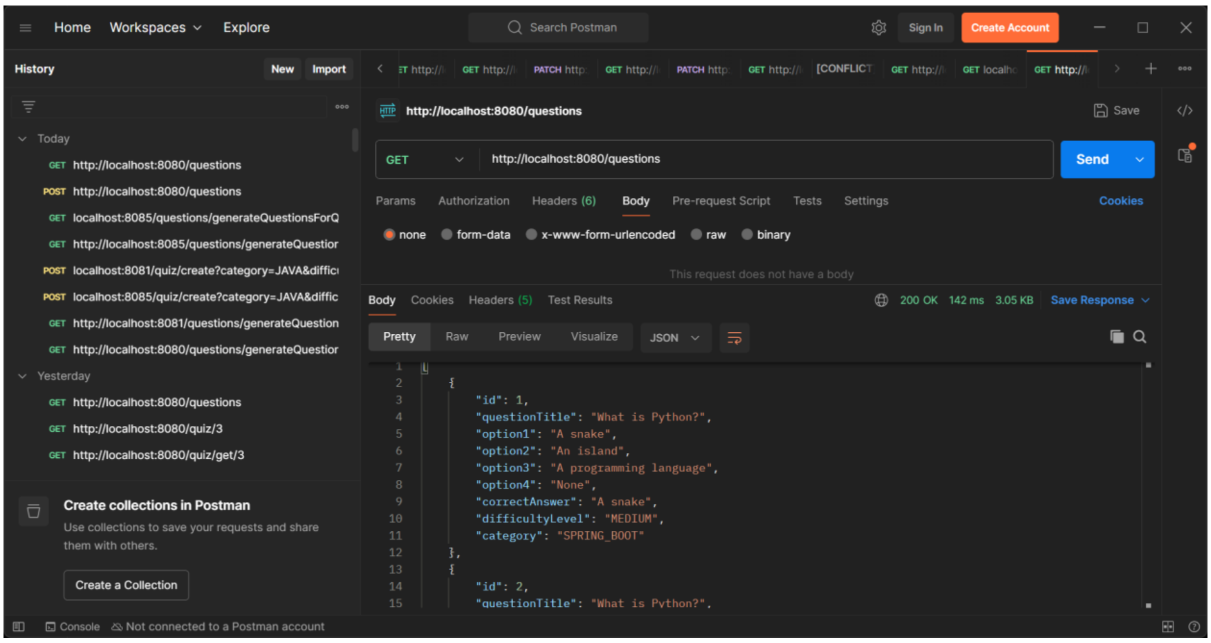
OUTPUT SCREENSHOTS-QUIZAPP MONOREPO

1 Create a question



History

Today
- GET http://localhost:8080/questions
- POST http://localhost:8080/questions
- GET localhost:8085/questions/generateQuestionsForQ
- GET http://localhost:8085/questions/generateQuestior
- POST localhost:8081/quiz/create?category=JAVA&diffici
- POST localhost:8085/quiz/create?category=JAVA&diffic
- GET http://localhost:8081/questions/generateQuestion
- GET http://localhost:8080/questions/generateQuestior

Yesterday
- GET http://localhost:8080/questions
- GET http://localhost:8080/quiz/3
- GET http://localhost:8080/quiz/get/3

Create collections in Postman

Use collections to save your requests and share them with others.

http://localhost:8080/questions

GET http://localhost:8080/questions

Body: none

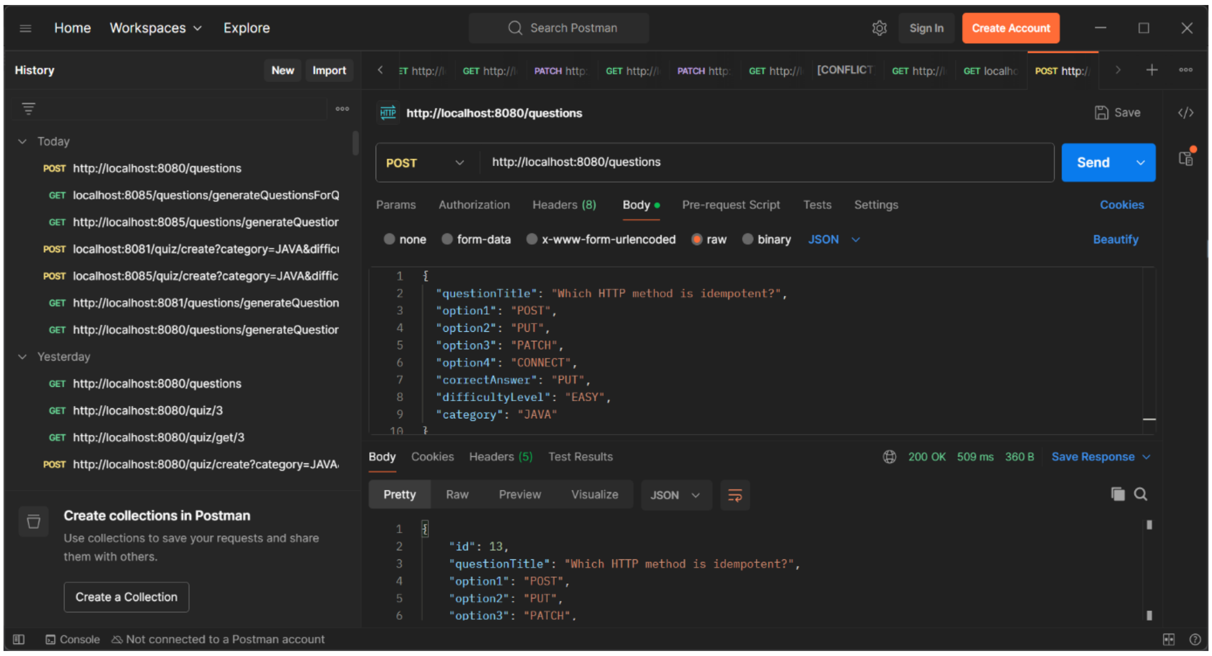
This request does not have a body

200 OK 142 ms 3.05 KB

```
[
    {
        "id": 1,
        "questionTitle": "What is Python?",
        "option1": "A snake",
        "option2": "An island",
        "option3": "A programming language",
        "option4": "None",
        "correctAnswer": "A snake",
        "difficultyLevel": "MEDIUM",
        "category": "SPRING_BOOT"
    },
    {
        "id": 2,
        "questionTitle": "What is Python?",
```

Console Not connected to a Postman account

2. Get all questions



History

Today
- POST http://localhost:8080/questions
- GET localhost:8085/questions/generateQuestionsForQ
- GET http://localhost:8085/questions/generateQuestior
- POST localhost:8081/quiz/create?category=JAVA&diffici
- POST localhost:8085/quiz/create?category=JAVA&diffic
- GET http://localhost:8081/questions/generateQuestion
- GET http://localhost:8080/questions/generateQuestior

