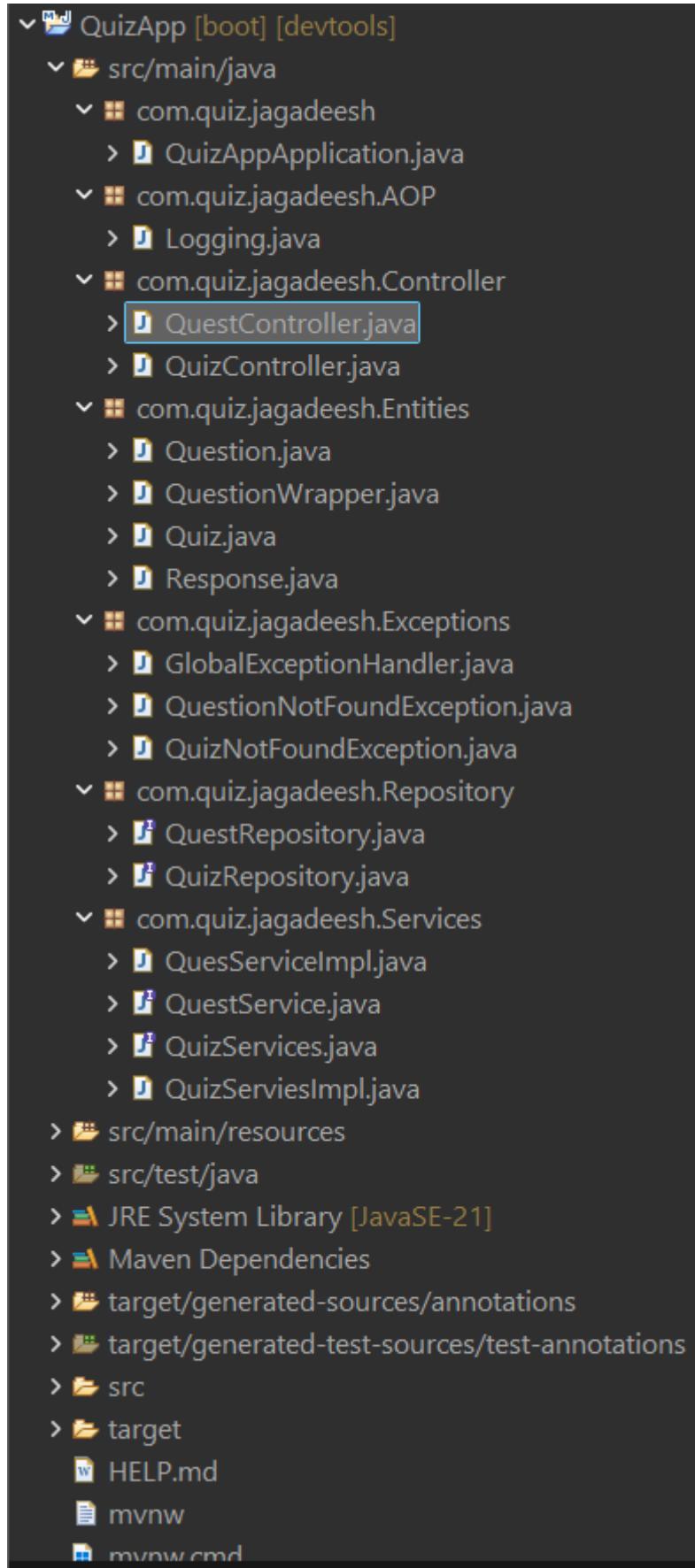


# Project Structure



1. Testing the Endpoints of QuestionController
  - `@PostMapping("/addQuestion")`
  - `@GetMapping("/getAllQuestions")`[pageable included]
  - `@PutMapping("/update/{id}")`
  - `@DeleteMapping("/delete/{id}")`
  - `@PatchMapping("patch/{id}")`
  - `@GetMapping("getQuestion/{id}")`
2. Testing the Endpoints if QuizController
  - `@PostMapping("/create")`
  - `@GetMapping("/getQuizByID/{id}")`
  - `@PostMapping("/submitQuiz/{id}")`
3. Screenshots of Logs in console
4. Screenshots of Custom exceptions
  - QuizNotFoundException
  - QuestionNotFoundException
5. MySQL Database
6. Screenshots of Swagger API
7. Screenshot of Swagger APIDOCS

## 1. Testing the Endpoints of QuestionController

### `@PostMapping("/addQuestion")`

The screenshot shows the Postman interface with a successful POST request to `http://localhost:8080/api/v1/questions/addQuestion`. The request body is a JSON object representing a question:

```

1 {
2   "questionTitle": "What is JPA in Java?",
3   "option1": "Java Programming Application",
4   "option2": "Java Process Architecture",
5   "option3": "Java Persistence API",
6   "option4": "None of these",
7   "correctAnswer": "Java Persistence API",
8   "level": "EASY",
9   "category": "JAVA"
10 }
11

```

The response status is **200 OK** with a response time of 336 ms and a size of 422 B. The response body is identical to the request body.

### `@GetMapping("/getAllQuestions")`

Home Workspaces API Network

POST http://localhost:8080/e • GET http://localhost:8080/q • PUT localhost8080/api/v1/q • DEL localhost8080/api/v1/q • PATCH localhost8080/api/v1/q • GET localhost8080/api/v1/q • + No environment

http://localhost:8080/api/v1/questions/getAllQuestions

GET http://localhost:8080/api/v1/questions/getAllQuestions

Params Authorization Headers (6) Body Scripts Settings Cookies

Body Cookies Headers (5) Test Results

{} JSON ▾ Preview Visualize

Filter using JSONPath: \$.story

```
1 {  
2   "content": [  
3     {  
4       "level": "EASY",  
5       "category": "JAVA",  
6       "id": 1,  
7       "questionTitle": "What is JPA in Java?",  
8       "correctAnswer": "Java Persistence API",  
9       "option2": "Java Programming Application",  
10      "option4": "None of these",  
11      "option3": "Java Process Architecture",  
12      "option1": "Java Persistence API"  
13    },  
14    {  
15      "level": "EASY",  
16      "category": "JAVA",  
17      "id": 2,  
18      "questionTitle": "Which keyword is used to define a class in Java?",  
19      "correctAnswer": "Class",  
20      "option2": "method",  
21      "option4": "package",  
22      "option3": "object",  
23      "option1": "class"  
24    },  
25    {  
26      "level": "EASY".  
27    }  
28  ]  
29}  
30}
```

Online Find and replace Console

26°C Haze

Home Workspaces API Network

POST http://localhost:8080/e • GET http://localhost:8080/q • PUT localhost8080/api/v1/q • DEL localhost8080/api/v1/q • PATCH localhost8080/api/v1/q • GET localhost8080/api/v1/q • + No environment

http://localhost:8080/api/v1/questions/getAllQuestions

GET http://localhost:8080/api/v1/questions/getAllQuestions

Params Authorization Headers (6) Body Scripts Settings Cookies

Body Cookies Headers (5) Test Results

{} JSON ▾ Preview Visualize

Filter using JSONPath: \$.story

```
23   "option1": "class"  
24 }  
25 }  
26 {  
27   "level": "EASY",  
28   "category": "JAVA",  
29   "id": 3,  
30   "questionTitle": "What is the correct main method signature in Java?",  
31   "correctAnswer": "public static void main",  
32   "option2": "main void public static",  
33   "option4": "public void static main",  
34   "option3": "void static public main",  
35   "option1": "public static void main"  
36 }  
37 }  
38 {  
39   "level": "EASY",  
40   "category": "JAVA",  
41   "id": 4,  
42   "questionTitle": "Which keyword is used to declare an integer variable in Java?",  
43   "correctAnswer": "int",  
44   "option2": "number",  
45   "option4": "num",  
46   "option3": "int",  
47   "option1": "integer"  
48 }  
49 }  
50 {  
51   "level": "EASY".  
52 }
```

