

1) Login as “ADMIN”

Please sign in

ADMIN

.....

Sign in

2) Student list is displayed with student records, since there is no record initially, list is empty

Student Management

Logout

Add Student

Student Id	First Name	Last Name	Course	Country	Action
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3) Adding new student as “ADMIN” by click of “Add Student” button, student form gets displayed

The screenshot shows a web browser window with the URL `localhost:8081/StudentManagement/students/showFormForAdd`. The page title is "Student Management". Below it, the section title "Add Student" is displayed. There are four input fields: "First Name" (Suresh), "Last Name" (Reddy), "Course" (B.Tech), and "Country" (India). A "Save" button is located below the form. At the bottom left, there is a link "Back to Students List". The browser's address bar and various icons are visible at the top.

4) Student record gets added and displayed in the list

The screenshot shows a web browser window with the URL `localhost:8081/StudentManagement/students/list`. The page title is "Student Management". On the right side, there is a "Logout" button. In the center, there is a table with the following data:

Student Id	First Name	Last Name	Course	Country	Action
1	Suresh	Reddy	B.Tech	India	Update Delete

5) Like above multiple student records can be added as “ADMIN”

Student Management

Add Student

Student Id	First Name	Last Name	Course	Country	Action
1	Suresh	Reddy	B.Tech	India	<button>Update</button> <button>Delete</button>
2	Murali	Mohan	B.Arch	Canada	<button>Update</button> <button>Delete</button>
3	Daniel	Denson	B.Tech	New Zealand	<button>Update</button> <button>Delete</button>
4	Tanya	Gupta	B.Com	USA	<button>Update</button> <button>Delete</button>

6) ADMIN can update student record

Student Management

Add Student

First Name:
Manish

Last Name:
Kumar

Course:
MBA

Country:
USA

Save

[Back to Students List](#)

7) Student Id 1 record is updated

localhost:8081/StudentManagement/students/list

Logout

Student Id	First Name	Last Name	Course	Country	Action
1	Manish	Kumar	MBA	USA	<button>Update</button> <button>Delete</button>
2	Murali	Mohan	B.Arch	Canada	<button>Update</button> <button>Delete</button>
3	Daniel	Denson	B.Tech	New Zealand	<button>Update</button> <button>Delete</button>
4	Tanya	Gupta	B.Com	USA	<button>Update</button> <button>Delete</button>

8) ADMIN can delete student record, deleting student Id 4 record

localhost:8081 says

Are you sure you want to delete this student?

Cancel OK

Logout

Student Id	First Name	Last Name	Course	Country	Action
1	Manish	Kumar	MBA	USA	<button>Update</button> <button>Delete</button>
2	Murali	Mohan	B.Arch	Canada	<button>Update</button> <button>Delete</button>
3	Daniel	Denson	B.Tech	New Zealand	<button>Update</button> <button>Delete</button>
4	Tanya	Gupta	B.Com	USA	<button>Update</button> <button>Delete</button>

