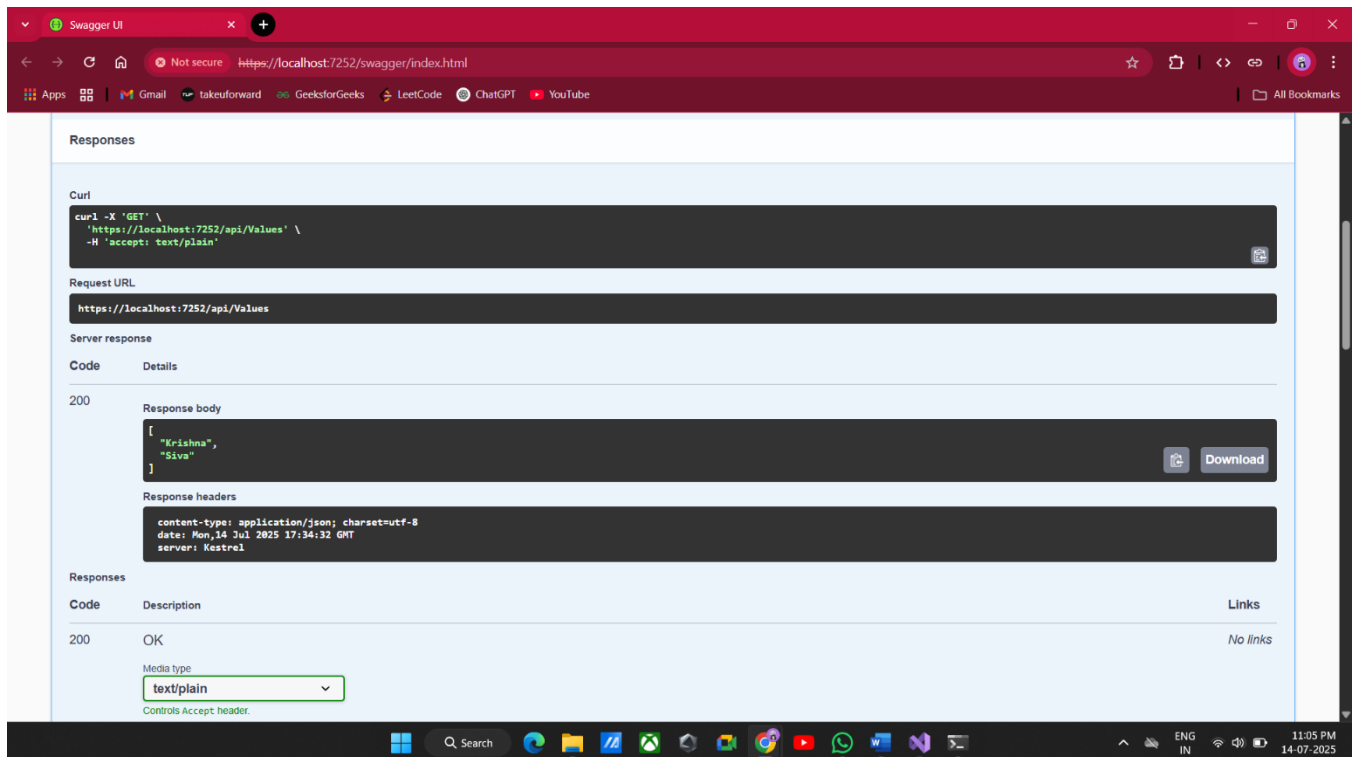


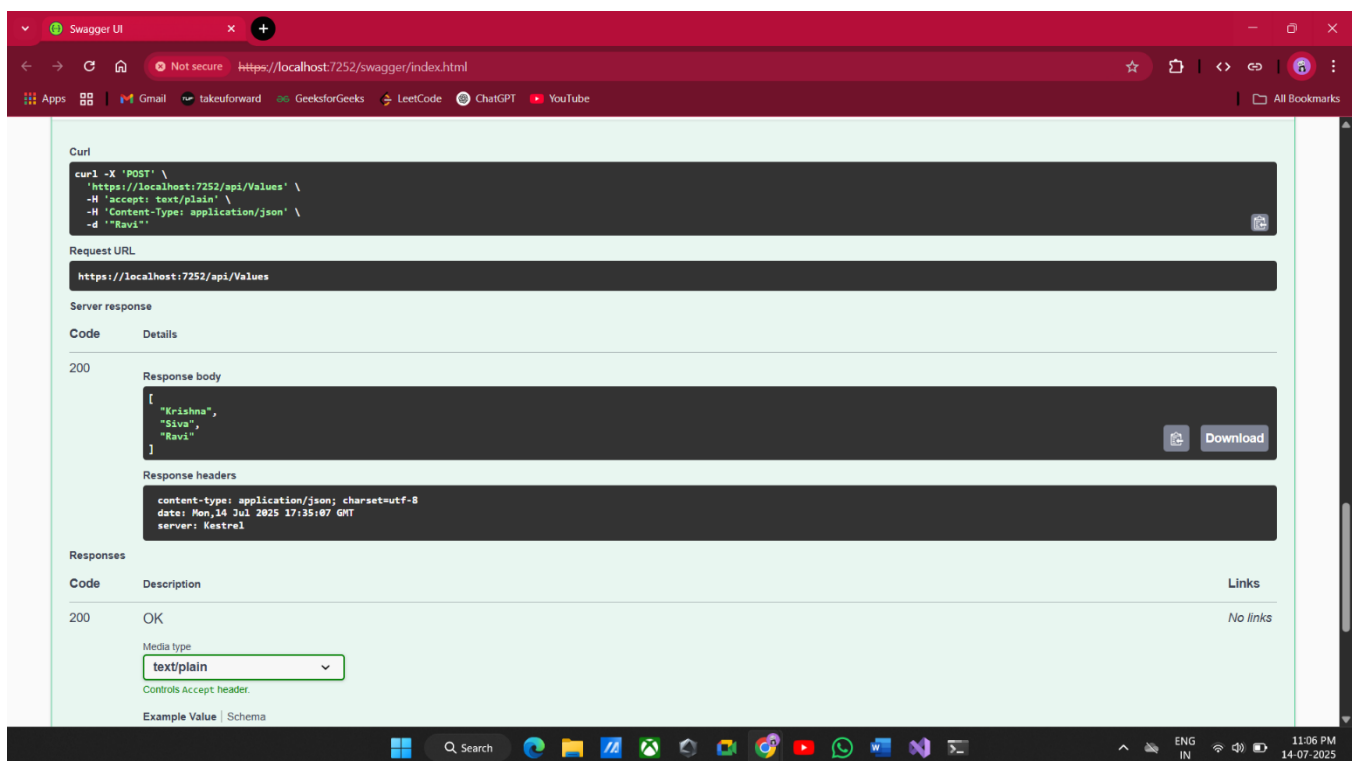
Web API Labs Summary

Lab 1

- Create a .NET Core Web API using the API template.
- Use the default controller (ValuesController) with GET, POST, PUT, DELETE methods.
- Run the application and validate GET method in Swagger or browser.



