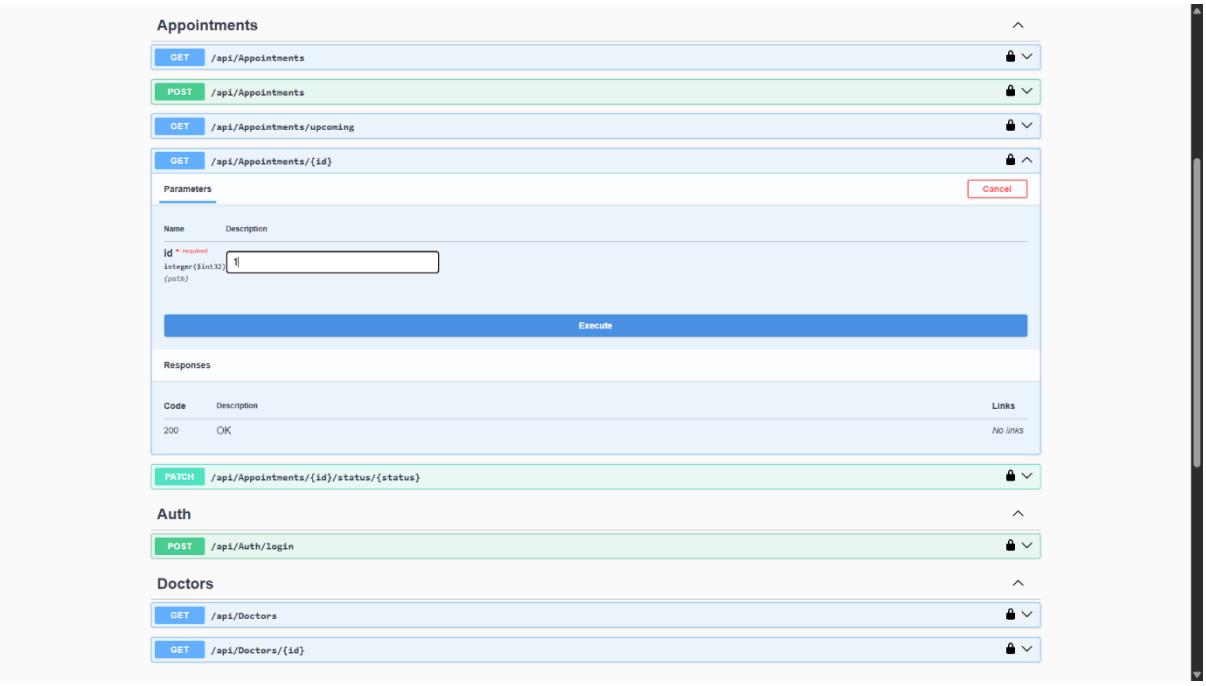


Figure: Upcoming appointments retrieved through API endpoint.