Home Workspaces API Network

POST http://localhost:8080/z • GET http://localhost:8080/qf • PUT localhost8080/api/v1/q/ • DEL localhost8080/api/v1/q/ • PATCH localhost8080/api/v1/q/ • GET localhost8080/api/v1/q/ • +

http://localhost:8080/api/v1/questions/getAllQuestions

GET http://localhost:8080/api/v1/questions/getAllQuestions

Params Authorization Headers (6) Body Scripts Settings Cookies

Body Cookies Headers (5) Test Results

{ } JSON D Preview ⚡ Visualize ↴

Filter using JSONPath: \$.story

```
48 |     "level": "EASY",
49 |     "category": "JAVA",
50 |     "id": 5,
51 |     "questionTitle": "Which statement is used to print text in Java?",
52 |     "correctAnswer": "System.out.println",
53 |     "option2": "System.out.print",
54 |     "option4": "print()",
55 |     "option3": "System.out.println",
56 |     "option1": "echo"
57 },
58 |
59 |     "level": "EASY",
60 |     "category": "JAVA",
61 |     "id": 6,
62 |     "questionTitle": "Which keyword is used to create an object in Java?",
63 |     "correctAnswer": "new",
64 |     "option2": "new",
65 |     "option4": "object",
66 |     "option3": "make",
67 |     "option1": "create"
68 },
69 |
70 |     "level": "EASY",
71 |     "category": "JAVA",
72 |     "id": 7,
```

Online Find and replace Console Postbot Runner Start Proxy Cookies Vault Trash

26°C Haze ENG IN 22:43:00 08-08-2025

Home Workspaces API Network

POST http://localhost:8080/z • GET http://localhost:8080/qf • PUT localhost8080/api/v1/q/ • DEL localhost8080/api/v1/q/ • PATCH localhost8080/api/v1/q/ • GET localhost8080/api/v1/q/ • +

http://localhost:8080/api/v1/questions/getAllQuestions

GET http://localhost:8080/api/v1/questions/getAllQuestions

Params Authorization Headers (6) Body Scripts Settings Cookies

Body Cookies Headers (5) Test Results

{ } JSON D Preview ⚡ Visualize ↴

Filter using JSONPath: \$.story

```
76 |     "option4": "includes",
77 |     "option3": "extends",
78 |     "option1": "implements"
79 },
80 |
81 |     "level": "EASY",
82 |     "category": "JAVA",
83 |     "id": 8,
84 |     "questionTitle": "What is the boolean value for true in Java?",
85 |     "correctAnswer": "true",
86 |     "option2": "1",
87 |     "option4": "on",
88 |     "option3": "true",
89 |     "option1": "yes"
90 },
91 |
92 |     "level": "EASY",
93 |     "category": "JAVA",
94 |     "id": 9,
95 |     "questionTitle": "What is the default value of a reference variable in Java?",
96 |     "correctAnswer": "null",
97 |     "option2": "void",
98 |     "option4": "empty",
99 |     "option3": "null",
100 |    "option1": "none"
```

Online Find and replace Console Postbot Runner Start Proxy Cookies Vault Trash

26°C Haze ENG IN 22:43:07 08-08-2025

The screenshot shows the Postman interface with a successful response from the API. The response body is a JSON object containing various properties like 'option1', 'pageable', and 'last'. The status bar at the bottom indicates the request took 127 ms.

```
177 |     "option1": "Java Programming Application"
178 |   }
179 | ],
180 |   "pageable": {
181 |     "pageNumber": 0,
182 |     "pageSize": 20,
183 |     "sort": {
184 |       "empty": true,
185 |       "sorted": false,
186 |       "unsorted": true
187 |     },
188 |     "offset": 0,
189 |     "paged": true,
190 |     "unpaged": false
191 |   },
192 |   "last": true,
193 |   "totalPages": 1,
194 |   "totalElements": 16,
195 |   "size": 20,
196 |   "number": 0,
197 |   "sort": {
198 |     "empty": true,
199 |     "sorted": false,
200 |     "unsorted": true
201 |   },
202 |   "first": true,
```

## @PutMapping("/update/{id}")

The screenshot shows the Postman interface with a successful response from the API after a PUT request. The response body is identical to the one shown in the previous screenshot, indicating the question was updated successfully.

```
1 {
2   "questionTitle": "What is JPA in Java?",
3   "option1": "Java Programming Application",
4   "option2": "Java Process Architecture",
5   "option3": "Java Persistence API",
6   "option4": "Java Programming Architecture",
7   "correctAnswer": "Java Persistence API",
8   "level": "EASY",
9   "category": "JAVA"
10 }
```

```
1 {
2   "level": "EASY",
3   "category": "JAVA",
4   "id": 16,
5   "questionTitle": "What is JPA in Java?",
6   "correctAnswer": "Java Persistence API",
7   "option2": "Java Process Architecture",
8   "option4": "Java Programming Architecture",
9   "option3": "Java Persistence API",
10  "option1": "Java Programming Application"
```

## @DeleteMapping("/delete/{id}")

Postman screenshot showing a successful DELETE request to `http://localhost:8080/api/v1/questions/delete/16`. The response body contains the number 1.

## @PatchMapping("patch/{id}")

Postman screenshot showing a successful PATCH request to `http://localhost:8080/api/v1/questions/patch/15`. The request body is a JSON object with a question title.

## @GetMapping("getQuestion/{id}")

The screenshot shows the Postman application interface. In the top navigation bar, there are links for Home, Workspaces, and API Network. The search bar contains the text "Search Postman". On the right side of the header, there are icons for Invite, Upgrade, and other settings.

In the main workspace, a collection named "Collections" is selected. A specific endpoint is highlighted: <http://localhost:8080/api/v1/questions/getQuestion/15>. The method is set to GET. Below the URL, there are tabs for Params, Authorization, Headers (6), Body, Scripts, and Settings. The Params tab is active, showing a table for Query Params with one entry: Key (Value). There is also a "Cookies" tab on the far right.

Below the endpoint configuration, there are tabs for Body, Cookies, Headers (5), Test Results, and a dropdown menu. The Body tab is selected, showing a JSON response. The response body is:

```
1 {  
2     "level": "EASY",  
3     "category": "SpringBoot",  
4     "id": 15,  
5     "questionTitle": "What is the default port number of Spring Boot?",  
6     "correctAnswer": "ORM Framework",  
7     "option2": "Entity",  
8     "option4": "API",  
9     "option3": "Database",  
10    "option1": "ORM Framework"  
11 }
```

The response status is 200 OK, with a duration of 19 ms and a size of 392 B. Below the response, there are various toolbars and system status indicators. The system status includes a weather icon (26°C Haze), network connectivity (ENG IN), battery level (22:47:58), and a timestamp (08-08-2023).

## 2. Testing the Endpoints of QuizController

*@PostMapping("/create")*

Home Workspaces API Network

POST http://localhost:8080/ HTTP/1.1

Host: localhost:8080

Content-Type: application/json

Accept: application/json

category: Java

level: Easy

title: Quiz on JAVA

Body (JSON)

```
1 {
2     "id": 7,
3     "questions": [
4         {
5             "level": "EASY",
6             "category": "JAVA",
7             "id": 8,
8             "questionTitle": "what is the boolean value for true in Java?",
9             "correctAnswer": "true",
10            "option2": "1",
11            "option4": "on",
12            "option3": "true",
13            "option1": "yes"
14        },
15        {
16            "level": "EASY",
17            "category": "JAVA",
18            "id": 9,
19            "questionTitle": "What is the output of the following Java code?",
20            "correctAnswer": "public static void main",
21            "option2": "main void public static",
22            "option4": "public void static main",
23            "option3": "void static public main",
24            "option1": "public static void main"
25        },
26        {
27            "level": "EASY",
28            "category": "JAVA",
29            "id": 6,
30            "questionTitle": "Which keyword is used to create an object in Java?",
31            "correctAnswer": "new",
32            "option2": "new",
33            "option4": "object",
34            "option3": "make",
35            "option1": "create"
36        }
    ]
}
```