Yesterday
- GET http://localhost:8080/questions
- GET http://localhost:8080/quiz/3
- GET http://localhost:8080/quiz/get/3
- POST http://localhost:8080/quiz/create?category=JAVA

Create collections in Postman

Use collections to save your requests and share them with others.

http://localhost:8080/questions

POST http://localhost:8080/questions

Headers (8) · Body: raw JSON

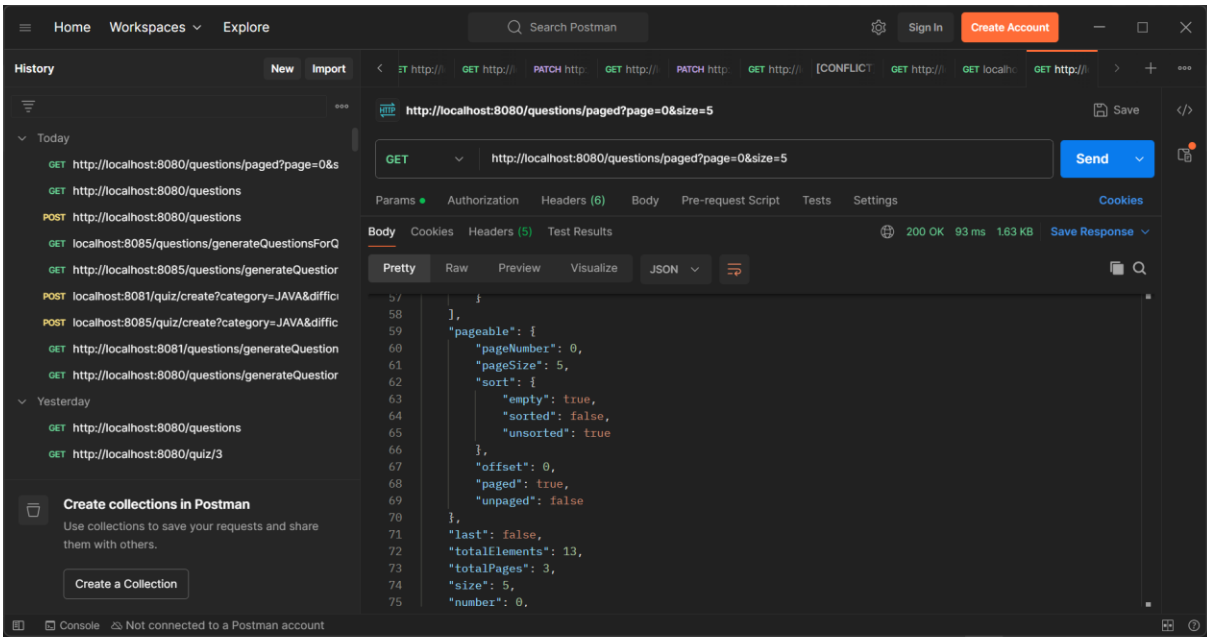
```
{
    "questionTitle": "Which HTTP method is idempotent?",
    "option1": "POST",
    "option2": "PUT",
    "option3": "PATCH",
    "option4": "CONNECT",
    "correctAnswer": "PUT",
    "difficultyLevel": "EASY",
    "category": "JAVA"
}
```

200 OK 509 ms 360 B

```
{
    "id": 13,
    "questionTitle": "Which HTTP method is idempotent?",
    "option1": "POST",
    "option2": "PUT",
    "option3": "PATCH",
```

Console Not connected to a Postman account

3. Pagination (get paged questions)


Home
Workspaces
Explore
Search Postman
Sign In
Create Account
History
New
Import
Create collections in Postman
Use collections to save your requests and share them with others.
Create a Collection
Console
Not connected to a Postman account

Today
- GET http://localhost:8080/questions/paged?page=0&s
- GET http://localhost:8080/questions
- POST http://localhost:8080/questions
- GET localhost:8085/questions/generateQuestionsForQ
- GET http://localhost:8085/questions/generateQuestior
- POST localhost:8081/quiz/create?category=JAVA&diffici
- POST localhost:8085/quiz/create?category=JAVA&diffic
- GET http://localhost:8081/questions/generateQuestion
- GET http://localhost:8080/questions/generateQuestior

Yesterday
- GET http://localhost:8080/questions
- GET http://localhost:8080/quiz/3

GET http://localhost:8080/questions/paged?page=0&size=5

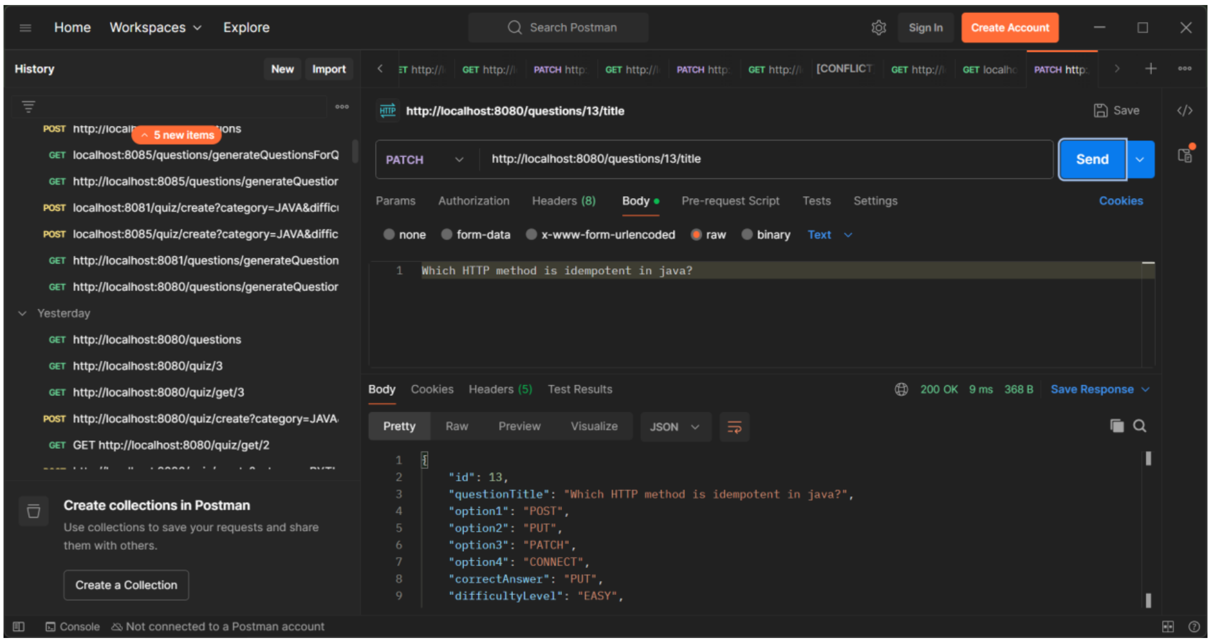
Params ● Authorization Headers (6) Body Pre-request Script Tests Settings