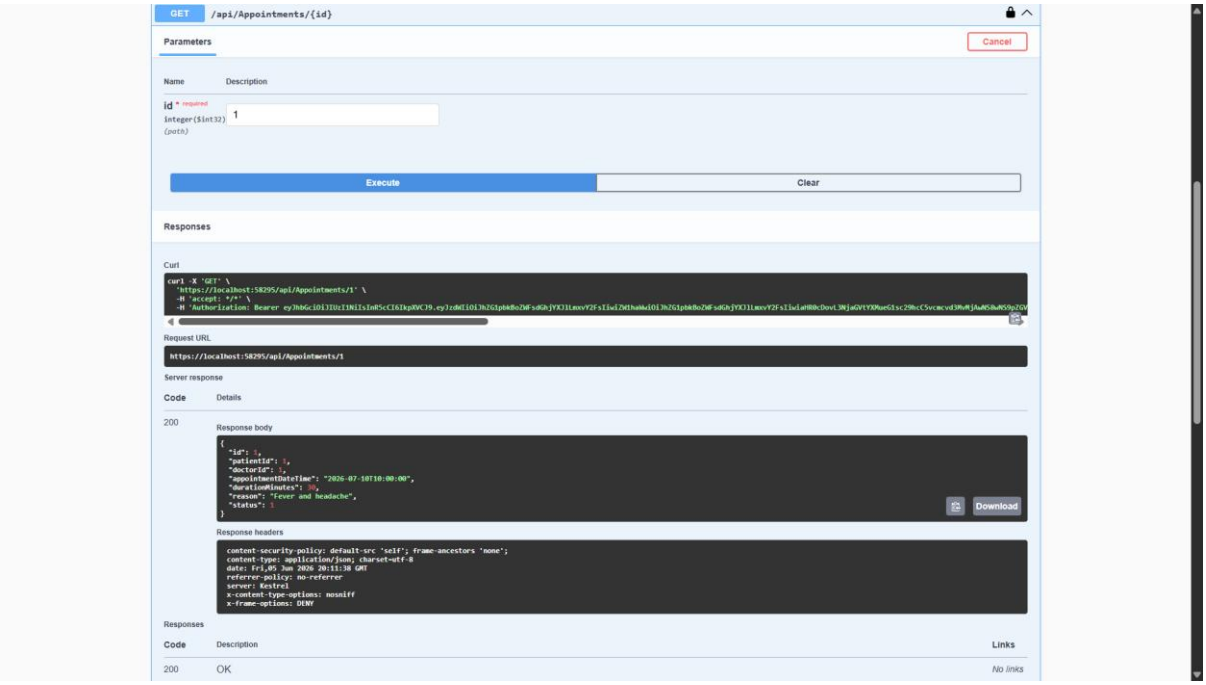
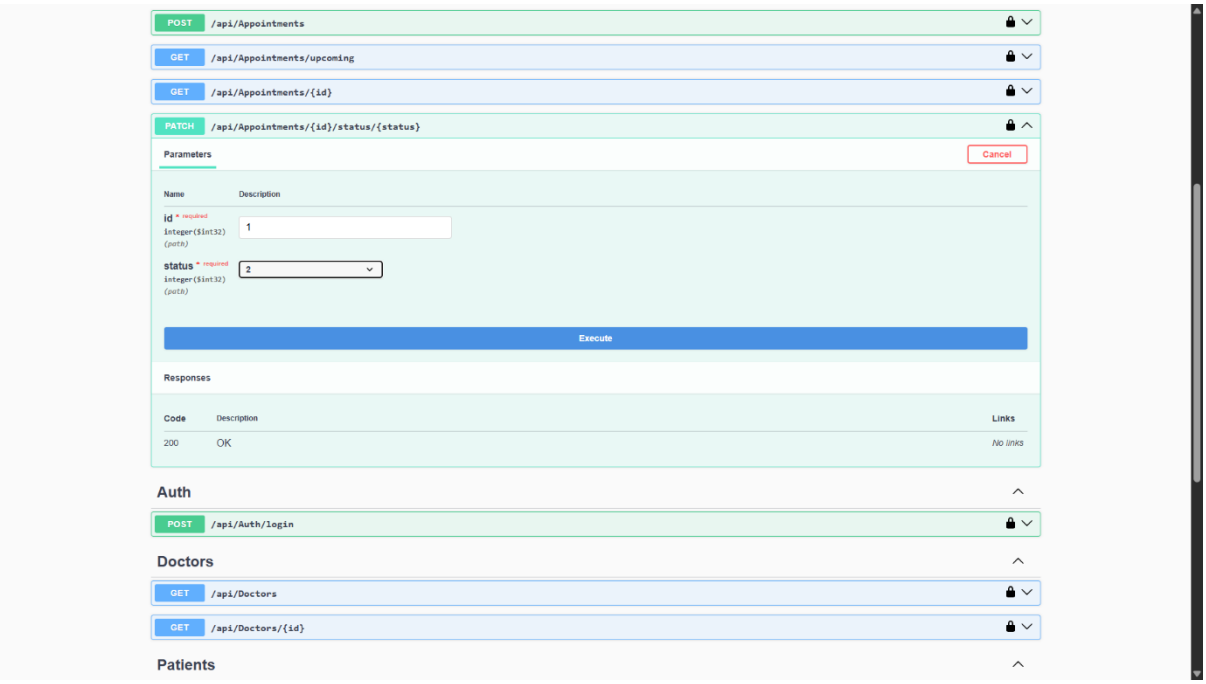


Figure: Appointment details retrieved by appointment ID.