Home Workspaces API Network

POST http://localhost:8080/ HTTP/1.1

Host: localhost:8080

Content-Type: application/json

Accept: application/json

category: Java

level: Easy

title: Quiz on JAVA

Body (JSON)

```
1 {
2     "id": 7,
3     "questions": [
4         {
5             "level": "EASY",
6             "category": "JAVA",
7             "id": 8,
8             "questionTitle": "what is the boolean value for true in Java?",
9             "correctAnswer": "true",
10            "option2": "1",
11            "option4": "on",
12            "option3": "true",
13            "option1": "yes"
14        },
15        {
16            "level": "EASY",
17            "category": "JAVA",
18            "id": 9,
19            "questionTitle": "What is the output of the following Java code?",
20            "correctAnswer": "public static void main",
21            "option2": "main void public static",
22            "option4": "public void static main",
23            "option3": "void static public main",
24            "option1": "public static void main"
25        },
26        {
27            "level": "EASY",
28            "category": "JAVA",
29            "id": 6,
30            "questionTitle": "Which keyword is used to create an object in Java?",
31            "correctAnswer": "new",
32            "option2": "new",
33            "option4": "object",
34            "option3": "make",
35            "option1": "create"
36        }
    ]
}
```

Home Workspaces API Network

POST http://localhost:8080/quiz/create?category=Java&level=Easy&title=Quiz on JAVA

Params Authorization Headers (8) Body Scripts Settings

Query Params

Key	Value	Description
category	Java	
level	Easy	
title	Quiz on JAVA	

Body Cookies Headers (5) Test Results

200 OK 228 ms 2.38 KB

```
35     "option1": "create"
36   },
37   {
38     "level": "EASY",
39     "category": "JAVA",
40     "id": 5,
41     "questionTitle": "Which statement is used to print text in Java?",
42     "correctAnswer": "System.out.println",
43     "option2": "System.out.print",
44     "option4": "print()",
45     "option3": "System.out.println",
46     "option1": "echo"
47   },
48   {
49     "level": "EASY",
50     "category": "JAVA",
51     "id": 10,
52     "questionTitle": "Which keyword is used for conditional statements in Java?".
```

Online Find and replace Console

26°C Haze

Home Workspaces API Network

POST http://localhost:8080/quiz/create?category=Java&level=Easy&title=Quiz on JAVA

Params Authorization Headers (8) Body Scripts Settings

Query Params

Key	Value	Description
category	Java	
level	Easy	
title	Quiz on JAVA	

Body Cookies Headers (5) Test Results

200 OK 228 ms 2.38 KB

```
54     "option2": "when",
55     "option4": "compare",
56     "option3": "check",
57     "option1": "if"
58   },
59   {
60     "level": "EASY",
61     "category": "JAVA",
62     "id": 2,
63     "questionTitle": "Which keyword is used to define a class in Java?",
64     "correctAnswer": "class",
65     "option2": "method",
66     "option4": "package",
67     "option3": "object",
68     "option1": "class"
69   },
70   {
```

POST http://localhost:8080/ HTTP/1.1

Host: localhost:8080

Content-Type: application/json

Accept: \*/\*

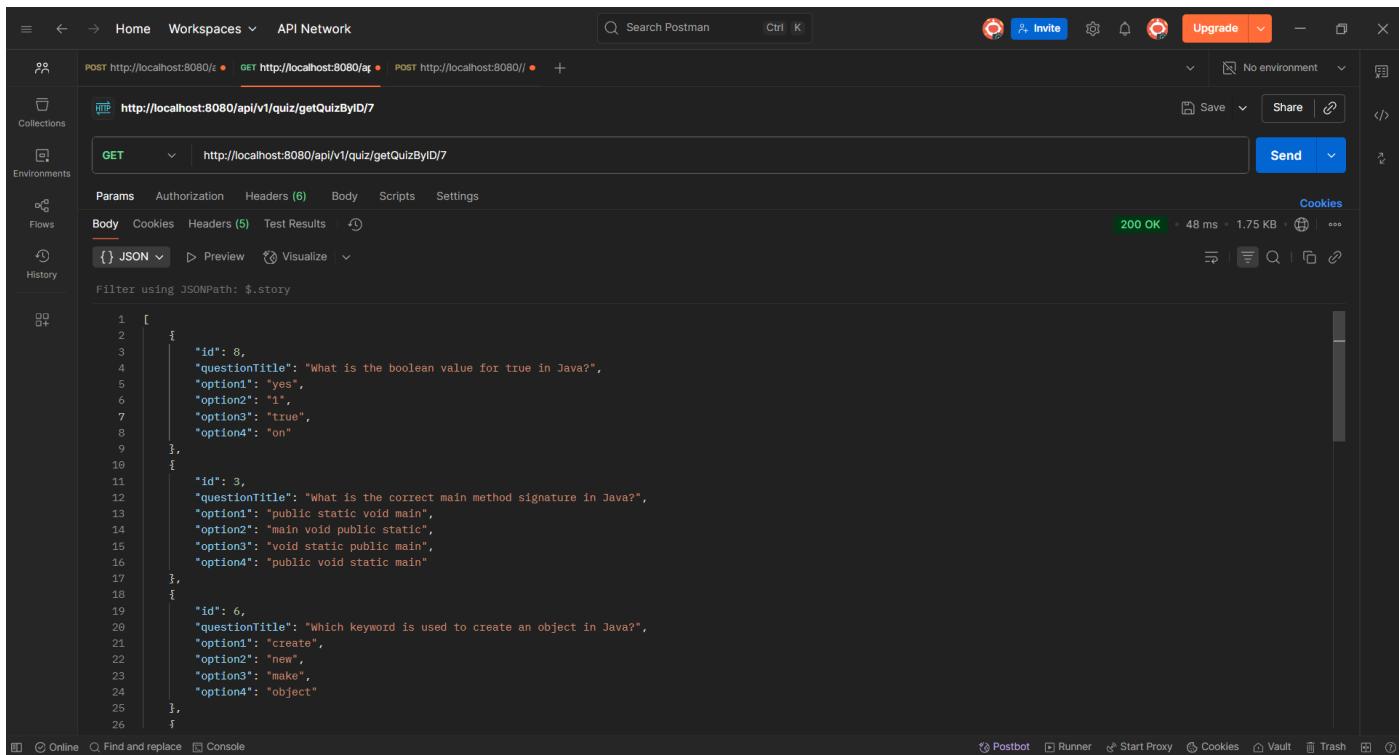
Query Params:

- category: Java
- level: Easy
- title: Quiz on JAVA

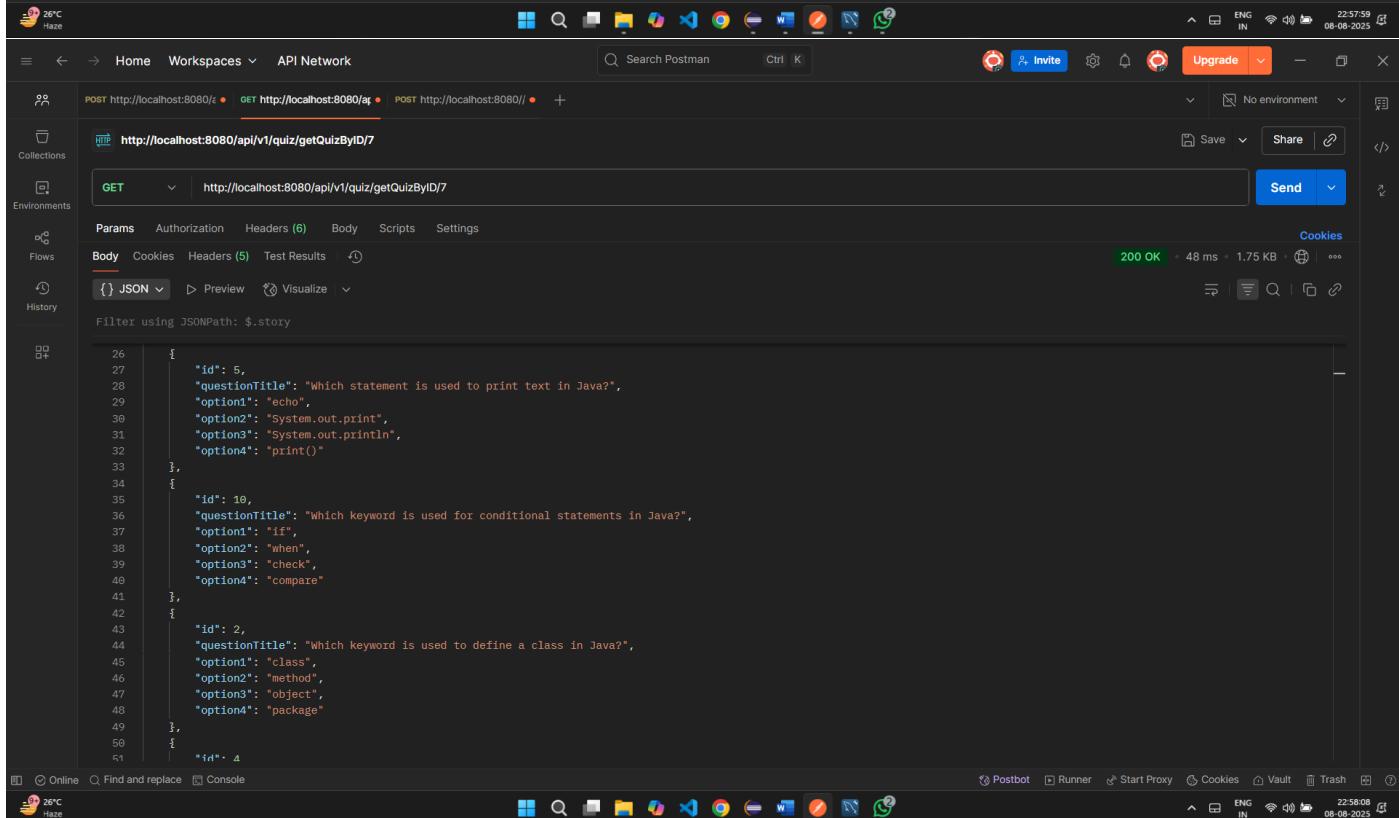
Body (JSON):

```
{  
    "id": 9,  
    "questionTitle": "What is the default value of a reference variable in Java?",  
    "correctAnswer": "null",  
    "option1": "none",  
    "option2": "void",  
    "option3": "empty",  
    "option4": "null",  
    "category": "JAVA",  
    "level": "EASY",  
    "quizTitle": "Quiz on JAVA"  
}
```

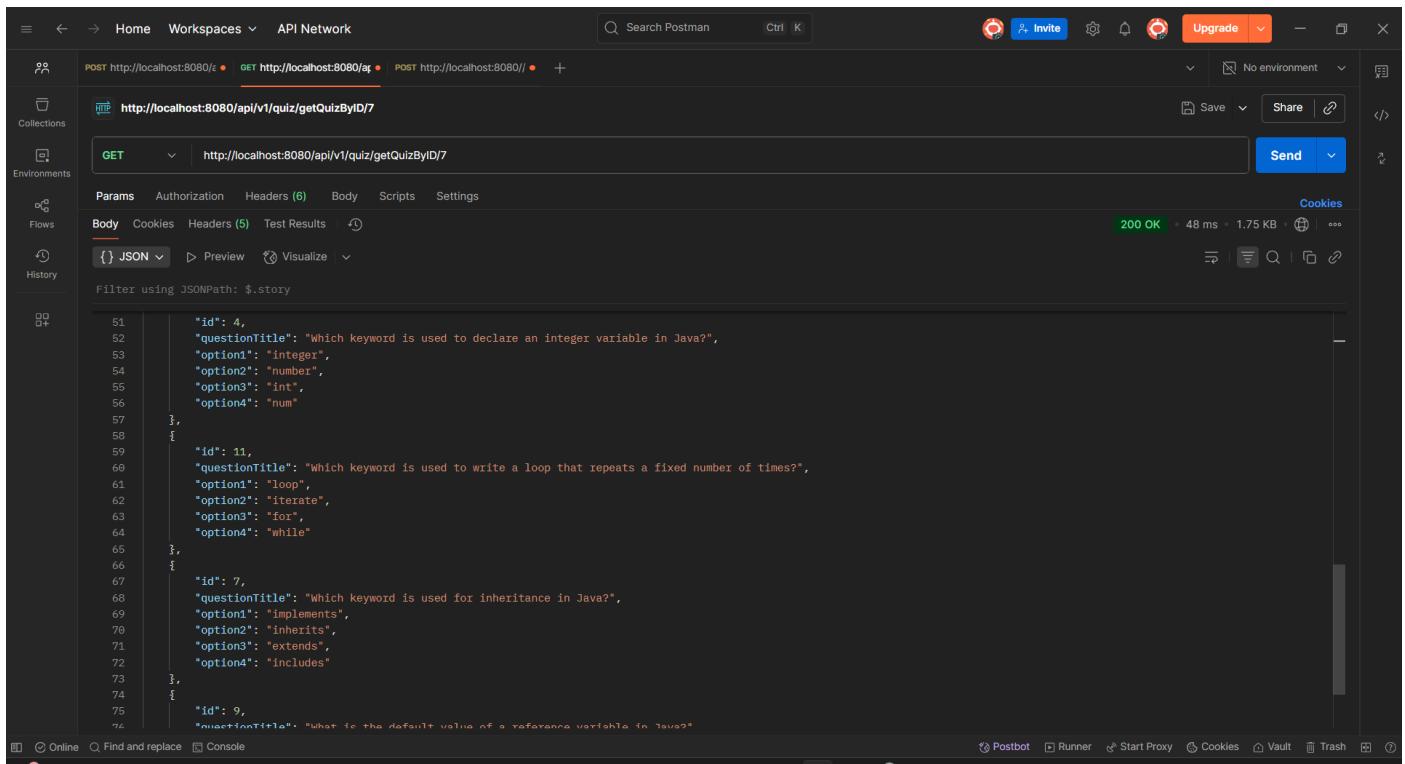
@GetMapping("/getQuizByID/{id}")