Body Cookies Headers (5) Test Results — 200 OK 93 ms 1.63 KB

Pretty Raw Preview Visualize JSON

```
        }
    ],
    "pageable": {
        "pageNumber": 0,
        "pageSize": 5,
        "sort": {
            "empty": true,
            "sorted": false,
            "unsorted": true
        },
        "offset": 0,
        "paged": true,
        "unpaged": false
    },
    "last": false,
    "totalElements": 13,
    "totalPages": 3,
    "size": 5,
    "number": 0,
```

4. Update question title


Home
Workspaces
Explore
Search Postman
Sign In
Create Account
History
New
Import
5 new items
Create collections in Postman
Use collections to save your requests and share them with others.
Create a Collection
Console
Not connected to a Postman account

- POST http://localh…ions
- GET localhost:8085/questions/generateQuestionsForQ
- GET http://localhost:8085/questions/generateQuestior
- POST localhost:8081/quiz/create?category=JAVA&diffici
- POST localhost:8085/quiz/create?category=JAVA&diffic
- GET http://localhost:8081/questions/generateQuestion
- GET http://localhost:8080/questions/generateQuestior

Yesterday
- GET http://localhost:8080/questions
- GET http://localhost:8080/quiz/3
- GET http://localhost:8080/quiz/get/3
- POST http://localhost:8080/quiz/create?category=JAVA
- GET GET http://localhost:8080/quiz/get/2

PATCH http://localhost:8080/questions/13/title

Params Authorization Headers (8) Body ● Pre-request Script Tests Settings

none form-data x-www-form-urlencoded [✓ raw] binary Text

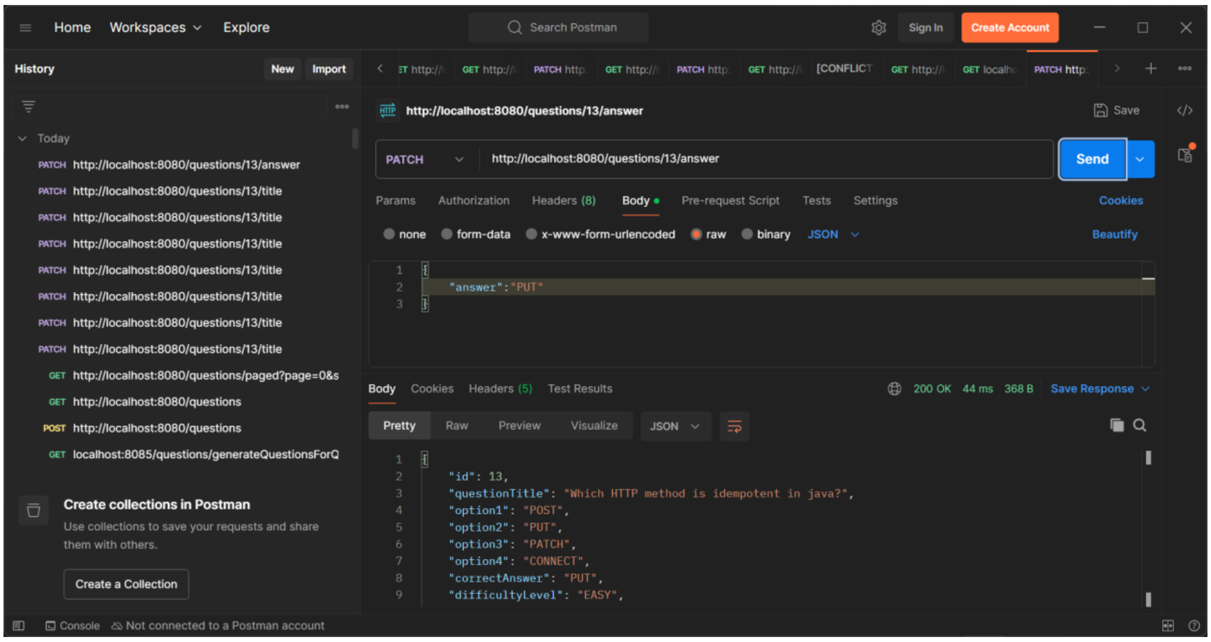
```
Which HTTP method is idempotent in java?
```

Body Cookies Headers (5) Test Results — 200 OK 9 ms 368 B

Pretty Raw Preview Visualize JSON

```
{
    "id": 13,
    "questionTitle": "Which HTTP method is idempotent in java?",
    "option1": "POST",
    "option2": "PUT",
    "option3": "PATCH",
    "option4": "CONNECT",
    "correctAnswer": "PUT",
    "difficultyLevel": "EASY",
```

5. Update correct answer (store **real text**)


Home
Workspaces
Explore
Search Postman
Sign In
Create Account
History
New
Import
Today
PATCH http://localhost:8080/questions/13/answer
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
GET http://localhost:8080/questions/paged?page=0&s
GET http://localhost:8080/questions
POST http://localhost:8080/questions
GET localhost:8085/questions/generateQuestionsForQ
Create collections in Postman
Use collections to save your requests and share them with others.
Create a Collection
Console
Not connected to a Postman account

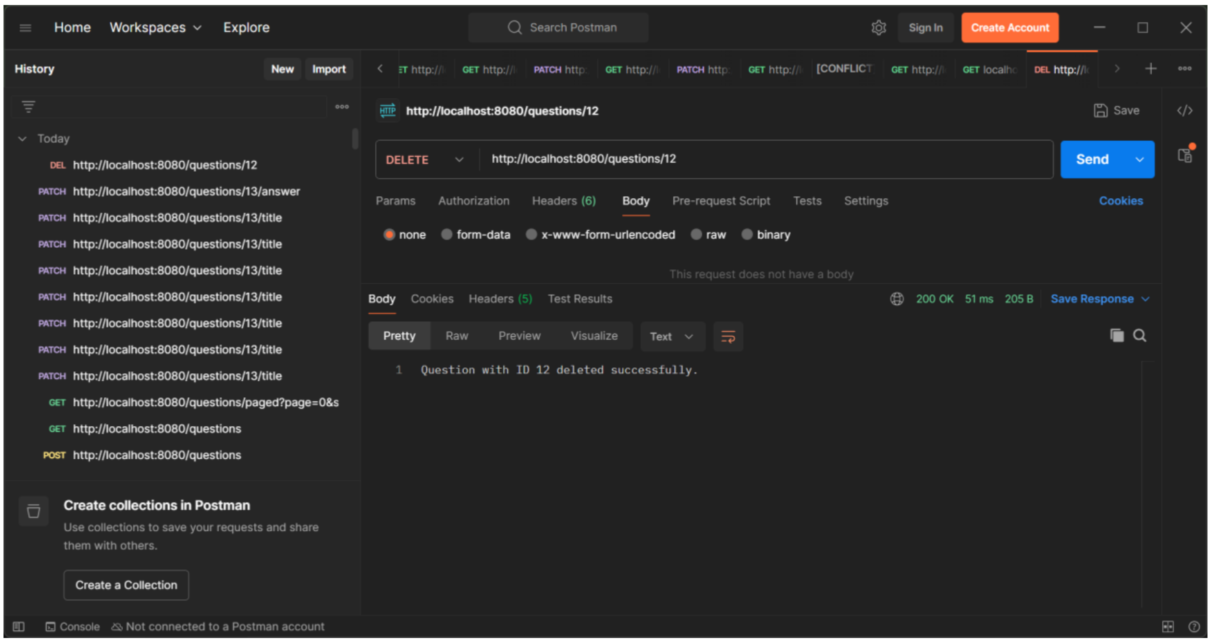
PATCH http://localhost:8080/questions/13/answer

```
{
    "answer":"PUT"
}
```