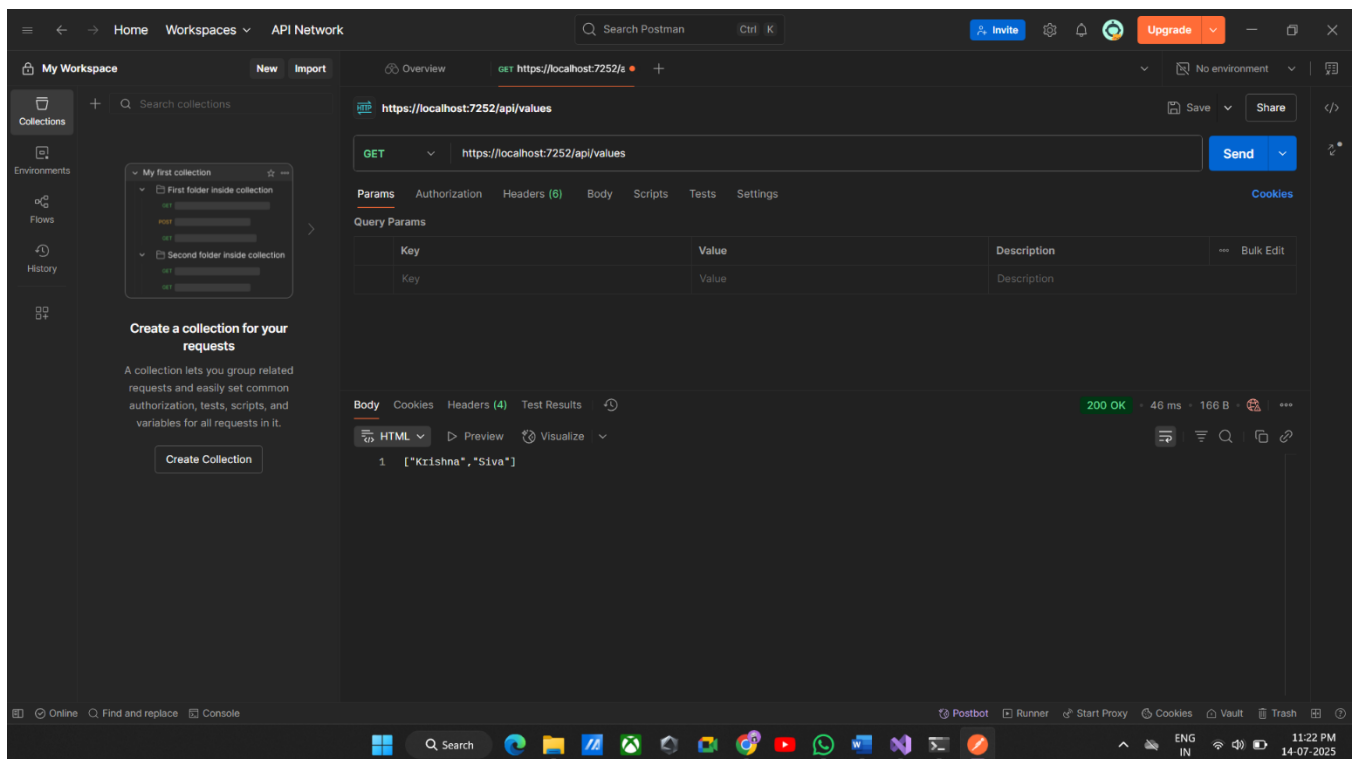
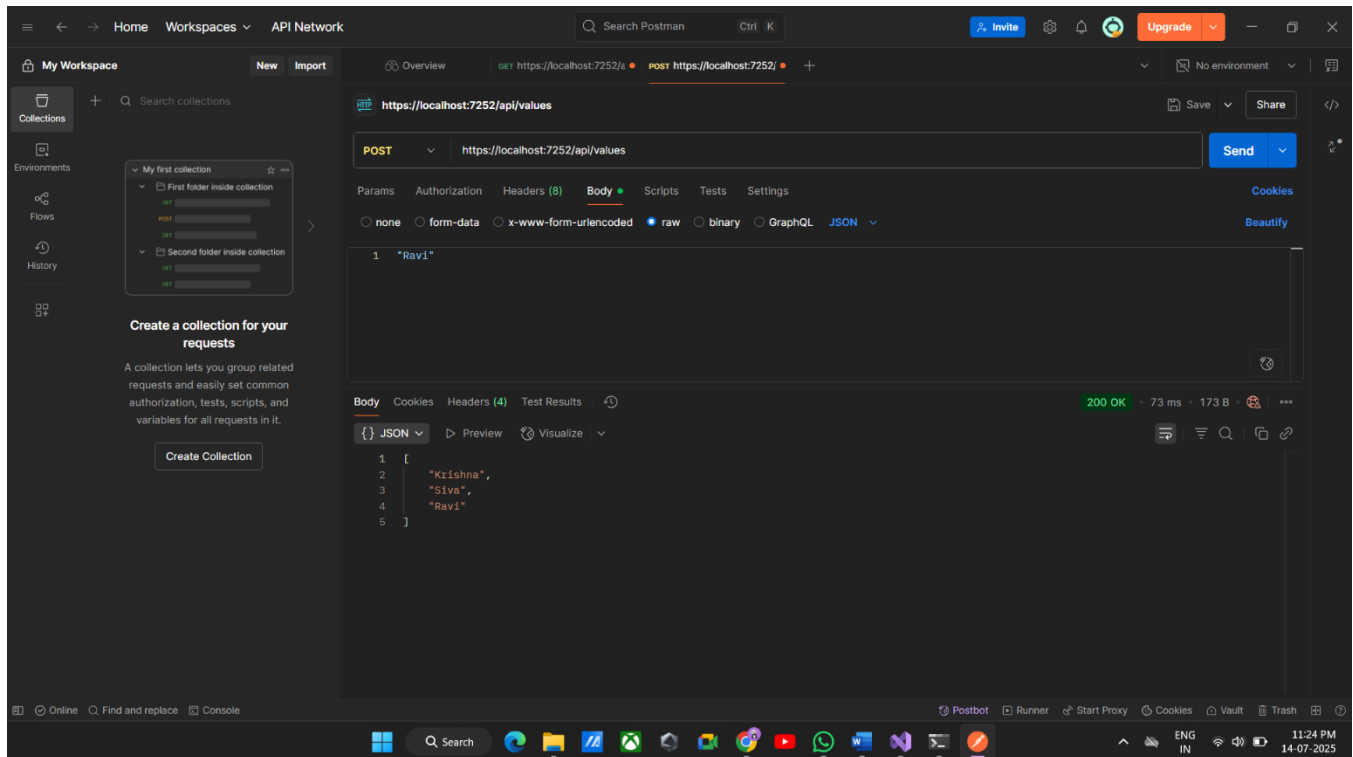
The screenshot shows the Swagger UI interface in a web browser. The URL bar indicates the endpoint is `https://localhost:7252/swagger/index.html`. The 'Responses' section is expanded for the GET method. The 'Curl' field shows the command: `curl -X 'GET' \ 'https://localhost:7252/api/Values' \ -H 'accept: text/plain'`. The 'Request URL' is `https://localhost:7252/api/Values`. The 'Server response' section shows a 200 status code. The 'Response body' is a JSON array: `["Krishna", "Siva"]`. The 'Response headers' are: `content-type: application/json; charset=utf-8`, `date: Mon, 14 Jul 2025 17:34:32 GMT`, and `server: Kestrel`. The 'Responses' table at the bottom shows a 200 status code with the description 'OK' and a media type of 'text/plain'.



