

Postman testing

Create

The screenshot displays the Postman application interface. The top navigation bar includes 'Home', 'Workspaces', 'API Network', 'Reports', and 'Explore'. The left sidebar shows 'My Workspace' with a 'duck' collection. The main area is configured for a POST request to 'localhost:8080/alehouse/create'. The 'Body' tab is selected, showing a JSON payload:

```
{  "food": "Fondue",  "drink": "Viziman Champion",  "price": 74,  "name": "Zoltan Chivay",  "gameOfGwent": 1}
```

. The bottom section shows the response in the 'Body' tab, formatted as JSON:

```
{  "id": 2,  "food": "Fondue",  "drink": "Viziman Champion",  "price": 74,  "name": "Zoltan Chivay",  "gameOfGwent": true}
```

. The status bar at the bottom indicates 'Status: 201 Created', 'Time: 9 ms', and 'Size: 273 B'. The Windows taskbar at the very bottom shows the system clock as 10:37 on 17/03/2022.

Postman

File Edit View Help

Home Workspaces API Network Reports Explore

Search Postman

My Workspace New Import

Overview POST localhost:8080/alehouse/create

Save

POST localhost:8080/alehouse/create Send

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

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

```
1 {
2   "food": "Fondue",
3   "drink": "Viziman Champion",
4   "price": 74,
5   "name": "Zoltan Chivay",
6   "gameOfGwent": 1
7 }
```

Body Cookies Headers (5) Test Results

Status: 201 Created Time: 9 ms Size: 273 B Save Response

Pretty Raw Preview Visualize JSON

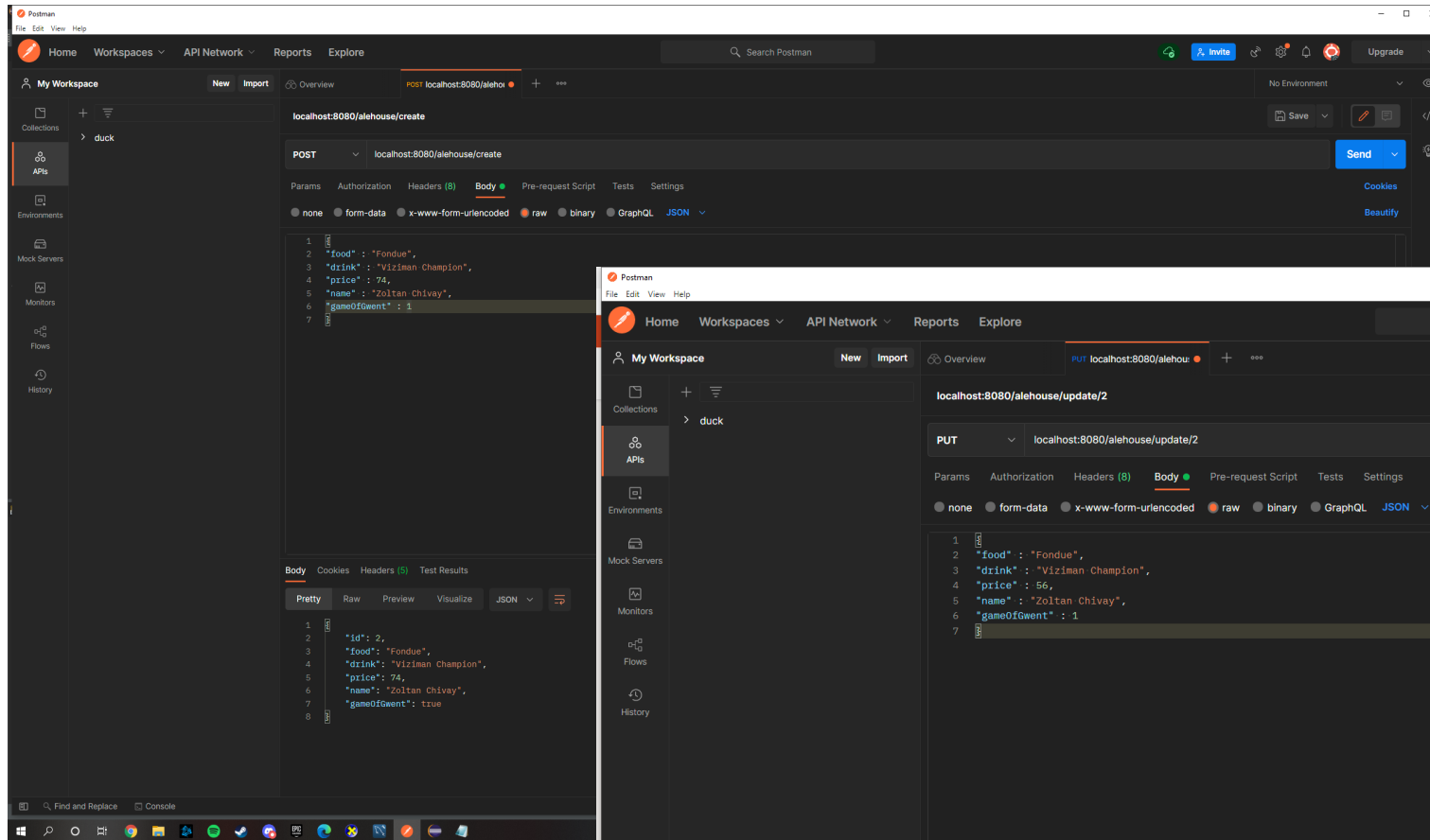
```
1 {
2   "id": 2,
3   "food": "Fondue",
4   "drink": "Viziman Champion",
5   "price": 74,
6   "name": "Zoltan Chivay",
7   "gameOfGwent": true
8 }
```