200 OK 44 ms 368 B

```
{
    "id": 13,
    "questionTitle": "Which HTTP method is idempotent in java?",
    "option1": "POST",
    "option2": "PUT",
    "option3": "PATCH",
    "option4": "CONNECT",
    "correctAnswer": "PUT",
    "difficultyLevel": "EASY",
```

6. Delete question


Home
Workspaces
Explore
Search Postman
Sign In
Create Account
History
New
Import
Today
DEL http://localhost:8080/questions/12
PATCH http://localhost:8080/questions/13/answer
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
GET http://localhost:8080/questions/paged?page=0&s
GET http://localhost:8080/questions
POST http://localhost:8080/questions
Create collections in Postman
Use collections to save your requests and share them with others.
Create a Collection
Console
Not connected to a Postman account

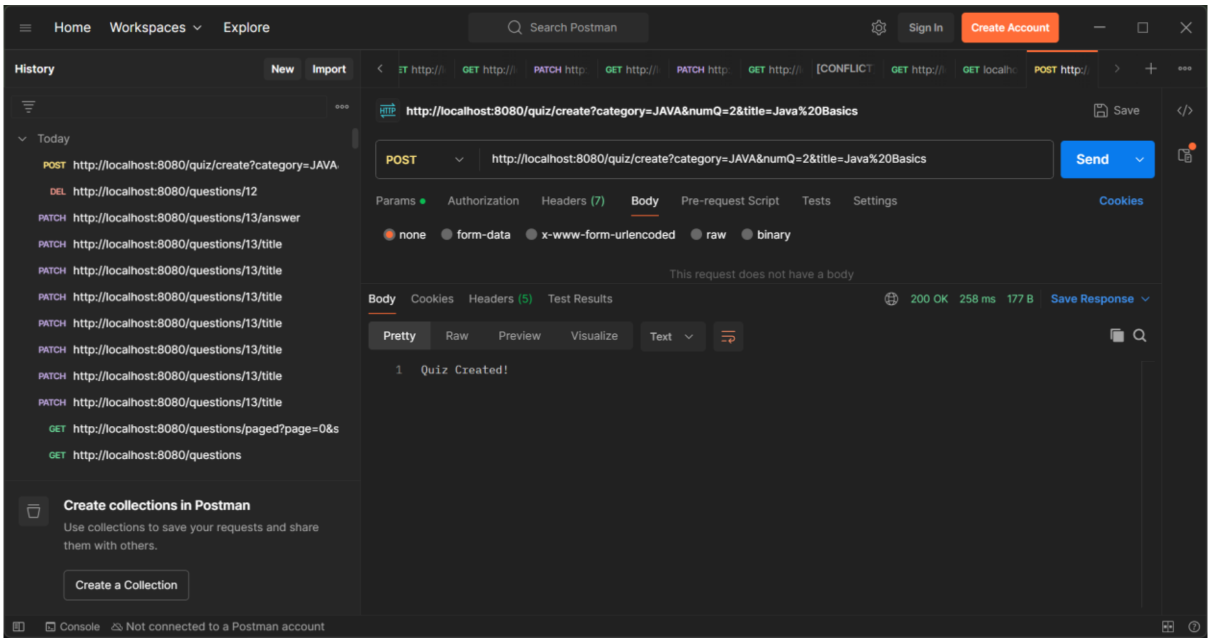
DELETE http://localhost:8080/questions/12

This request does not have a body

200 OK 51 ms 205 B

```
Question with ID 12 deleted successfully.
```

7. Create a quiz



```
POST  http://localhost:8080/quiz/create?category=JAVA
DEL   http://localhost:8080/questions/12
PATCH http://localhost:8080/questions/13/answer
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
PATCH http://localhost:8080/questions/13/title
GET   http://localhost:8080/questions/paged?page=0&s
GET   http://localhost:8080/questions
```

http://localhost:8080/quiz/create?category=JAVA&numQ=2&title=Java%20Basics

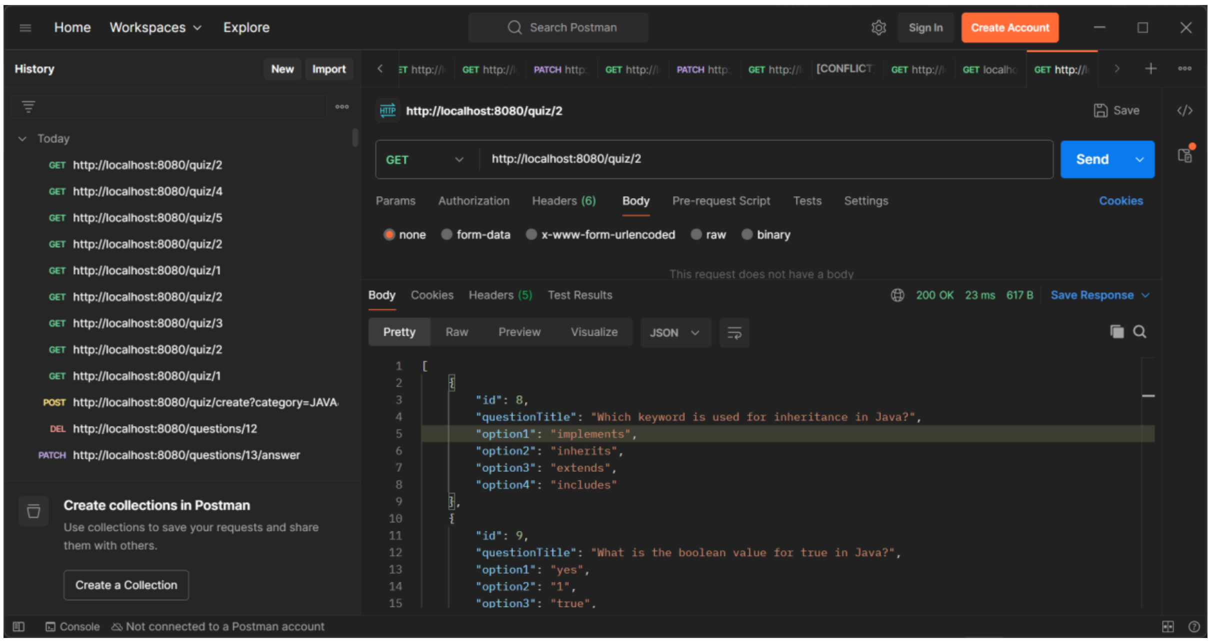
POST http://localhost:8080/quiz/create?category=JAVA&numQ=2&title=Java%20Basics