9) After deleting Student Id 4 record, only 3 records will be displayed as below

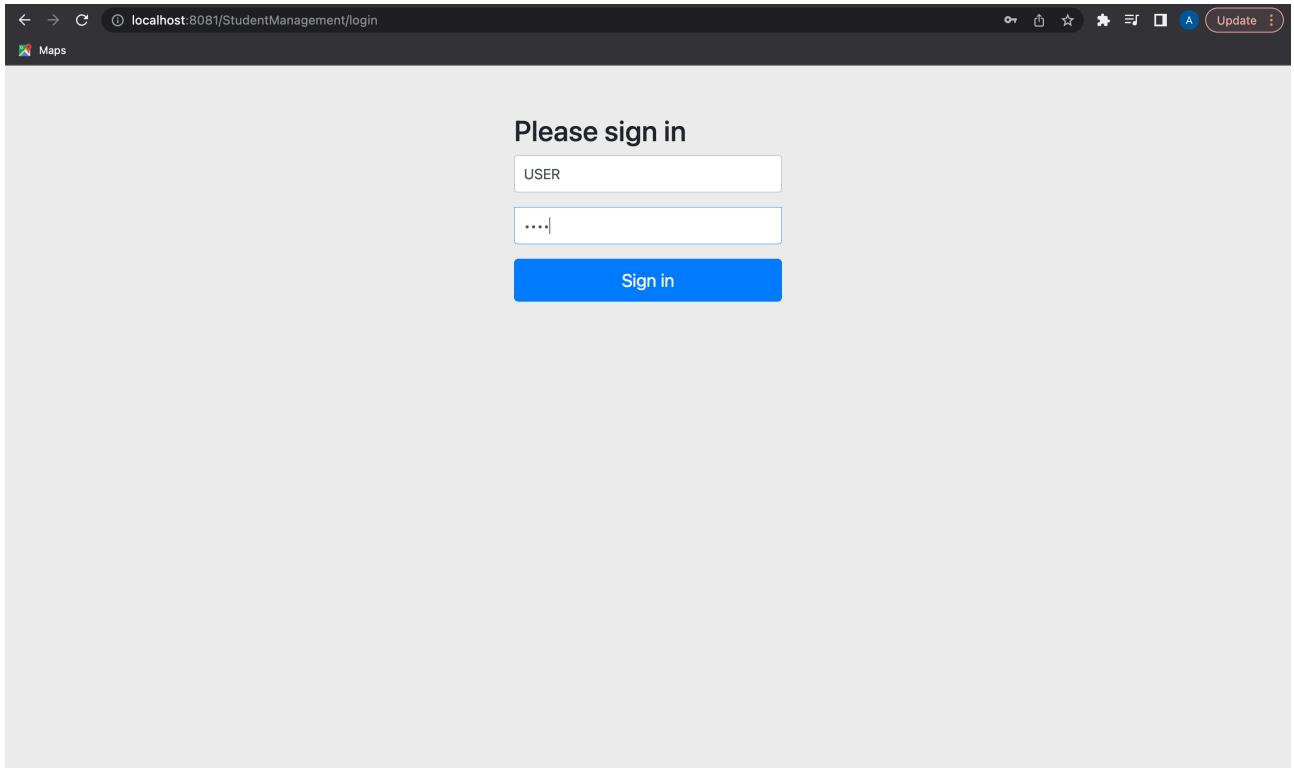
The screenshot shows a web browser window with the URL `localhost:8081/StudentManagement/students/list`. The page title is "Student Management". At the top right, there is a "Logout" button. On the left, there is a blue "Add Student" button. The main content is a table with the following data:

Student Id	First Name	Last Name	Course	Country	Action
1	Manish	Kumar	MBA	USA	<button>Update</button> <button>Delete</button>
2	Murali	Mohan	B.Arch	Canada	<button>Update</button> <button>Delete</button>
3	Daniel	Denson	B.Tech	New Zealand	<button>Update</button> <button>Delete</button>

10) On click of logout it redirects to the login page.

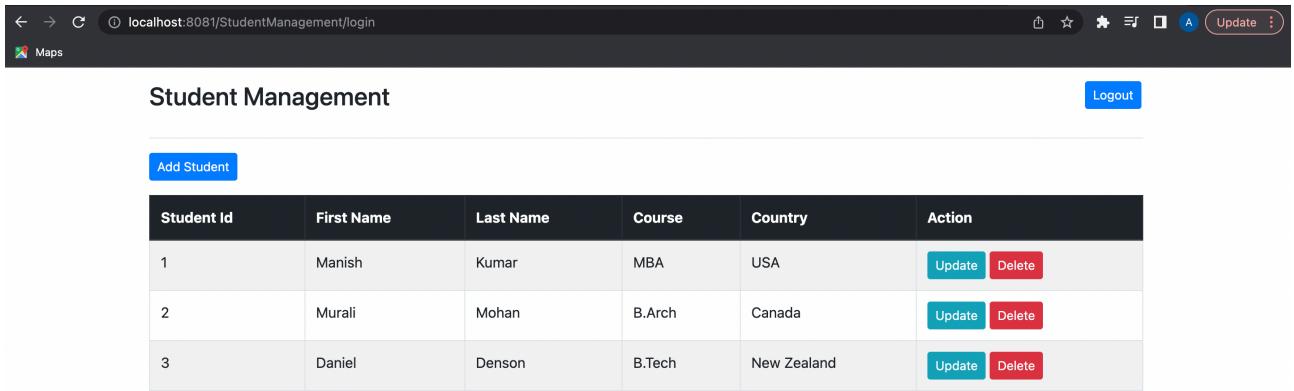
The screenshot shows a web browser window with the URL `localhost:8081/StudentManagement/login`. The page title is "Please sign in". It features two input fields: "Username" and "Password", and a blue "Sign in" button.