The screenshot shows the Swagger UI interface in a web browser. The URL bar indicates the endpoint is `https://localhost:7252/swagger/index.html`. The 'Curl' field shows the command: `curl -X 'POST' \ 'https://localhost:7252/api/Values' \ -H 'accept: text/plain' \ -H 'Content-Type: application/json' \ -d 'Ravi'`. The 'Request URL' is `https://localhost:7252/api/Values`. The 'Server response' section shows a 200 status code. The 'Response body' is a JSON array: `["Krishna", "Siva", "Ravi"]`. The 'Response headers' are: `content-type: application/json; charset=utf-8`, `date: Mon, 14 Jul 2025 17:35:07 GMT`, and `server: Kestrel`. The 'Responses' table at the bottom shows a 200 status code with the description 'OK' and a media type of 'text/plain'.

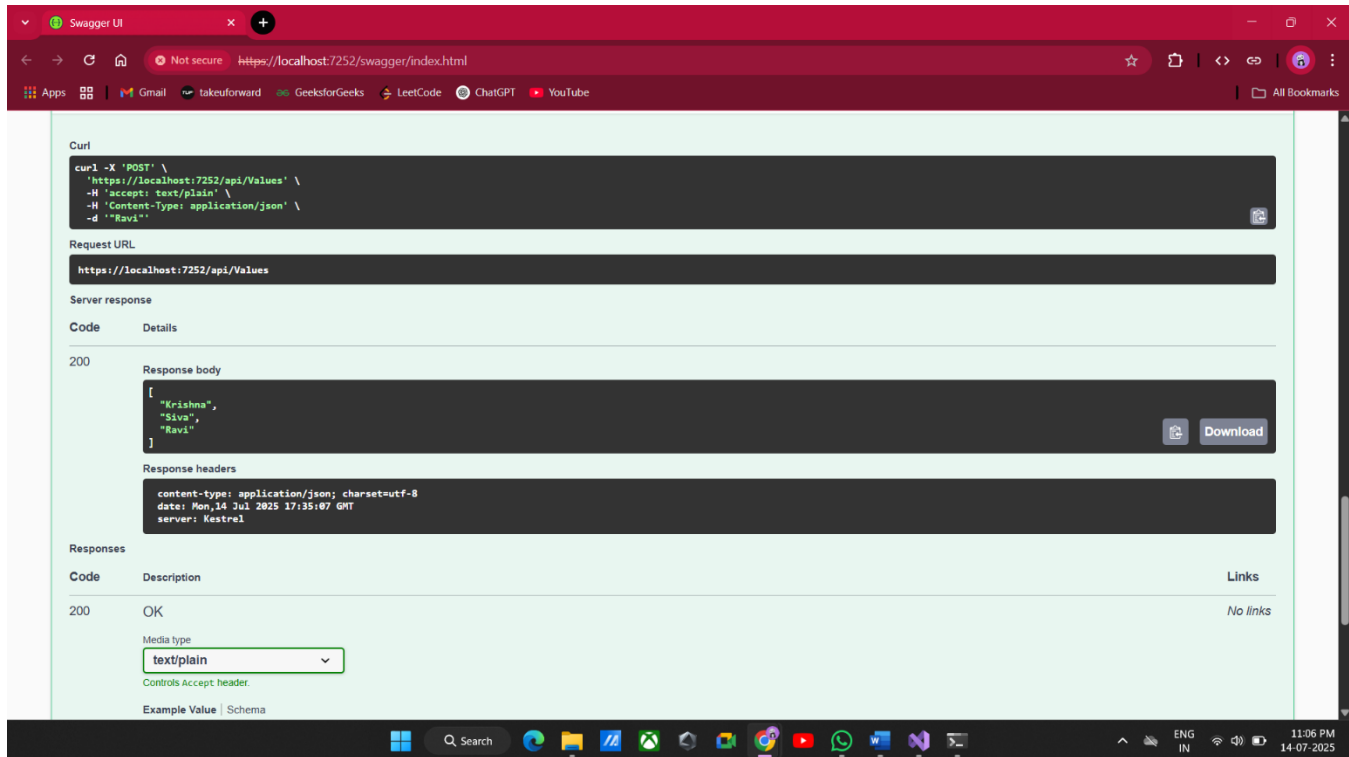
Lab 2

- Install Swashbuckle.AspNetCore NuGet package to enable Swagger.
- Configure Swagger in Program.cs to generate API documentation.
- Test GET method through Swagger UI by clicking 'Try it out' and 'Execute'.
- Verify output in Swagger UI and POSTMAN.
- Rename route in Employee controller to 'Emp' and test.



Lab 3

- Create custom 'Employee' model with nested 'Department' and 'Skill' types.
- Implement GET and POST methods in EmployeeController.
- Add CustomAuthFilter to validate Authorization token in request header.
- Add CustomExceptionHandler to handle and log exceptions globally.



Lab 4

- Implement PUT method in EmployeeController to update employee details.
- Validate employee ID: return BadRequest if invalid or not found.
- Update employee details from JSON input and return updated object.
- Test via Swagger and verify proper error/status responses.

Swagger UI

localhost:7252/swagger/index.html

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Responses