This request does not have a body

Body — 200 OK 258 ms 177 B

```
Quiz Created!
```

8. Get quiz questions (wrapper – no correct answers)



```
GET   http://localhost:8080/quiz/2
GET   http://localhost:8080/quiz/4
GET   http://localhost:8080/quiz/5
GET   http://localhost:8080/quiz/2
GET   http://localhost:8080/quiz/1
GET   http://localhost:8080/quiz/2
GET   http://localhost:8080/quiz/3
GET   http://localhost:8080/quiz/2
GET   http://localhost:8080/quiz/1
POST  http://localhost:8080/quiz/create?category=JAVA
DEL   http://localhost:8080/questions/12
PATCH http://localhost:8080/questions/13/answer
```

http://localhost:8080/quiz/2

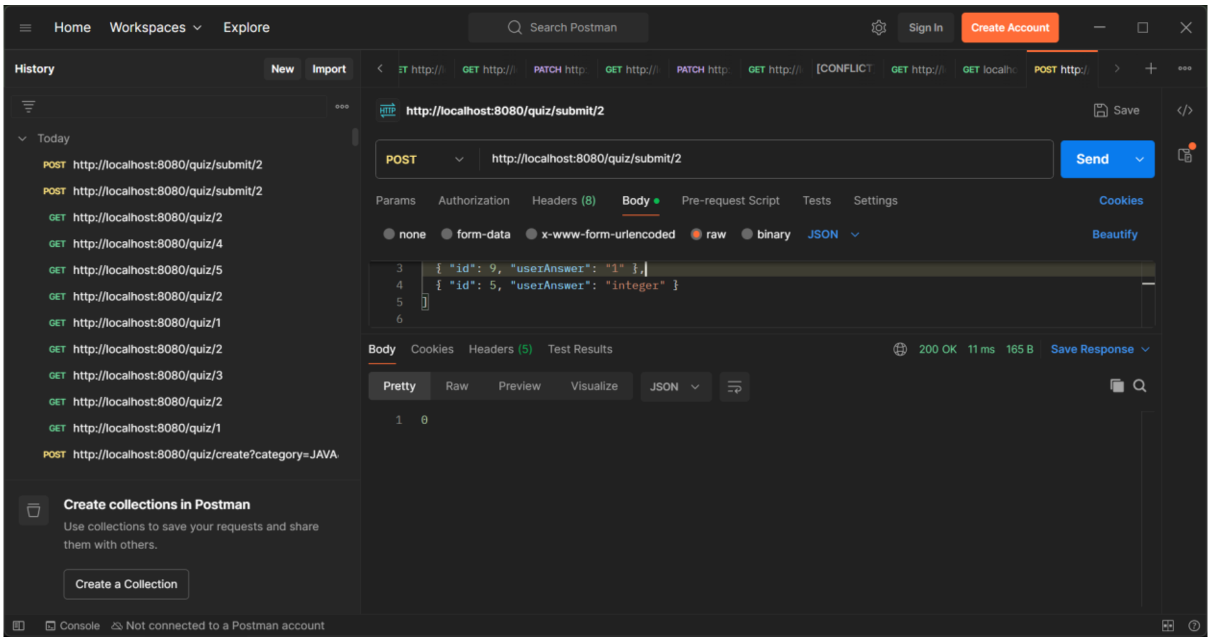
GET http://localhost:8080/quiz/2

This request does not have a body

Body — 200 OK 23 ms 617 B

```
[
    {
        "id": 8,
        "questionTitle": "Which keyword is used for inheritance in Java?",
        "option1": "implements",
        "option2": "inherits",
        "option3": "extends",
        "option4": "includes"
    },
    {
        "id": 9,
        "questionTitle": "What is the boolean value for true in Java?",
        "option1": "yes",
        "option2": "1",
        "option3": "true",
```

9. Submit quiz answers (using **real answer text**)



POST http://localhost:8080/quiz/submit/2

```
  { "id": 9, "userAnswer": "1" },
  { "id": 5, "userAnswer": "integer" }
]
```

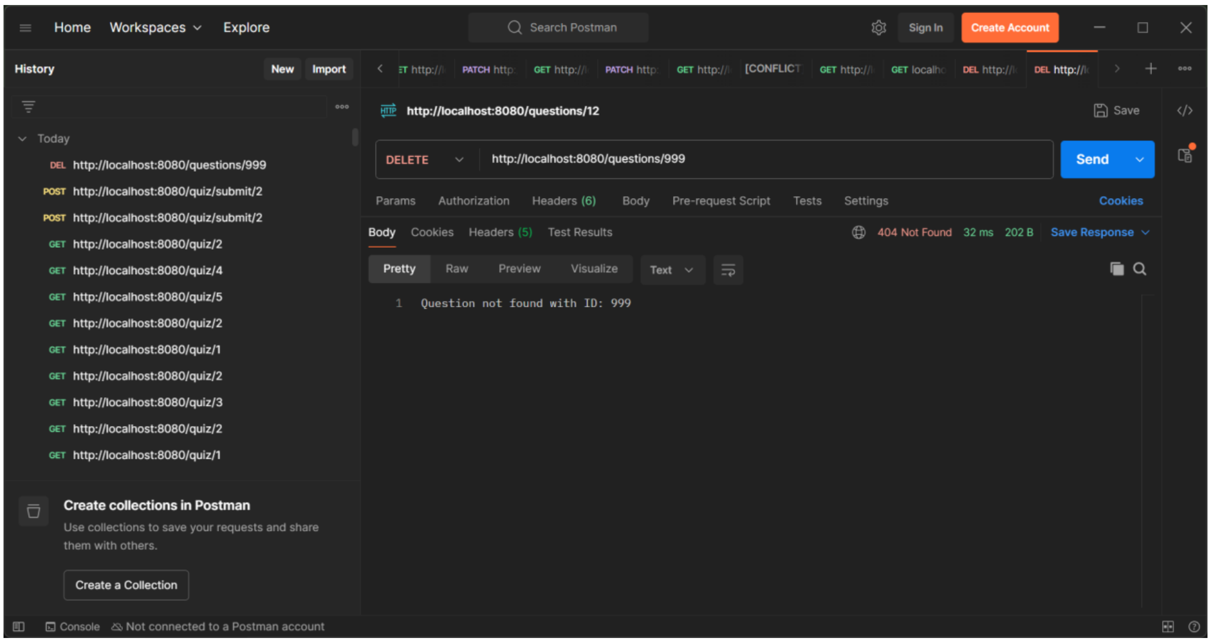
200 OK 11 ms 165 B

```
0
```

History:

- POST http://localhost:8080/quiz/submit/2
- POST http://localhost:8080/quiz/submit/2
- GET http://localhost:8080/quiz/2
- GET http://localhost:8080/quiz/4
- GET http://localhost:8080/quiz/5
- GET http://localhost:8080/quiz/2
- GET http://localhost:8080/quiz/1
- GET http://localhost:8080/quiz/2
- GET http://localhost:8080/quiz/3
- GET http://localhost:8080/quiz/2
- GET http://localhost:8080/quiz/1
- POST http://localhost:8080/quiz/create?category=JAVA

10. Custom Exception (404 from QuestionNotFoundException)



DELETE http://localhost:8080/questions/999

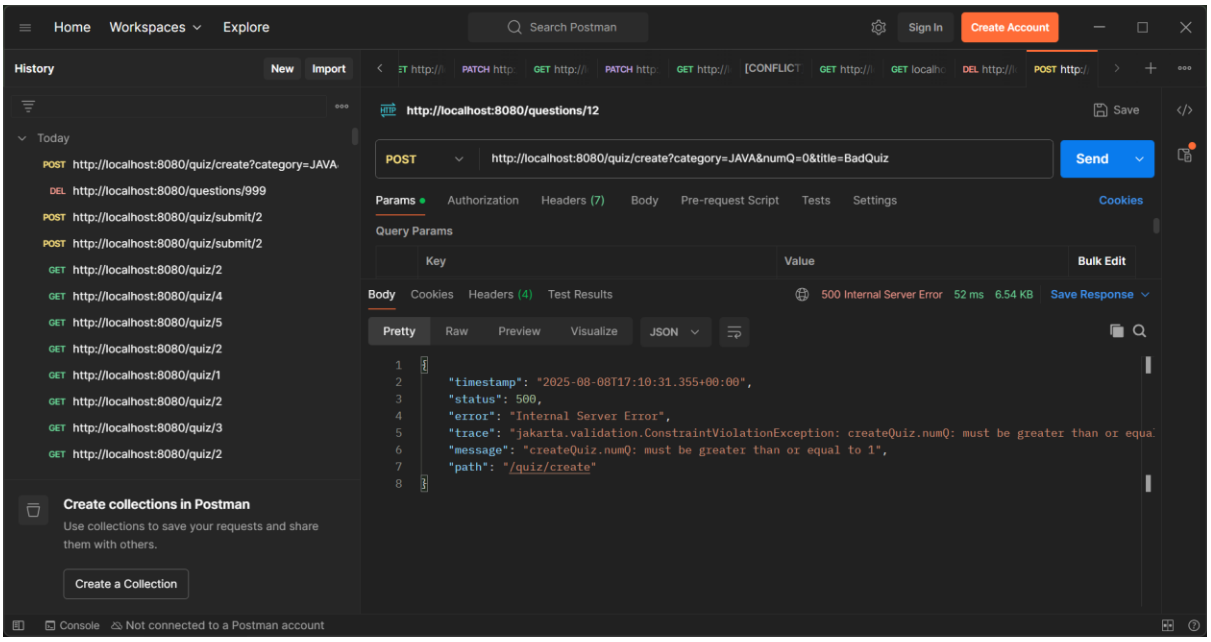
404 Not Found 32 ms 202 B

```
Question not found with ID: 999
```

History:

- DEL http://localhost:8080/questions/999
- POST http://localhost:8080/quiz/submit/2
- POST http://localhost:8080/quiz/submit/2
- GET http://localhost:8080/quiz/2
- GET http://localhost:8080/quiz/4
- GET http://localhost:8080/quiz/5
- GET http://localhost:8080/quiz/2
- GET http://localhost:8080/quiz/1
- GET http://localhost:8080/quiz/2
- GET http://localhost:8080/quiz/3
- GET http://localhost:8080/quiz/2
- GET http://localhost:8080/quiz/1

11. Validation

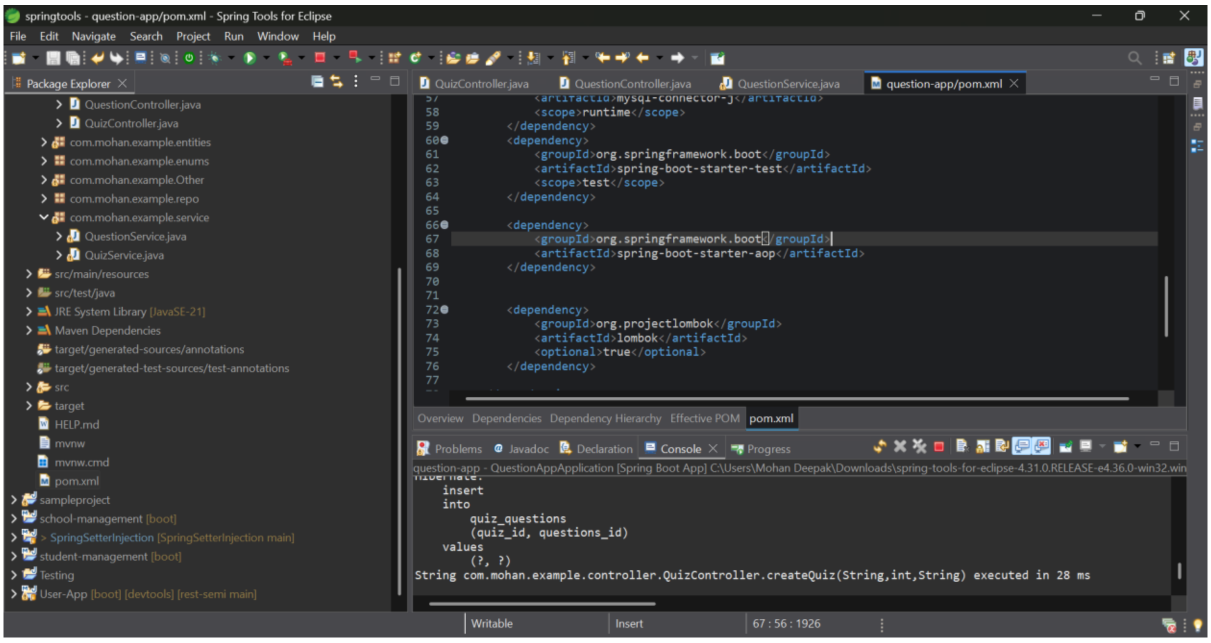


POST http://localhost:8080/quiz/create?category=JAVA&numQ=0&title=BadQuiz

500 Internal Server Error 52 ms 6.54 KB

```
{
    "timestamp": "2025-08-08T17:10:31.355+00:00",
    "status": 500,
    "error": "Internal Server Error",
    "trace": "jakarta.validation.ConstraintViolationException: createQuiz.numQ: must be greater than or equa
    "message": "createQuiz.numQ: must be greater than or equal to 1",
    "path": "/quiz/create"
}
```