11) Login as “USER”



The screenshot shows a login page titled "Please sign in". It has two input fields: one for "USER" and another for a password represented by "...". A blue "Sign in" button is at the bottom.

12) USER can view the list



The screenshot shows a "Student Management" page with a table listing three students. The columns are "Student Id", "First Name", "Last Name", "Course", "Country", and "Action". Each row contains an "Update" and a "Delete" button. The "Action" column is bolded.

Student Id	First Name	Last Name	Course	Country	Action
1	Manish	Kumar	MBA	USA	Update Delete
2	Murali	Mohan	B.Arch	Canada	Update Delete
3	Daniel	Denson	B.Tech	New Zealand	Update Delete

13) USER can add new student record

The screenshot shows a web browser window with the URL `localhost:8081/StudentManagement/students/showFormForAdd`. The page title is "Student Management". The main content is titled "Add Student". It contains four input fields: "First Name" (Deeksha), "Last Name" (Patel), "Course" (Full Stack Development), and "Country" (India). Below the form is a blue "Save" button. At the bottom left is a link "Back to Students List". The browser's address bar and various icons are visible at the top.

First Name:
Deeksha

Last Name:
Patel

Course:
Full Stack Development

Country:
India

Save

[Back to Students List](#)

14) After adding new student, it get displayed in the list

The screenshot shows a web browser window with the URL `localhost:8081/StudentManagement/students/list`. The page title is "Student Management". On the right side, there is a "Logout" button. In the center, there is a table with a header row and five data rows. The table includes columns for Student Id, First Name, Last Name, Course, Country, and Action (with "Update" and "Delete" buttons). The data is as follows:

Student Id	First Name	Last Name	Course	Country	Action
1	Manish	Kumar	MBA	USA	<button>Update</button> <button>Delete</button>
2	Murali	Mohan	B.Arch	Canada	<button>Update</button> <button>Delete</button>
3	Daniel	Denson	B.Tech	New Zealand	<button>Update</button> <button>Delete</button>
5	Deeksha	Patel	Full Stack Development	India	<button>Update</button> <button>Delete</button>

15) USER can add multiple student records as required.

Student Id	First Name	Last Name	Course	Country	Action
1	Manish	Kumar	MBA	USA	<button>Update</button> <button>Delete</button>
2	Murali	Mohan	B.Arch	Canada	<button>Update</button> <button>Delete</button>
3	Daniel	Denson	B.Tech	New Zealand	<button>Update</button> <button>Delete</button>
5	Deeksha	Patel	Full Stack Development	India	<button>Update</button> <button>Delete</button>
6	Harshit	Choudhary	B.E.	India	<button>Update</button> <button>Delete</button>
7	Meenakshi	Shah	B.Com	New Zealand	<button>Update</button> <button>Delete</button>

16) USER cannot update any student record, if USER tries to update then get below error



HTTP Status 403 - Access is denied

Hi USER, you do not have permission to access this page!