Activate Windows
Go to Settings to activate Windows.

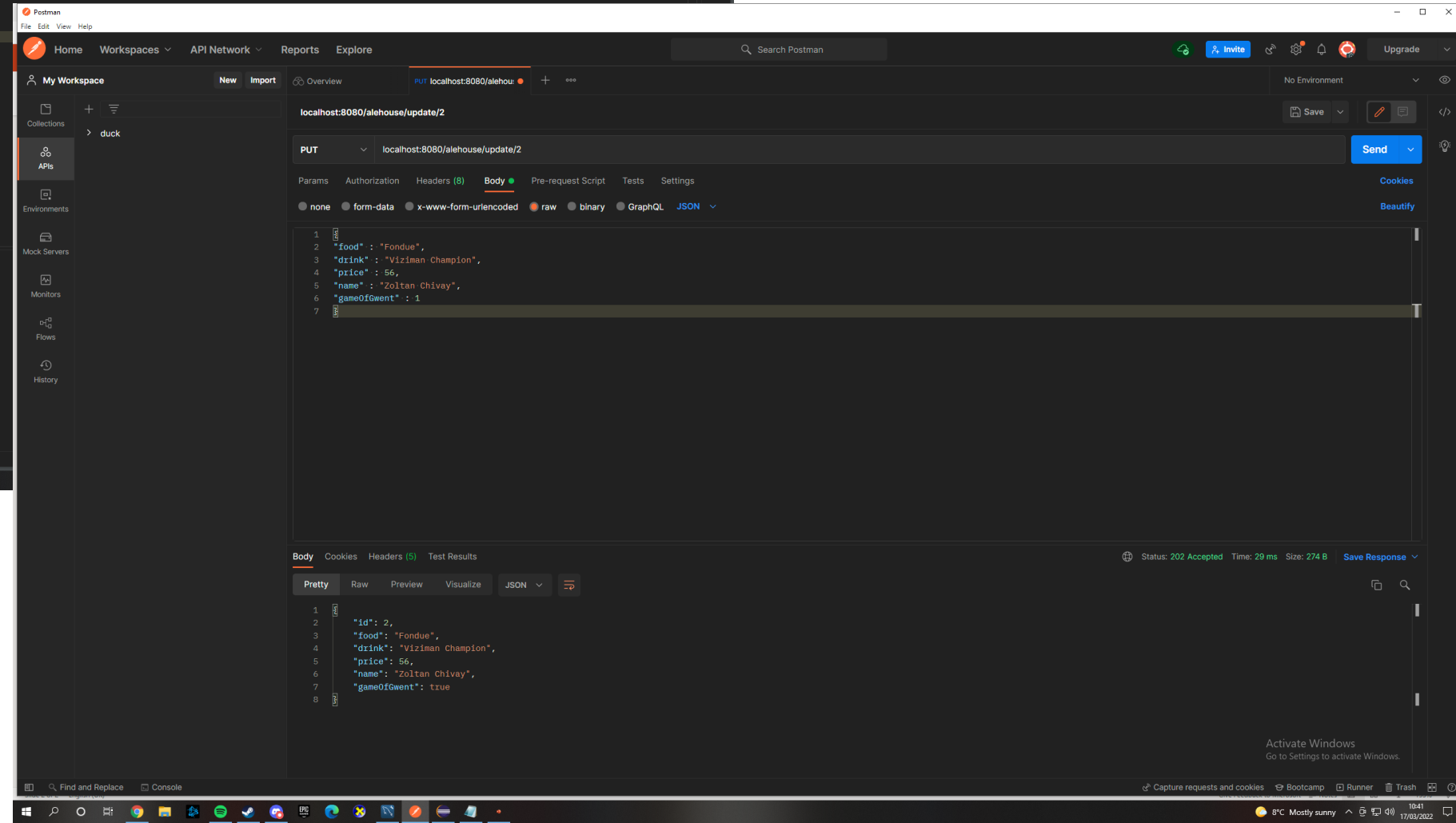
Capture requests and cookies Bootcamp Runner Trash