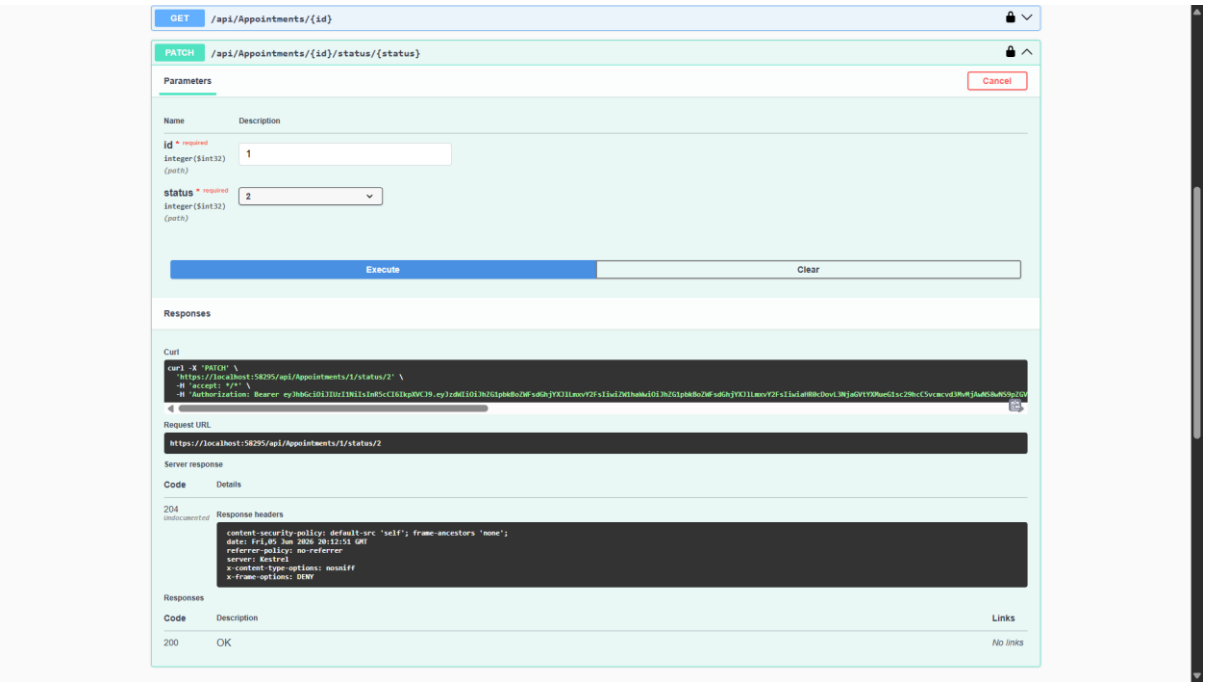


Figure: Appointment status updated successfully through PATCH API.

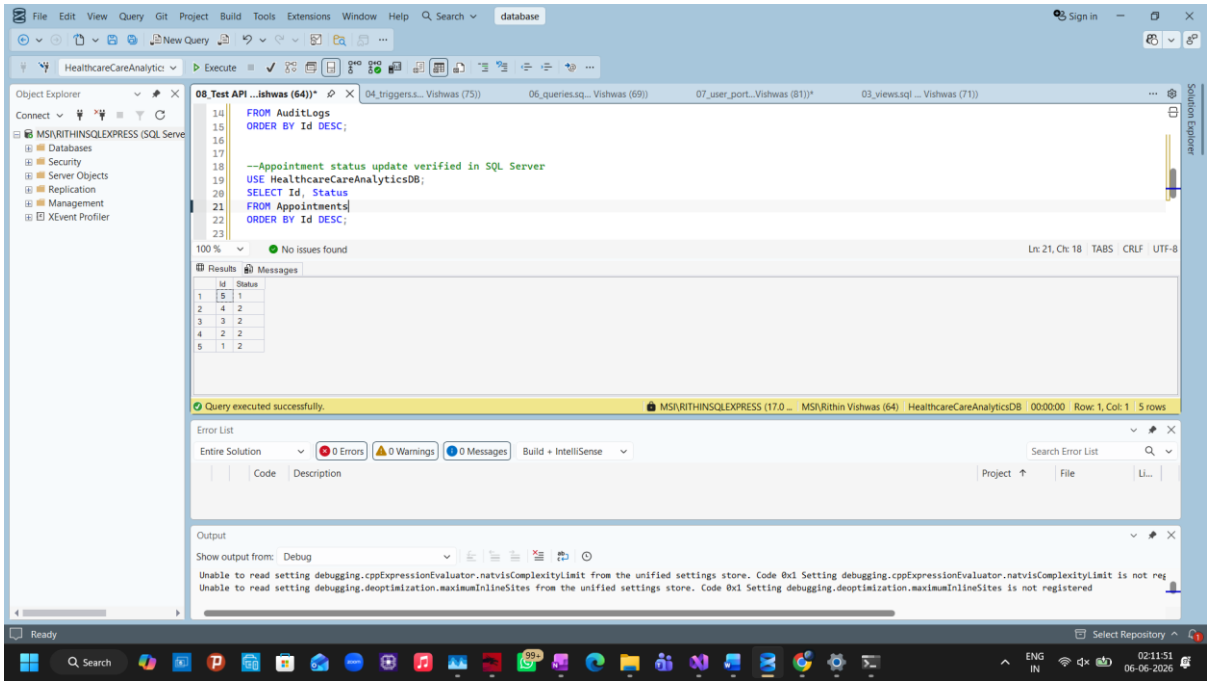


Figure: Appointment status update verified in SQL Server.

API Testing Explanation

Tested the Web API using Swagger. First, I started the Healthcare.API project and opened Swagger UI. Then I tested the login endpoint with admin credentials. After successful login, the API generated a JWT token. I used the token in Swagger Authorize using the Bearer format. Then I tested protected endpoints such as Patients, Doctors, and Appointments. I created an appointment through the API and verified the inserted data directly in SQL Server. I also checked the AuditLogs table to confirm that the SQL trigger executed successfully. Finally, I removed the token and tested a protected endpoint again, which returned 401 Unauthorized, proving that JWT security is working.

API demo flow:

Run API → Open Swagger → Login → Get JWT → Authorize → Test Patients → Test Doctors → Create Appointment → Verify SQL → Verify Audit Log → Test Unauthorized Access