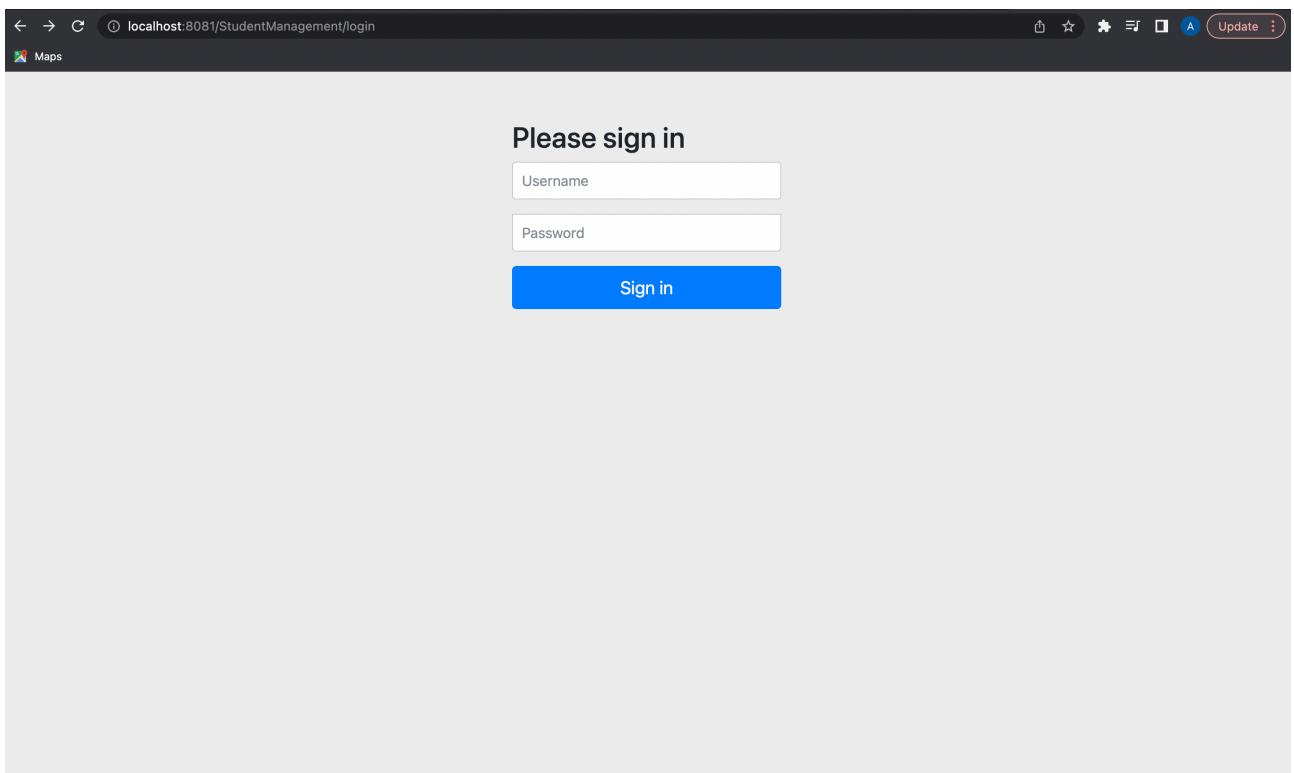
17) USER cannot delete any student record, if USER tries to delete then get below error



HTTP Status 403 - Access is denied

Hi USER, you do not have permission to access this page!

18) On click of logout it redirects to the login page.



19) Created database named “springbootapp” , inserted values into “roles”, “users”, “users_roles” tables by executing below commands in MySQLWorkbench

```

1 •  create database springbootapp;
2 •  use springbootapp;
3 •  insert into roles values(1,"ADMIN");
4 •  insert into roles values(2,"USER");
5
6 •  insert into users values(1,"$2a$12$0n9TDJGcX4dIOxIhsAxudVQBzXqN3VFt59Nrwi0dEbyhdw1","ADMIN");
7 •  insert into users values(2,"$2a$12$20PX6b2CBpVI3fdqbUGBT.1vEA11G02/vM0eMCuV0/mNJAF4CQ3dK","USER");
8
9 •  insert into users_roles values(1,1);
10 • insert into users_roles values(2,2);
11

```

Action Output

Time	Action	Response	Duration / Fetch Time
30 19:20:44	SELECT * FROM springbootapp.student LIMIT 0, 1000	0 row(s) returned	0.0043 sec / 0.00001...

Query Completed

20) SpringBoot application up and running successfully.

application.properties

```

1 server.port=8081
2 spring.jpa.hibernate.ddl-auto:update
3 spring.datasource.url=jdbc:mysql://localhost:3306/springbootapp
4 spring.datasource.username=root