8°C Mostly sunny 10:37 17/03/2022

Update



In this you can see that the price has changed from 74 to 56



readAll

Postman

File Edit View Help

Home Workspaces API Network Reports Explore

Search Postman

Invite

Upgrade

My Workspace

New Import

Overview

GET localhost:8080/alehou

localhost:8080/alehouse/readAll

Save

Send

GET

localhost:8080/alehouse/readAll

Params

Authorization

Headers (8)

Body

Pre-request Script

Tests

Settings

none

form-data

x-www-form-urlencoded

raw

binary

GraphQL

JSON

1

2

3

4

5

6

1

2

3

4

5

6

Body

Cookies

Headers (5)

Test Results

Pretty

Raw

Preview

Visualize

JSON

1

2

3

4

5

6

7

8

9

10

11

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14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

Status: 200 OK

Time: 103 ms

Size: 594 B

Save Response

Find and Replace

Console

Capture requests and cookies

Bootcamp

Runner

Trash

8°C Mostly sunny

10:47

17/03/2022

readById

Postman

File Edit View Help

Home

Workspaces

API Network

Reports

Explore

Search Postman

Invite

Upgrade

My Workspace

New Import

Overview

GET localhost:8080/alehou:

+ ...

No Environment

Save

Send

Beautify

localhost:8080/alehouse/readById/3

GET localhost:8080/alehouse/readById/3

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

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

```
1 {
2   "food" : "Potion of tir na lia",
3   "drink" : "Kaedweni stout",
4   "price" : 15,
5   "name" : "Gerald",
6   "gameOfGwent" : 1
7 }
```

Body Cookies Headers (5) Test Results

Pretty Raw Preview Visualize JSON

```
1 {
2   "id": 3,
3   "food": "Wyvern meat",
4   "drink": "Raspberry juice",
5   "price": 47,
6   "name": "Emhyr Var Emreis",
7   "gameOfGwent": true
8 }
```