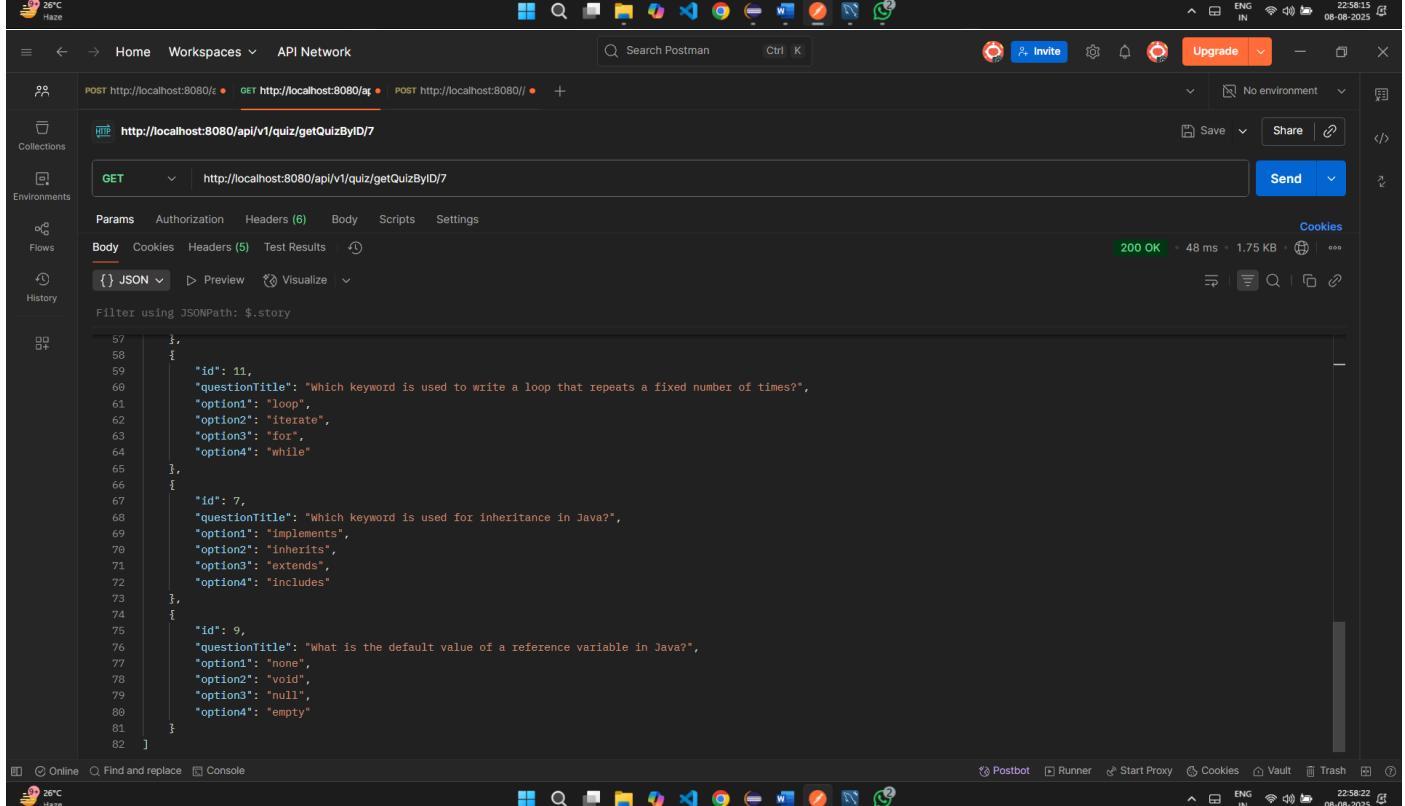
```
[{"id": 8, "questionTitle": "What is the boolean value for true in Java?", "option1": "yes", "option2": "1", "option3": "true", "option4": "on"}, {"id": 3, "questionTitle": "What is the correct main method signature in Java?", "option1": "public static void main", "option2": "main void public static", "option3": "void static public main", "option4": "public void static main"}, {"id": 6, "questionTitle": "Which keyword is used to create an object in Java?", "option1": "create", "option2": "new", "option3": "make", "option4": "object"}]
```



```
[{"id": 5, "questionTitle": "Which statement is used to print text in Java?", "option1": "echo", "option2": "System.out.print", "option3": "System.out.println", "option4": "print()"}, {"id": 10, "questionTitle": "Which keyword is used for conditional statements in Java?", "option1": "if", "option2": "when", "option3": "check", "option4": "compare"}, {"id": 2, "questionTitle": "Which keyword is used to define a class in Java?", "option1": "class", "option2": "method", "option3": "object", "option4": "package"}]
```



```
51 |     "id": 4,
52 |     "questionTitle": "Which keyword is used to declare an integer variable in Java?",
53 |     "option1": "integer",
54 |     "option2": "number",
55 |     "option3": "int",
56 |     "option4": "num"
57 |   },
58 |   {
59 |     "id": 11,
60 |     "questionTitle": "Which keyword is used to write a loop that repeats a fixed number of times?",
61 |     "option1": "loop",
62 |     "option2": "iterate",
63 |     "option3": "for",
64 |     "option4": "while"
65 |   },
66 |   {
67 |     "id": 7,
68 |     "questionTitle": "Which keyword is used for inheritance in Java?",
69 |     "option1": "implements",
70 |     "option2": "inherits",
71 |     "option3": "extends",
72 |     "option4": "includes"
73 |   },
74 |   {
75 |     "id": 9,
76 |     "questionTitle": "What is the default value of a reference variable in Java?"
77 |   }
78 | ]
79 | }
```



```
57 |   },
58 |   {
59 |     "id": 11,
60 |     "questionTitle": "Which keyword is used to write a loop that repeats a fixed number of times?",
61 |     "option1": "loop",
62 |     "option2": "iterate",
63 |     "option3": "for",
64 |     "option4": "while"
65 |   },
66 |   {
67 |     "id": 7,
68 |     "questionTitle": "Which keyword is used for inheritance in Java?",
69 |     "option1": "implements",
70 |     "option2": "inherits",
71 |     "option3": "extends",
72 |     "option4": "includes"
73 |   },
74 |   {
75 |     "id": 9,
76 |     "questionTitle": "What is the default value of a reference variable in Java?",
77 |     "option1": "none",
78 |     "option2": "void",
79 |     "option3": "null",
80 |     "option4": "empty"
81 |   }
82 | ]
```

**@PostMapping("/submiQuiz/{id}")**

The screenshot shows the Postman application interface. In the top navigation bar, there are links for Home, Workspaces, and API Network. A search bar is located at the top right. On the left side, there are sections for Collections, Environments, Flows, and History. The main workspace displays a POST request to <http://localhost:8080/api/v1/quiz/submQuiz/7>. The request has 8 headers. The Body tab is selected, showing a raw JSON payload:

```
1 [  
2 {  
3   "id": 8,  
4   "userAnswer": "true"  
5 },  
6 {  
7   "id": 3,  
8   "userAnswer": "public static void main"  
9 },  
10 {  
11   "id": 6,  
12   "userAnswer": "new"  
13 },  
14 {  
15   "id": 5,  
16   "userAnswer": "System.out.println"  
17 }]
```

The response status is 200 OK, with a duration of 19 ms and a size of 181 B. The response body is:

```
1 Your Score is : 8
```

This screenshot is identical to the one above, showing the same POST request to <http://localhost:8080/api/v1/quiz/submQuiz/7>. The response status is 200 OK, with a duration of 19 ms and a size of 181 B. The response body is:

```
1 Your Score is : 8
```

POST http://localhost:8080/ ● GET http://localhost:8080/api/ ● POST http://localhost:8080/ ●

http://localhost:8080/api/v1/quiz/submQuiz/7

POST http://localhost:8080/api/v1/quiz/submQuiz/7

Params Authorization Headers (8) Body Scripts Settings

Body (raw JSON)

```
[{"id": 1, "userAnswer": "int"}, {"id": 11, "userAnswer": "loop"}, {"id": 7, "userAnswer": "extends"}, {"id": 9, "userAnswer": "none"}]
```

Body Cookies Headers (5) Test Results

Raw Preview Visualize

1 Your Score is : 8

POST http://localhost:8080/ ● GET http://localhost:8080/api/ ● POST http://localhost:8080/ ●

http://localhost:8080/api/v1/quiz/submQuiz/7

POST http://localhost:8080/api/v1/quiz/submQuiz/7

Params Authorization Headers (8) Body Scripts Settings

Body (raw JSON)

```
[{"id": 1, "userAnswer": "int"}, {"id": 11, "userAnswer": "loop"}, {"id": 7, "userAnswer": "extends"}, {"id": 9, "userAnswer": "none"}]
```