Curl

curl -X 'GET' \\\n'https://localhost:7252/api/Employee/GetStandard' \\\n-H 'accept: text/plain' \\\n-H 'Authorization: Bearer token123'

Request URL

https://localhost:7252/api/Employee/GetStandard

Server response

CodeDetails

200

Response body

```
{\n  \"id\": 1,\n  \"name\": \"Krishna\",\n  \"salary\": 60000,\n  \"permanent\": true,\n  \"department\": {\n    \"id\": 1,\n    \"name\": \"IT\"\n  },\n  \"skills\": [\n    {\n      \"id\": 1,\n      \"name\": \"C#\"\n    },\n    {\n      \"id\": 2,\n      \"name\": \"SQL\"\n    }\n  ],\n  \"dateOfBirth\": \"2000-01-01T00:00:00\"\n}
```

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10:18 AM 15-07-2025

Swagger UI

localhost:7252/swagger/index.html

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Execute

Clear

Responses

Curl

curl -X 'DELETE' \\\n'https://localhost:7252/api/Employee/1' \\\n-H 'accept: */*' \\\n-H 'Authorization: Bearer token123'

Request URL

https://localhost:7252/api/Employee/1

Server response

CodeDetails

200

Response body

Employee with ID 1 deleted successfully

Download

Response headers

```
content-type: text/plain; charset=utf-8\ndate: Tue, 15 Jul 2025 05:06:48 GMT\nserver: Kestrel
```

Responses

CodeDescriptionLinks

200OKNo links

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PowerShell

System Tray

10:36 AM 15-07-2025

Lab 5

- Enable JWT Authentication in Program.cs with secret key.
- Create AuthController with GET method to generate JWT token.
- Add [Authorize] attribute to EmployeeController to protect routes.
- Test with Swagger or POSTMAN using Authorization: Bearer <token>.
- Check for 401 Unauthorized on invalid/expired tokens.
- Add role-based authorization with [Authorize(Roles="Admin,POC")] and test.