Status: 200 OK Time: 15 ms Size: 275 B Save Response

Find and Replace

Console

Capture requests and cookies

Bootcamp

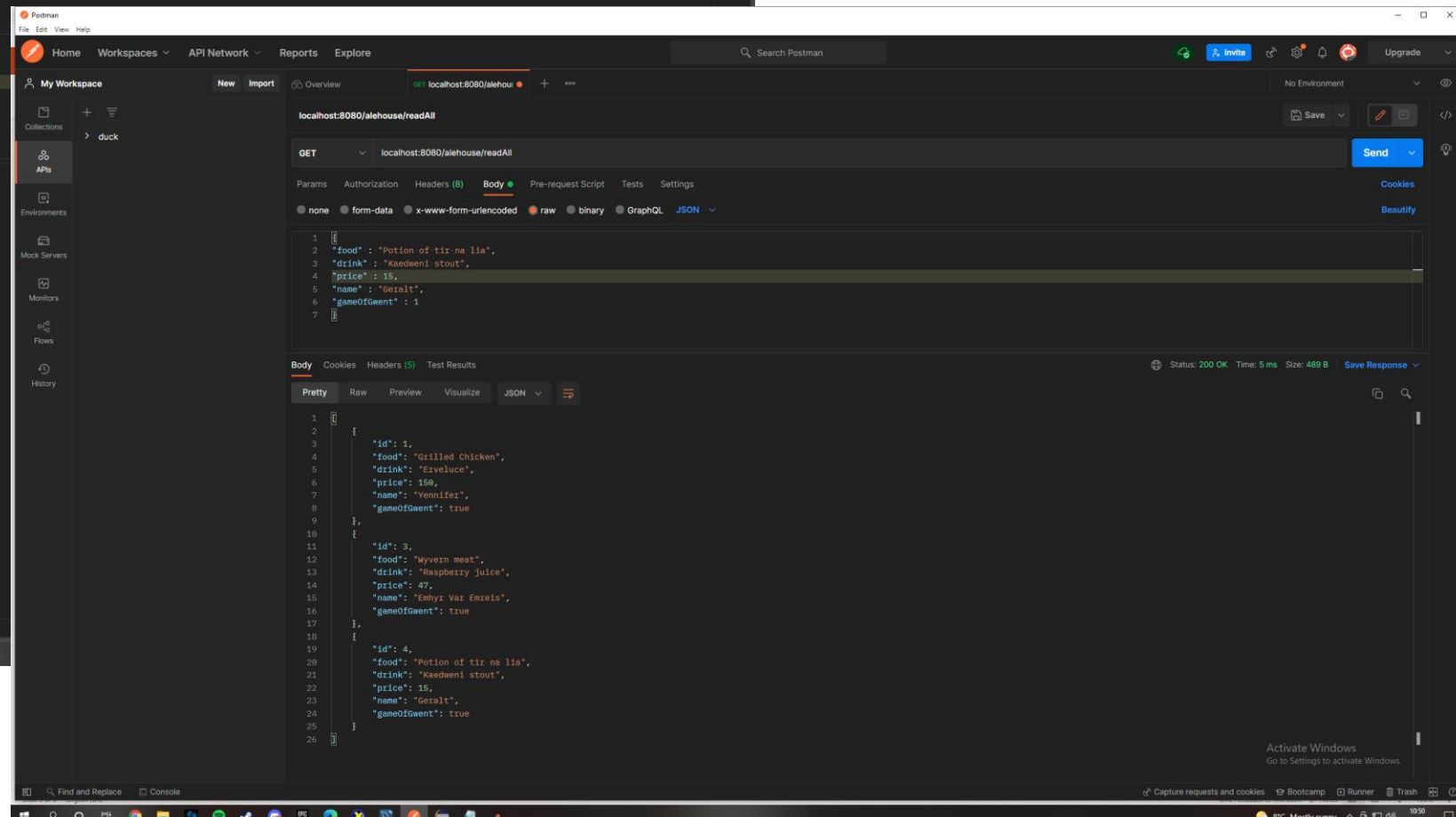
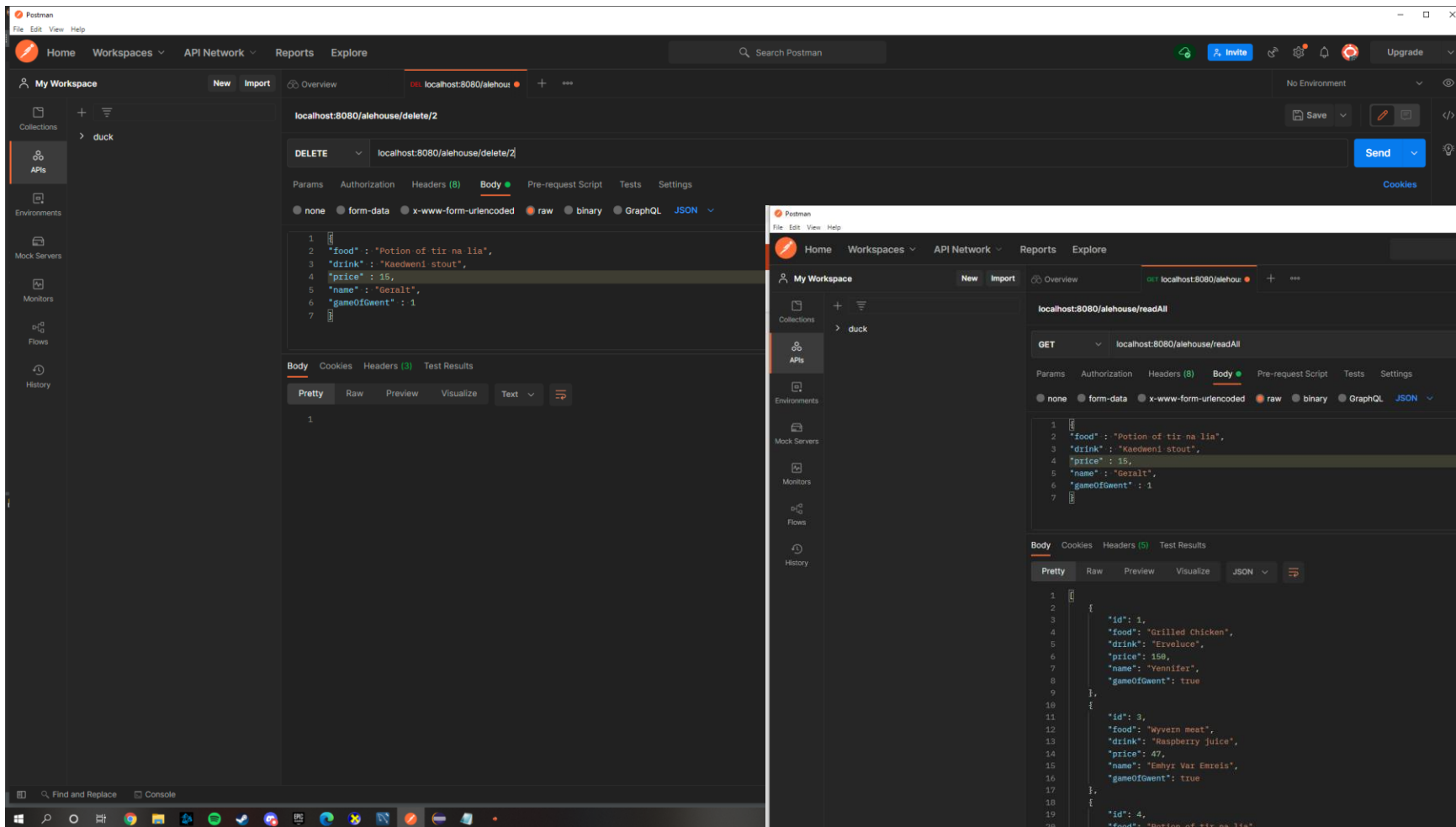
Runner