```

Console

```

20:55:10.797 [Thread-0] DEBUG org.springframework.boot.devtools.restart.classloader.RestartClassLoader - Created RestartClassLoader org.springframework.boot.devtools.restart.classloader.RestartClassLoader
:: Spring Boot ::

2022-11-10 20:55:11.520 INFO 53992 --- [ restartedMain] c.g.s.StudentManagementApplication : Starting StudentManagementApplication using Java 17.0.2 on Aakankshas-MacBook-Pro
2022-11-10 20:55:11.521 INFO 53992 --- [ restartedMain] c.g.s.StudentManagementApplication : No active profile set, falling back to default profiles: default
2022-11-10 20:55:11.667 INFO 53992 --- [ restartedMain] e.DevToolsPropertyDefaultsPostProcessor : Devtools property defaults active! Set 'spring.devtools.add-properties' to 'false' to disable
2022-11-10 20:55:11.667 INFO 53992 --- [ restartedMain] s.d.r.c.RepositoryConfigurationDelegate : For additional web related logging consider setting the 'logging.level.web' property
2022-11-10 20:55:12.770 INFO 53992 --- [ restartedMain] s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositories in DEFAULT mode.
2022-11-10 20:55:13.880 INFO 53992 --- [ restartedMain] o.a.p.c.core.StandardService : Finished Spring Data repository scanning in 90 ms. Found 2 JPA repository interfaces.
2022-11-10 20:55:13.880 INFO 53992 --- [ restartedMain] o.a.p.c.core.StandardService : Tomcat initialized with ports: 8081 (http)
2022-11-10 20:55:13.880 INFO 53992 --- [ restartedMain] o.a.p.c.c.ContainerInitializer : Starting service [Tomcat]
2022-11-10 20:55:13.880 INFO 53992 --- [ restartedMain] o.a.p.c.c.ContainerInitializer : Standard Service initialized [Apache Tomcat/9.0.54]
2022-11-10 20:55:13.880 INFO 53992 --- [ restartedMain] o.a.p.c.c.ContainerInitializer : At least one JAR was scanned for TLDs yet contained no TLDs. Enable debug log to see which JARs were scanned.
2022-11-10 20:55:13.880 INFO 53992 --- [ restartedMain] o.a.p.c.c.ContainerInitializer : Initializing Spring embedded WebApplicationContext
2022-11-10 20:55:13.880 INFO 53992 --- [ restartedMain] o.a.p.c.c.ContainerInitializer : Root WebApplicationContext: initialization completed in 2677 ms
2022-11-10 20:55:14.345 INFO 53992 --- [ restartedMain] w.s.c.ServletWebServerApplicationContext : HikariPool-1 - Start completed.
2022-11-10 20:55:14.739 INFO 53992 --- [ restartedMain] o.hibernate.jpa.internal.util.LogHelper : HHH000204: Processing PersistenceUnitInfo [name: default]
2022-11-10 20:55:14.781 INFO 53992 --- [ restartedMain] org.hibernate.Version : HHH000412: Hibernate ORM core version 5.4.32.Final
2022-11-10 20:55:14.901 INFO 53992 --- [ restartedMain] o.hibernate.annotations.common.Version : HCANN000001: Hibernate Commons Annotations (5.1.2.Final)
2022-11-10 20:55:14.990 INFO 53992 --- [ restartedMain] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Starting...
2022-11-10 20:55:15.473 INFO 53992 --- [ restartedMain] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Start completed.
2022-11-10 20:55:15.508 INFO 53992 --- [ restartedMain] org.hibernate.dialect.Dialect : HHH000400: Using dialect: org.hibernate.dialect.MySQL8Dialect
2022-11-10 20:55:15.508 INFO 53992 --- [ restartedMain] org.hibernate.engine.transaction.TransactionFactory : HHH000409: Using JtaPlatform implementation: [org.hibernate.engine.transaction.jta.platform.internal.JtaPlatform]
2022-11-10 20:55:16.450 INFO 53992 --- [ restartedMain] o.s.s.web.DefaultSecurityFilterChain : Initialized JPA EntityManagerFactory for persistence unit 'default'
2022-11-10 20:55:17.014 WARN 53992 --- [ restartedMain] o.p.b.c.EntityManagerFactoryBean : spring.jpa.open-in-view is enabled by default. Therefore, database queries may be performed during a view's lifecycle. Use spring.jpa.open-in-view="false" to disallow this behavior.
2022-11-10 20:55:18.042 INFO 53992 --- [ restartedMain] o.s.s.web.DefaultSecurityFilterChain : Will secure open any request with [org.springframework.security.web.context.request.async.WebAsyncManager].
2022-11-10 20:55:18.118 INFO 53992 --- [ restartedMain] o.s.b.d.a.OptionalAutoReloadServer : LiveReload server is running on port 35729.
2022-11-10 20:55:18.173 INFO 53992 --- [ restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8081 (http) with context path '/StudentManagement'
2022-11-10 20:55:18.191 INFO 53992 --- [ restartedMain] c.g.s.StudentManagementApplication : Started StudentManagementApplication in 7.378 seconds (JVM running for 8.17)

```