12. AOP (LoggingAspect)



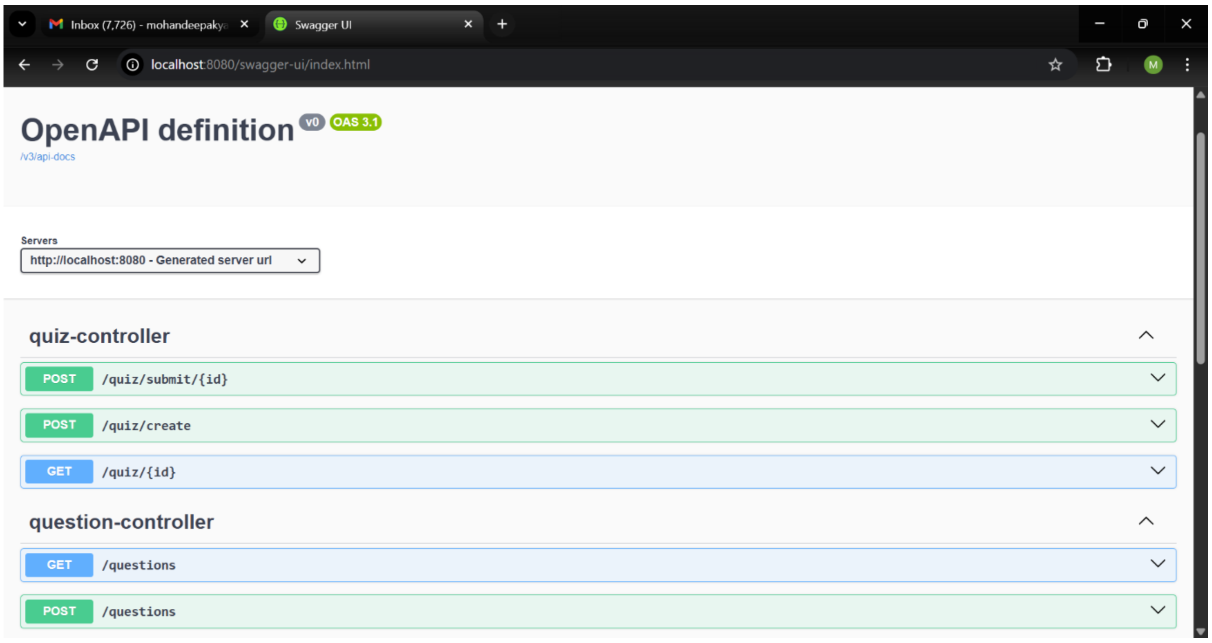
springtools - question-app/pom.xml - Spring Tools for Eclipse

```
            <artifactId>mysql-connector-j</artifactId>
            <scope>runtime</scope>
        </dependency>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-test</artifactId>
            <scope>test</scope>
        </dependency>

        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-aop</artifactId>
        </dependency>


        <dependency>
            <groupId>org.projectlombok</groupId>
            <artifactId>lombok</artifactId>
            <optional>true</optional>
        </dependency>
```

question-app - QuestionAppApplication [Spring Boot App] C:\Users\Mohan Deepak\Downloads\spring-tools-for-eclipse-4.31.0.RELEASE-e4.36.0-win32.win

```
    insert
    into
        quiz_questions
        (quiz_id, questions_id)
    values
        (?, ?)
String com.mohan.example.controller.QuizController.createQuiz(String,int,String) executed in 28 ms
```

13. Swagger UI



localhost:8080/swagger-ui/index.html

OpenAPI definition v0 OAS 3.1

/v3/api-docs

Servers: http://localhost:8080 - Generated server url

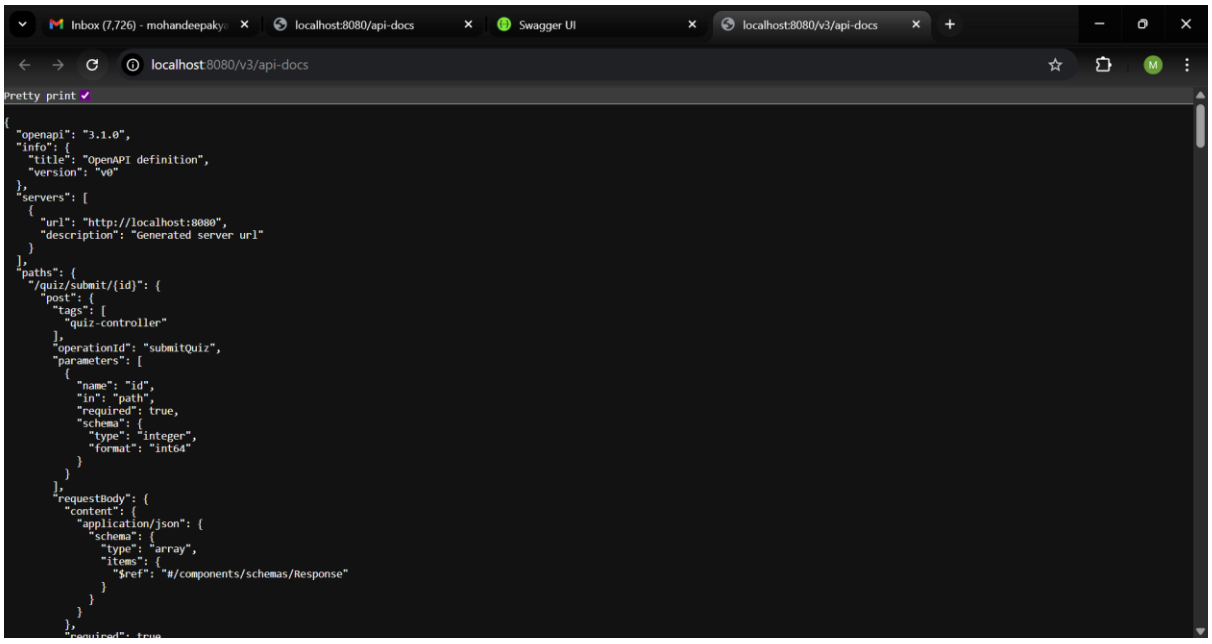
quiz-controller

```
POST /quiz/submit/{id}
POST /quiz/create
GET  /quiz/{id}
```