Body Cookies Headers (5) Test Results

Raw Preview Visualize

1 Your Score is : 8

### 3. Screenshots of Logs in console

```
eclipse-workspace - Eclipse IDE
File Edit Navigate Search Project Run Window Help
Console QuizController.java QuizServicesImpl.java
QuizApp - QuizAppApplication [Spring Boot App] C:\Users\Jagadeesh Dowluri\.p2\pool\plugins\org.eclipse.jdt.openjdk.hotspot.jre.full.win32.x86_64_21.0.8.v20250724-1412\jre\bin\javaw.exe (08-Aug-2025, 10:36:44 pm elapsed: 0:37:02) [pid: 26476]
2025-08-08T23:08:53.520+05:30  WARN 26476 --- [QuizApp] [nio-8080-exec-4] com.quiz.jagadeesh.AOP.Logging : Quiz submitted successful
2025-08-08T23:09:37.494+05:30  WARN 26476 --- [QuizApp] [nio-8080-exec-5] com.quiz.jagadeesh.AOP.Logging : Submitting quiz...
Hibernate:
    select
        q1_0.id,
        q1_0.quiz_title
    from
        quiz q1_0
    where
        q1_0.id=?
Hibernate:
    select
        q1_0.quiz_id,
        q1_1.id,
        q1_1.correct_answer,
        q1_1.option1,
        q1_1.option2,
        q1_1.option3,
        q1_1.option4,
        q1_1.question_title,
        q1_1.category,
        q1_1.level
    from
        quiz_questions q1_0
    join
        question q1_1
    on q1_1.id=q1_0.questions_id
    where
        q1_0.quiz_id=?
2025-08-08T23:09:37.503+05:30  WARN 26476 --- [QuizApp] [nio-8080-exec-5] com.quiz.jagadeesh.AOP.Logging : Quiz submitted successful
```

```
24°C Haze
eclipse-workspace - Eclipse IDE
File Edit Navigate Search Project Run Window Help
Console QuizController.java QuizServicesImpl.java
QuizApp - QuizAppApplication [Spring Boot App] C:\Users\Jagadeesh Dowluri\.p2\pool\plugins\org.eclipse.jdt.openjdk.hotspot.jre.full.win32.x86_64_21.0.8.v20250724-1412\jre\bin\javaw.exe (08-Aug-2025, 10:36:44 pm elapsed: 0:37:33) [pid: 26476]
[QuizApp] [nio-8080-exec-4] com.quiz.jagadeesh.AOP.Logging : Quiz questions fetched successfully.
[QuizApp] [nio-8080-exec-7] .m.m.a.ExceptionHandlerExceptionResolver : Resolved [org.springframework.web.servlet.resource.NoResourceFoundException]
[QuizApp] [nio-8080-exec-9] com.quiz.jagadeesh.AOP.Logging : Submitting quiz...
```

```
[QuizApp] [nio-8080-exec-9] com.quiz.jagadeesh.AOP.Logging : Quiz created successfully.  
[QuizApp] [nio-8080-exec-1] .m.m.a.ExceptionHandlerExceptionResolver : Resolved [org.springframework.web.servlet.resource.NoResourceFoundException]  
[QuizApp] [nio-8080-exec-4] com.quiz.jagadeesh.AOP.Logging : Fetching quiz questions by ID...
```

```
[QuizApp] [nio-8080-exec-6] com.quiz.jagadeesh.AOP.Logging : Question fetched successfully by ID.  
[QuizApp] [nio-8080-exec-9] com.quiz.jagadeesh.AOP.Logging : Creating a new quiz...
```

```
[QuizApp] [nio-8080-exec-1] com.quiz.jagadeesh.AOP.Logging : Question updated successfully.  
[QuizApp] [nio-8080-exec-2] com.quiz.jagadeesh.AOP.Logging : Deleting a question...  
  
[QuizApp] [nio-8080-exec-2] com.quiz.jagadeesh.AOP.Logging : Question deleted successfully.  
[QuizApp] [nio-8080-exec-5] com.quiz.jagadeesh.AOP.Logging : Patching a question...
```

```
[QuizApp] [io-8080-exec-10] com.quiz.jagadeesh.AOP.Logging : Question updated successfully.  
[QuizApp] [nio-8080-exec-1] com.quiz.jagadeesh.AOP.Logging : Updating a question...
```

```
[QuizApp] [nio-8080-exec-7] com.quiz.jagadeesh.AOP.Logging : All questions fetched successfully.  
[QuizApp] [nio-8080-exec-7] ration$PageModule$WarningLoggingModifier : Serializing PageImpl instances as-is is not supported, meaning that the Spring Data's PagedModel (globally via @EnableSpringDataWebSupport(pageSerializationMode = VIA_DTO)) agedResourcesAssembler as documented in https://docs.spring.io/spring-data/commons/reference/repositories/core-extensions.html#core.web.pageable  
[QuizApp] [io-8080-exec-10] com.quiz.jagadeesh.AOP.Logging : Updating a question...
```

```
[QuizApp] [ restartedMain] jpaBaseConfiguration$JpaWebConfiguration : initialized JPA EntityManagerFactory for persistence unit 'default'  
[QuizApp] [ restartedMain] o.s.v.b.OptionalValidatorFactoryBean : spring.jpa.open-in-view is enabled by default. Therefore, database quer  
[QuizApp] [ restartedMain] .w.s.a.s.AnnotationActionEndpointMapping : Failed to set up a Bean Validation provider: jakarta.validation.NoProv:  
[QuizApp] [ restartedMain] o.s.b.d.a.OptionalLiveReloadServer : Supporting [WS-Addressing August 2004, WS-Addressing 1.0]  
[QuizApp] [ restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : LiveReload server is running on port 35729  
[QuizApp] [ restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 8080 (http) with context path '/'  
[QuizApp] [ restartedMain] com.quiz.jagadeesh.QuizAppApplication : Started QuizAppApplication in 0.941 seconds (process running for 111.9s)
```

```
[QuizApp] [ restartedMain] .ConditionEvaluationDeltaLoggingListener : Condition evaluation unchanged  
[QuizApp] [nio-8080-exec-2] o.a.c.C.[Tomcat].[localhost].[] : Initializing Spring DispatcherServlet 'dispatcherServlet'  
[QuizApp] [nio-8080-exec-2] o.s.web.servlet.DispatcherServlet : Initializing Servlet 'dispatcherServlet'  
[QuizApp] [nio-8080-exec-2] o.s.web.servlet.DispatcherServlet : Completed initialization in 2 ms  
[QuizApp] [nio-8080-exec-2] com.quiz.jagadeesh.AOP.Logging : Adding a new question...
```

```
tion3, option4, question_title, category, level)
```

```
[QuizApp] [nio-8080-exec-2] com.quiz.jagadeesh.AOP.Logging : Question added successfully.  
[QuizApp] [nio-8080-exec-3] .m.m.a.ExceptionHandlerExceptionResolver : Resolved [org.springframework.web.servlet.resource.NoResourceFoundException]  
[QuizApp] [nio-8080-exec-4] .m.m.a.ExceptionHandlerExceptionResolver : Resolved [org.springframework.web.servlet.resource.NoResourceFoundException]  
[QuizApp] [nio-8080-exec-7] com.quiz.jagadeesh.AOP.Logging : Fetching all questions...
```

## 4. Screenshots of Custom exceptions

- QuizNotFoundException

POST http://localhost:8080/z • GET http://localhost:8080/api • POST http://localhost:8080/i • +

**http://localhost:8080/api/v1/quiz/submiQuiz/18**

**POST** http://localhost:8080/api/v1/quiz/submiQuiz/18

Params Authorization Headers (8) **Body** Scripts Settings

none form-data x-www-form-urlencoded raw binary GraphQL JSON

```

23 },
24 {
25   "id": 2,
26   "userAnswer": "class"
27 },
28 {
29   "id": 4,
30   "userAnswer": "int"
31 }
32

```

Cookies Beautify

**Body** Cookies Headers (5) Test Results

{ } JSON ▾ ▶ Preview Visualize

```

1 {
2   "path": "/api/v1/quiz/submiQuiz/18",
3   "error": "Not Found",
4   "message": "Quiz Not found !",
5   "timestamp": "2025-08-08T23:18:03.022714Z",
6   "status": 404
7 }

```

404 Not Found 30 ms 311 B

eclipse-workspace - Eclipse IDE

File Edit Navigate Search Project Run Window Help

Project Explorer ▾

- College-App
- DiscoveryServices
- Many\_2\_Many\_Mappings
- Many\_2\_One\_Mappings
- Mapping (In Wipro-QuizApplication-Monorepo-m)
- One\_2\_Many\_Mappings
- One\_2\_One\_Mappings
- QuestionServiceEUR
- QuizApp [boot] [devtools]
- src/main/java
  - com.quiz.jagadeesh
  - com.quiz.jagadeesh.AOP
  - com.quiz.jagadeesh.Controller
    - QuestController.java
    - QuizController.java
  - com.quiz.jagadeesh.Entities
  - com.quiz.jagadeesh.Exceptions
    - GlobalExceptionHandler.java
    - QuestionNotFoundException.java
    - QuizNotFoundException.java
  - com.quiz.jagadeesh.Repository
  - com.quiz.jagadeesh.Services
    - QuesServiceImpl.java
    - QuestService.java
    - QuizServices.java
    - QuizServicesImpl.java
- src/main/resources
  - static
  - templates
  - application.properties
- src/test/java
- target/generated-sources/annotations
- target/generated-test-sources/test-annotations
- src
- tarnal

Console ▾ QuizController.java QuizServicesImpl.java QuizNotFoundException.java QuestionNotFoundException.java

QuizApp - QuizAppApplication (Spring Boot App) C:\Users\Jagadeesh Dowluri\p2\pool\plugins\org.eclipse.justmykit\hotspot\jre\full\win32\x86\_64\_21.0.8.v20250724-1412\jre\bin\javaw.exe (08-Aug-2025, 10:36:44)

Logging : Quiz submitted successfully.