Trash

10:48 17/03/2022

Delete

In this you can see that I have deleted the order with an id of 2 and it does not show in the readAll.



JUnit testing

Controller integration test

The screenshot displays the Eclipse IDE environment. The main editor window shows the source code for `AleHouseControllerIntegrationTest.java`. The code includes imports for Spring Boot test utilities, annotations for `@SpringBootTest`, `@AutoConfigureMockMvc`, and `@ActiveProfiles("test")`, and a `@Sql` block to execute database scripts. The test class `AleHouseControllerIntegrationTest` contains a `@Test` method `testCreate()` that simulates a POST request to `/alehouse/create` and verifies the response status and body.

The left sidebar shows the Package Explorer with the project structure and the Failure Trace panel. The bottom panel displays the Console output, which includes log messages from Tomcat and the application, as well as error messages related to the database connection and HikariDataSource shutdown.

```
2
3import static org.springframework.test.web.servlet.request.MockMvcRequestBuilders.delete;
28
29 @SpringBootTest(webEnvironment = WebEnvironment.RANDOM_PORT)
30 @AutoConfigureMockMvc
31 @ActiveProfiles("test")
32 @Sql(executionPhase = ExecutionPhase.BEFORE_TEST_METHOD, scripts = { "classpath:AleHouse-schema.sql",
33 "classpath:AleHouse-data.sql" })
34 public class AleHouseControllerIntegrationTest {
35     //INTEGRATION TESTING
36     @Autowired
37     private MockMvc mvc;
38
39     @Autowired
40     private ObjectMapper mapper;
41
42     @Test
43     public void testCreate() throws Exception {
44         AleHouse testAleHouse = new AleHouse("Erveluce", "Grilled Chicken", 150, "Yennifer", true);
45         String testAleHouseAsJSON = this.mapper.writeValueAsString(testAleHouse);
46         RequestBuilder req = post("/alehouse/create").content(testAleHouseAsJSON)
47             .contentType(MediaType.APPLICATION_JSON);
48
49         AleHouse testSavedAleHouse = new AleHouse(2L, "Erveluce", "Grilled Chicken", 150, "Yennifer", true);
50         String testSavedAleHouseAsJSON = this.mapper.writeValueAsString(testSavedAleHouse);
51
52         ResultMatcher checkAleHouseStatus = status().isCreated();
53         ResultMatcher checkAleHouseBody = content().json(testSavedAleHouseAsJSON);
54
55         this.mvc.perform(req).andExpect(checkAleHouseStatus).andExpect(checkAleHouseBody);
56     }
57 }
```

Console Output:

```
2022-03-17 10:52:45.995 INFO 9020 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 63789 (http) with context p
2022-03-17 10:52:46.002 INFO 9020 --- [main] .q.d.C.AleHouseControllerIntegrationTest : Started AleHouseControllerIntegrationTest in 2.944 sec
2022-03-17 10:52:46.466 INFO 9020 --- [ionShutdownHook] j.LocalContainerEntityManagerFactoryBean : Closing JPA EntityManagerFactory for persistence unit
2022-03-17 10:52:46.467 INFO 9020 --- [ionShutdownHook] .SchemaDropperImpl$DelayedDropActionImpl : HHH000477: Starting delayed evictData of schema as par
2022-03-17 10:52:46.468 WARN 9020 --- [ionShutdownHook] o.h.engine.jdbc.spi.SqlExceptionHelper : SQL Error: 90121, SQLState: 90121
2022-03-17 10:52:46.468 ERROR 9020 --- [ionShutdownHook] o.h.engine.jdbc.spi.SqlExceptionHelper : Database is already closed (to disable automatic closi
2022-03-17 10:52:46.469 WARN 9020 --- [ionShutdownHook] o.h.engine.jdbc.spi.SqlExceptionHelper : SQL Error: 90121, SQLState: 90121
2022-03-17 10:52:46.469 ERROR 9020 --- [ionShutdownHook] o.h.engine.jdbc.spi.SqlExceptionHelper : Database is already closed (to disable automatic closi
2022-03-17 10:52:46.469 WARN 9020 --- [ionShutdownHook] o.s.b.f.support.DisposableBeanAdapter : Invocation of destroy method failed on bean with name
2022-03-17 10:52:46.469 INFO 9020 --- [ionShutdownHook] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Shutdown initiated...
2022-03-17 10:52:46.471 INFO 9020 --- [ionShutdownHook] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Shutdown completed.
```