question-controller

```
GET  /questions
POST /questions
```

14. API-docs

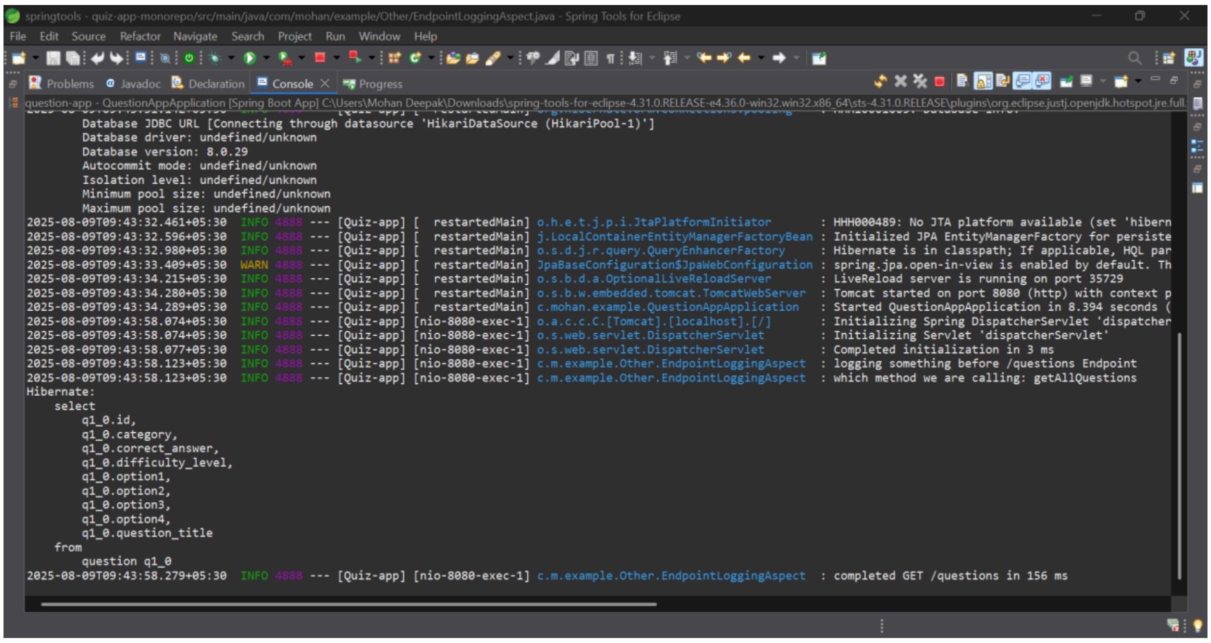


localhost:8080/v3/api-docs

Pretty print ✓

```
{
  "openapi": "3.1.0",
  "info": {
    "title": "OpenAPI definition",
    "version": "v0"
  },
  "servers": [
    {
      "url": "http://localhost:8080",
      "description": "Generated server url"
    }
  ],
  "paths": {
    "/quiz/submit/{id}": {
      "post": {
        "tags": [
          "quiz-controller"
        ],
        "operationId": "submitQuiz",
        "parameters": [
          {
            "name": "id",
            "in": "path",
            "required": true,
            "schema": {
              "type": "integer",
              "format": "int64"
            }
          }
        ],
        "requestBody": {
          "content": {
            "application/json": {
              "schema": {
                "type": "array",
                "items": {
                  "$ref": "#/components/schemas/Response"
                }
              }
            }
          },
          "required": true
```

15.AOP


springtools - quiz-app-monorepo/src/main/java/com/mohan/example/Other/EndpointLoggingAspect.java - Spring Tools for Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Problems Javadoc Declaration Console Progress

```
question-app - QuestionAppApplication [Spring Boot App] C:\Users\Mohan Deepak\Downloads\spring-tools-for-eclipse-4.31.0.RELEASE-e4.36.0-win32.win32.x86_64\sts-4.31.0.RELEASE\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.
        Database JDBC URL [Connecting through datasource 'HikariDataSource (HikariPool-1)']
        Database driver: undefined/unknown
        Database version: 8.0.29
        Autocommit mode: undefined/unknown
        Isolation level: undefined/unknown
        Minimum pool size: undefined/unknown
        Maximum pool size: undefined/unknown
2025-08-09T09:43:32.461+05:30  INFO 4888 --- [Quiz-app] [  restartedMain] o.h.e.t.j.p.i.JtaPlatformInitiator       : HHH000489: No JTA platform available (set 'hibern
2025-08-09T09:43:32.596+05:30  INFO 4888 --- [Quiz-app] [  restartedMain] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persiste
2025-08-09T09:43:32.980+05:30  INFO 4888 --- [Quiz-app] [  restartedMain] o.s.d.j.r.query.QueryEnhancerFactory     : Hibernate is in classpath; If applicable, HQL par
2025-08-09T09:43:33.409+05:30  WARN 4888 --- [Quiz-app] [  restartedMain] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Th
2025-08-09T09:43:34.215+05:30  INFO 4888 --- [Quiz-app] [  restartedMain] o.s.b.d.a.OptionalLiveReloadServer       : LiveReload server is running on port 35729
2025-08-09T09:43:34.280+05:30  INFO 4888 --- [Quiz-app] [  restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat started on port 8080 (http) with context p
2025-08-09T09:43:34.289+05:30  INFO 4888 --- [Quiz-app] [  restartedMain] c.mohan.example.QuestionAppApplication   : Started QuestionAppApplication in 8.394 seconds (
2025-08-09T09:43:58.074+05:30  INFO 4888 --- [Quiz-app] [nio-8080-exec-1] o.a.c.c.C.[Tomcat].[localhost].[/]       : Initializing Spring DispatcherServlet 'dispatcher
2025-08-09T09:43:58.074+05:30  INFO 4888 --- [Quiz-app] [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet        : Initializing Servlet 'dispatcherServlet'
2025-08-09T09:43:58.077+05:30  INFO 4888 --- [Quiz-app] [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet        : Completed initialization in 3 ms
2025-08-09T09:43:58.123+05:30  INFO 4888 --- [Quiz-app] [nio-8080-exec-1] c.m.example.Other.EndpointLoggingAspect  : logging something before /questions Endpoint
2025-08-09T09:43:58.123+05:30  INFO 4888 --- [Quiz-app] [nio-8080-exec-1] c.m.example.Other.EndpointLoggingAspect  : which method we are calling: getAllQuestions
Hibernate: 
    select
        q1_0.id,
        q1_0.category,
        q1_0.correct_answer,
        q1_0.difficulty_level,
        q1_0.option1,
        q1_0.option2,
        q1_0.option3,
        q1_0.option4,
        q1_0.question_title 
    from
        question q1_0
2025-08-09T09:43:58.279+05:30  INFO 4888 --- [Quiz-app] [nio-8080-exec-1] c.m.example.Other.EndpointLoggingAspect  : completed GET /questions in 156 ms
```