Logging : Submitting quiz...

ExceptionResolver : Resolved [com.quiz.jagadeesh.Exceptions.QuizNotFoundException: Quiz Not found !]

Terminal Data Source Explorer Properties

## - QuestionNotFoundException

Postman screenshot showing a failed PATCH request to `/api/v1/questions/patch/16`. The response body indicates a `Not Found` error for a question with id 16.

```

1 {
2   "path": "/api/v1/questions/patch/16",
3   "error": "Not Found",
4   "message": "Question not found with id: 16",
5   "timestamp": "2025-08-08T23:23:58.956532Z",
6   "status": 404
7 }

```

Eclipse IDE screenshot showing the project structure in the Project Explorer and a terminal window displaying a stack trace for a `QuizNotFoundException`.

```

exception: Quiz Not found !
>ResourceNotFoundException: No static resource api/v1/quiz/questions/patch/20.]
>ResourceNotFoundException: No static resource api/v1/quiz/questions/patch/20.]

```

Terminal output:

```

>undException: Question not found with id: 16

```

## 5. MySQL Database

The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, Help. The left sidebar has sections for Navigator, Schemas, and SQLAdditions. The main area displays a query results grid and a schema browser.

**Schemas**

- many\_2\_manymapping
- many\_2\_onemapping
- one\_2\_manymapping
- one\_2\_onemapping
- qdatabase
- quizservice\_db
- quiz\_db
- Tables
- question
- quiz
- quiz\_questions
- views
- Stored Procedures
- Functions
- quizservice\_db
- skafit
- sys
- world

**SQLAdditions**

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

**Result Grid**

	id	correct_answer	option1	option2	option3	option4	question_title	category	level
3	public static void main	public static void main	main void public static	void static public main	public void static main	on	What is the correct main method signature in Java?	JAVA	EASY
8	true	yes	1	true	on	What is the boolean value for true in Java?	JAVA	EASY	
5	System.out.println	echo	System.out.print	System.out.println	print()	Which statement is used to print text in Java?	JAVA	EASY	
2	class	class	method	object	package	Which keyword is used to define a class in Java?	JAVA	EASY	
9	null	none	void	null	empty	What is the default value of a reference variable in Java?	JAVA	EASY	
6	new	create	new	make	object	What is the keyword used to create an object in Java?	JAVA	EASY	
1	Java Persistence API	Java Persistence API	Java Programming Application	Java Process Architecture	None of these	What is JPA in Java?	JAVA	EASY	
4	int	integer	number	int	num	Which keyword is used to declare an integer variable in Java?	JAVA	EASY	
11	for	loop	iterate	for	while	Which keyword is used to write a loop that repeats?	JAVA	EASY	
7	extends	implements	inherit	extends	includes	Which keyword is used for inheritance in Java?	JAVA	EASY	
13	Initializes a new GIT...	Initializes a new GIT...	Installs Git	Deletes a Git repo	None of the above	What does 'git init' do?	GIT	EASY	
15	ORM Framework	CRM Framework	Entity	Database	API	What is the Hibernate?	SpringBoot	EASY	
10	if	if	when	check	compare	Which keyword is used for conditional statements?	JAVA	EASY	
12	@RestController	@Controller	@RestController	@Service	@Component	Which annotation is used to create a REST Controller?	SpringBoot	MED...	
14	8080	8080	8000	9090	443	What is the default port of Spring Boot?	SpringBoot	EASY	
	http	http	http	https	https		https	easy	

**Administration Schemas Information**

**Table: question**

**Columns:**

ID	correct_answer	option1	option2	option3	option4	question_title	category	level
1	A	B	C	D	E	What is the correct main method signature in Java?	JAVA	EASY
2	True	False	Yes	No	On	What is the boolean value for true in Java?	JAVA	EASY
3	System.out.println	echo	System.out.print	System.out.println	print()	Which statement is used to print text in Java?	JAVA	EASY
4	Class	Object	Method	Package	None	Which keyword is used to define a class in Java?	JAVA	EASY
5	Null	None	Void	Empty	On	What is the default value of a reference variable in Java?	JAVA	EASY
6	New	Create	New	Make	Object	What is the keyword used to create an object in Java?	JAVA	EASY
7	Extends	Implements	Inherit	Extends	Includes	Which keyword is used for inheritance in Java?	JAVA	EASY
8	Initializes a new GIT...	Initializes a new GIT...	Installs Git	Deletes a Git repo	None of the above	What does 'git init' do?	GIT	EASY
9	ORM Framework	CRM Framework	Entity	Database	API	What is the Hibernate?	SpringBoot	EASY
10	If	If	When	Check	Compare	Which keyword is used for conditional statements?	JAVA	EASY
11	@RestController	@Controller	@RestController	@Service	@Component	Which annotation is used to create a REST Controller?	SpringBoot	MED...
12	8080	8080	8000	9090	443	What is the default port of Spring Boot?	SpringBoot	EASY
13	Http	Http	Http	Https	Https		Https	Easy

**Action Output**

#	Time	Action	Message	Duration / Fetch
1	22:18:24	SELECT * FROM quiz_db.question LIMIT 0, 1000	15 row(s) returned	0.000 sec / 0.000 sec

24°C Haze

ENG IN

23:28:05 08-06-2025

## 6. Screenshots of Swagger API

The screenshot shows the Swagger UI interface for an OpenAPI definition. At the top, it displays "OpenAPI definition v0 OAS 3.1". Below this, there's a "Servers" section with a dropdown menu set to "http://localhost:8080 - Generated server url". The main content area is titled "quest-controller" and lists several API endpoints:

- PUT /api/v1/questions/update/{id}
- POST /api/v1/questions/addQuestion
- PATCH /api/v1/questions/patch/{id}
- GET /api/v1/questions/getQuestion/{id}

The screenshot shows the Swagger UI interface for an OpenAPI definition. At the top, it displays "OpenAPI definition v0 OAS 3.1". Below this, there's a "Servers" section with a dropdown menu set to "http://localhost:8080 - Generated server url". The main content area is titled "quiz-controller" and lists several API endpoints:

- POST /api/v1/quiz/submiQuiz/{id}
- POST /api/v1/quiz/create
- GET /api/v1/quiz/getQuizByID/{id}

Below the endpoints, there's a "Schemas" section containing three items:

- Question > Expand all object
- Response > Expand all object
- Quiz > Expand all object

Schemas

- Question** > Expand all object
- Response** > Expand all object
- Quiz** > Expand all object
- QuestionWrapper** > Expand all object
- Pageable** > Expand all object
- PageQuestion** > Expand all object
- PageableObject** > Expand all object
- SortObject** > Expand all object