Service unit test

```
1 package com.qa.demo.Service;
2
3 import static org.junit.jupiter.api.Assertions.assertEquals;
4
19
20 @SpringBootTest
21 public class AleHouseServiceUnitTest {
22     //THIS IS UNIT TESTING
23
24     @Autowired
25     private AleHouseService service;
26
27     @MockBean
28     private AleHouseRepo repo;
29
30     @Test
31     public void createTest() {
32         AleHouse orders = new AleHouse("Beauclair white", "Poisoned apple", 100, "Triss", true);
33         AleHouse outgoing = new AleHouse(3, "Beauclair white", "Poisoned apple", 100, "Triss", true);
34
35         Mockito.when(this.repo.save(orders)).thenReturn(outgoing);
36
37         assertEquals(outgoing, this.service.create(orders));
38
39         Mockito.verify(this.repo, Mockito.times(1)).save(orders);
40     }
41
42     @Test
43     public void updateTest() {
44         Optional<AleHouse> optionalOutgoing = Optional.of(new AleHouse(1L, "Raspberry juice", "Wyvern meat", 41, "Emhyn", true));
45         AleHouse orders = new AleHouse("Raspberry juice", "Wyvern meat", 41, "Emhyn Var Emreis", true);
```

```
<terminated> AleHouseServiceUnitTest [JUnit] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (17 Mar 2022, 10:53:54 - 10:53:59)
2022-03-17 10:53:58.870 INFO 3228 --- [main] o.s.b.a.h2.H2ConsoleAutoConfiguration : H2 console available at '/h2-console'. Database available
2022-03-17 10:53:59.103 INFO 3228 --- [main] c.q.d.Service.AleHouseServiceUnitTest : Started AleHouseServiceUnitTest in 2.674 seconds (JVM
2022-03-17 10:53:59.182 INFO 3228 --- [ionShutdownHook] j.LocalContainerEntityManagerFactoryBean : Closing JPA EntityManagerFactory for persistence unit
2022-03-17 10:53:59.182 INFO 3228 --- [ionShutdownHook] .SchemaDropperImpl$DelayedDropActionImpl : HHH000477: Starting delayed evictData of schema as part of shutdown
2022-03-17 10:53:59.183 WARN 3228 --- [ionShutdownHook] o.h.engine.jdbc.spi.SqlExceptionHelper : SQL Error: 90121, SQLState: 90121
2022-03-17 10:53:59.183 ERROR 3228 --- [ionShutdownHook] o.h.engine.jdbc.spi.SqlExceptionHelper : Database is already closed (to disable automatic closing of the database connection)
2022-03-17 10:53:59.184 WARN 3228 --- [ionShutdownHook] o.h.engine.jdbc.spi.SqlExceptionHelper : SQL Error: 90121, SQLState: 90121
2022-03-17 10:53:59.184 ERROR 3228 --- [ionShutdownHook] o.h.engine.jdbc.spi.SqlExceptionHelper : Database is already closed (to disable automatic closing of the database connection)
2022-03-17 10:53:59.184 WARN 3228 --- [ionShutdownHook] o.s.b.f.support.DisposableBeanAdapter : Invocation of destroy method failed on bean with name
2022-03-17 10:53:59.185 INFO 3228 --- [ionShutdownHook] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Shutdown initiated...
2022-03-17 10:53:59.187 INFO 3228 --- [ionShutdownHook] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Shutdown completed.
```

Entity test

The screenshot displays the Eclipse IDE environment with the following components:

- Package Explorer:** Shows the project structure with 'eclipse-workspace' and 'Springdemo'.
- Failure Trace:** Displays 'Finished after 0.44 seconds', 'Runs: 2/2', 'Errors: 0', and 'Failures: 0'.
- Git Repositories:** Lists the workspace and Java project locations.
- Main Editor:** Contains the code for `AleHouseEntityTest.java`.
- Problems, Console, and Terminal:** The terminal shows the command `terminated> AleHouseEntityTest [JUnit] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (17 Mar 2022, 10:55:50 - 10:55:52)`.

```
1 package com.qa.demo.Entity;
2
3 import org.junit.jupiter.api.Test;
4
5
6
7
8
9
10 public class AleHouseEntityTest {
11
12     @Test
13     public void testAll() {
14         assertEquals(AleHouse.class).usingGetClass().verify();
15     };
16
17
18     @Test
19     public void GetterAndSetterTest() {
20         AleHouse alehouse = new AleHouse(4, "Chicken", "Zerrikanian spirit", 5, "Ciri", true);
21
22         assertNotNull(alehouse.getId());
23         assertNotNull(alehouse.getDrink());
24         assertNotNull(alehouse.getFood());
25         assertNotNull(alehouse.isGameOfGwent());
26         assertNotNull(alehouse.getName());
27         assertNotNull(alehouse.getPrice());
28
29         assertEquals(alehouse.getId(), 4);
30         assertEquals(alehouse.getFood(), "Chicken");
31         assertEquals(alehouse.getDrink(), "Zerrikanian spirit");
32         assertEquals(alehouse.getPrice(), 5);
33         assertEquals(alehouse.getName(), "Ciri");
34         assertEquals(alehouse.isGameOfGwent(), true);
35 }
```