## 7. Screenshot of Swagger APIDOCs

```

{
  "openapi": "3.1.0",
  "info": {
    "title": "OpenAPI definition",
    "version": "v0"
  },
  "servers": [
    {
      "url": "http://localhost:8080"
    }
  ],
  "paths": {
    "/api/v1/questions/update/{id)": {
      "put": {
        "tags": ["quest-controller"],
        "operationId": "UpdateQuestion",
        "parameters": [
          {
            "name": "id",
            "in": "path",
            "required": true,
            "schema": {
              "type": "integer",
              "format": "int64"
            }
          }
        ],
        "requestBody": {
          "content": {
            "application/json": {
              "schema": {
                "$ref": "#/components/schemas/Question"
              }
            }
          }
        },
        "responses": {
          "200": {
            "description": "OK",
            "content": {
              "application/json": {
                "schema": {
                  "$ref": "#/components/schemas/Question"
                }
              }
            }
          }
        }
      }
    },
    "/api/v1/quiz/submQuiz/{id)": {
      "post": {
        "tags": ["quiz-controller"],
        "operationId": "submitQuiz",
        "parameters": [
          {
            "name": "id",
            "in": "path",
            "required": true,
            "schema": {
              "type": "integer",
              "format": "int32"
            }
          }
        ],
        "requestBody": {
          "content": {
            "application/json": {
              "schema": {
                "type": "array",
                "items": {
                  "$ref": "#/components/schemas/Response"
                }
              }
            }
          }
        },
        "responses": {
          "200": {
            "description": "OK",
            "content": {
              "application/json": {
                "schema": {
                  "$ref": "#/components/schemas/Quiz"
                }
              }
            }
          }
        }
      }
    },
    "/api/v1/quiz/create": {
      "post": {
        "tags": ["quiz-controller"],
        "operationId": "createQuiz",
        "parameters": [
          {
            "name": "category"
          },
          {
            "name": "level"
          }
        ],
        "requestBody": {
          "content": {
            "application/json": {
              "schema": {
                "type": "string"
              }
            }
          }
        },
        "responses": {
          "200": {
            "description": "OK",
            "content": {
              "application/json": {
                "schema": {
                  "$ref": "#/components/schemas/Quiz"
                }
              }
            }
          }
        }
      }
    },
    "/api/v1/questions/addQuestion": {
      "post": {
        "tags": ["quest-controller"],
        "operationId": "addQuestion",
        "requestBody": {
          "content": {
            "application/json": {
              "schema": {
                "$ref": "#/components/schemas/Question"
              }
            }
          }
        }
      }
    },
    "/api/v1/questions/patch/{id)": {
      "patch": {
        "tags": ["quest-controller"],
        "operationId": "patchQuestion",
        "parameters": [
          {
            "name": "id",
            "in": "path",
            "required": true,
            "schema": {
              "type": "integer",
              "format": "int64"
            }
          }
        ],
        "requestBody": {
          "content": {
            "application/json": {
              "schema": {
                "$ref": "#/components/schemas/Question"
              }
            }
          }
        }
      }
    },
    "/api/v1/quiz/getQuizByID/{id)": {
      "get": {
        "tags": ["quiz-controller"],
        "operationId": "getQuizByID",
        "parameters": [
          {
            "name": "id",
            "in": "path",
            "required": true,
            "schema": {
              "type": "integer",
              "format": "int32"
            }
          }
        ],
        "responses": {
          "200": {
            "description": "OK",
            "content": {
              "application/json": {
                "schema": {
                  "$ref": "#/components/schemas/Quiz"
                }
              }
            }
          }
        }
      }
    },
    "/api/v1/questions/getQuestion/{id)": {
      "get": {
        "tags": ["quest-controller"],
        "operationId": "getQuestionbyId",
        "parameters": [
          {
            "name": "id",
            "in": "path",
            "required": true,
            "schema": {
              "type": "integer",
              "format": "int64"
            }
          }
        ],
        "responses": {
          "200": {
            "description": "OK",
            "content": {
              "application/json": {
                "schema": {
                  "$ref": "#/components/schemas/Question"
                }
              }
            }
          }
        }
      }
    },
    "/api/v1/questions/getAllQuestions": {
      "get": {
        "tags": ["quest-controller"],
        "operationId": "getAllQuestions",
        "parameters": [
          {
            "name": "pageable",
            "in": "query",
            "required": true,
            "schema": {
              "$ref": "#/components/schemas/Pageable"
            }
          }
        ],
        "responses": {
          "200": {
            "description": "OK",
            "content": {
              "application/json": {
                "schema": {
                  "$ref": "#/components/schemas/PageQuestion"
                }
              }
            }
          }
        }
      }
    },
    "/api/v1/questions/delete/{id)": {
      "delete": {
        "tags": ["quest-controller"],
        "operationId": "deleteQuestion",
        "parameters": [
          {
            "name": "id",
            "in": "path",
            "required": true,
            "schema": {
              "type": "integer",
              "format": "int64"
            }
          }
        ],
        "responses": {
          "200": {
            "description": "OK"
          }
        }
      }
    },
    "/api/v1/questions/getPageable": {
      "get": {
        "tags": ["quest-controller"],
        "operationId": "getPageable",
        "parameters": [
          {
            "name": "level",
            "in": "query",
            "enum": [
              "EASY",
              "MEDIUM",
              "HARD"
            ],
            "schema": {
              "type": "string"
            }
          },
          {
            "name": "category",
            "in": "query",
            "enum": [
              "JAVA",
              "SPRING",
              "GIT",
              "SpringBoot"
            ],
            "schema": {
              "type": "string"
            }
          },
          {
            "name": "correctAnswer",
            "in": "query",
            "schema": {
              "type": "string"
            }
          },
          {
            "name": "questionTitle",
            "in": "query",
            "schema": {
              "type": "string"
            }
          },
          {
            "name": "response",
            "in": "query",
            "schema": {
              "type": "object"
            }
          },
          {
            "name": "userAnswer",
            "in": "query",
            "schema": {
              "type": "string"
            }
          }
        ],
        "responses": {
          "200": {
            "description": "OK",
            "content": {
              "application/json": {
                "schema": {
                  "$ref": "#/components/schemas/PageableObject"
                }
              }
            }
          }
        }
      }
    },
    "/api/v1/questions/getSortObject": {
      "get": {
        "tags": ["quest-controller"],
        "operationId": "getSortObject",
        "parameters": [
          {
            "name": "first",
            "in": "query",
            "type": "boolean"
          },
          {
            "name": "last",
            "in": "query",
            "type": "boolean"
          },
          {
            "name": "pageable",
            "in": "query",
            "schema": {
              "$ref": "#/components/schemas/PageableObject"
            }
          },
          {
            "name": "unpaged",
            "in": "query",
            "type": "boolean"
          }
        ],
        "responses": {
          "200": {
            "description": "OK",
            "content": {
              "application/json": {
                "schema": {
                  "$ref": "#/components/schemas/SortObject"
                }
              }
            }
          }
        }
      }
    }
  },
  "components": {
    "schemas": {
      "Question": {
        "type": "object",
        "properties": {
          "id": {
            "type": "integer",
            "format": "int64"
          },
          "level": {
            "type": "string"
          },
          "category": {
            "type": "string"
          },
          "correctAnswer": {
            "type": "string"
          },
          "questionTitle": {
            "type": "string"
          },
          "response": {
            "type": "object",
            "properties": {
              "id": {
                "type": "integer",
                "format": "int64"
              },
              "userAnswer": {
                "type": "string"
              }
            }
          }
        }
      },
      "PageQuestion": {
        "type": "object",
        "properties": {
          "totalElements": {
            "type": "integer",
            "format": "int64"
          },
          "totalPages": {
            "type": "integer",
            "format": "int32"
          },
          "size": {
            "type": "integer",
            "format": "int32"
          },
          "content": {
            "type": "array",
            "items": {
              "$ref": "#/components/schemas/Question"
            }
          },
          "number": {
            "type": "integer",
            "format": "int32"
          },
          "sort": {
            "type": "array",
            "items": {
              "type": "string"
            }
          }
        }
      },
      "SortObject": {
        "type": "object",
        "properties": {
          "first": {
            "type": "boolean"
          },
          "last": {
            "type": "boolean"
          },
          "pageable": {
            "type": "object",
            "empty": {
              "type": "boolean"
            }
          },
          "unpaged": {
            "type": "boolean"
          },
          "pageNumber": {
            "type": "integer",
            "format": "int32"
          },
          "pageSize": {
            "type": "integer",
            "format": "int32"
          },
          "sort": {
            "type": "array",
            "items": {
              "type": "string"
            }
          }
        }
      }
    }
  }
}
  
```