

Metrodata Academy SIBKM DevSecOps Task 4: MySQL Connector

Objective

- Establish a connection between the Spring Boot application in the Product-Service repository and a MySQL database.
- Push the modified application to a new branch within the repository.

Solution

1. Project Setup

1. Configure Git:

```
git config --global user.name "<Your Name>"
git config --global user.email "<Your Email>"
echo "export GITHUB_TOKEN=<Your Access Token>" >> ~/.bashrc
source ~/.bashrc
```

2. Clone the Repository:

```
git clone <Repository URL>
```

3. Create a new branch.

```
cd product-service
git checkout -b lareza-farhan-wanaghi
```

2. Test the Application

1. Edit the `pom.xml` file:

```
nano pom.xml
```

Uncomment the MySQL and JPA dependencies to enable them (since the dependencies are previously commented):

```
<dependency>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-starter-data-jpa</artifactId>
</dependency>
<dependency>
  <groupId>com.mysql</groupId>
  <artifactId>mysql-connector-j</artifactId>
```

```
<scope>runtime</scope>
</dependency>
```

2. Run the application:

```
bash mvnw spring-boot:run
```

You may encounter an error similar to this:

```
2023-09-07 11:44:41.763 ERROR 44136 --- [ restartedMain] o.s.b.d.LoggingFailureAnalysisReporter :
*****
APPLICATION FAILED TO START
*****

Description:

Failed to configure a DataSource: 'url' attribute is not specified and no embedded datasource could be configured.

Reason: Failed to determine a suitable driver class

Action:

Consider the following:
    If you want an embedded database (H2, HSQL or Derby), please put it on the classpath.
    If you have database settings to be loaded from a particular profile you may need to activate it (no profiles are currently active).
```

This error occurs due to the lack of configurations declared for the database connection.

3. Solve the Problem

1. Edit the `application.yaml` file to configure the database connection:

```
nano src/main/resources/application.yaml
```

Add the following lines (assuming all provided information is correct):

```
spring:
  datasource:
    url: jdbc:mysql://localhost:3306/product_service
    username: user1
    password: 123456
```

4. Verify the Solution

1. Run the application:

```
bash mvnw spring-boot:run
```

You should see the application running successfully now.

```
l
2023-09-07 11:56:24.623 INFO 49381 --- [ restartedMain] o.hibernate.annotations.common.Version : HCANN000001: Hibernate Commons Annotations {5.1.2}
2023-09-07 11:56:24.765 INFO 49381 --- [ restartedMain] org.hibernate.dialect.Dialect : HHH000400: Using dialect: org.hibernate.dialect.MySQL8Dialect
2023-09-07 11:56:24.863 INFO 49381 --- [ restartedMain] o.h.e.t.j.p.i.JtaPlatformInitiator : HHH000490: Using JtaPlatform implementation: [org.hibernate.engine.transaction.jta.platform.internal.NoJtaPlatform]
2023-09-07 11:56:24.869 INFO 49381 --- [ restartedMain] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2023-09-07 11:56:24.926 WARN 49381 --- [ restartedMain] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database queries may be performed during view rendering. Explicitly configure spring.jpa.open-in-view to disable this warning
2023-09-07 11:56:25.122 INFO 49381 --- [ restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload server is running on port 35729
2023-09-07 11:56:25.165 INFO 49381 --- [ restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8080 (http) with context path ''
2023-09-07 11:56:25.176 INFO 49381 --- [ restartedMain] c.m.p.ProductServiceApplication : Started ProductServiceApplication in 2.807 seconds (JVM running for 3.196s)
2023-09-07 11:56:32.258 INFO 49381 --- [nio-8080-exec-1] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring DispatcherServlet 'dispatcherServlet'
2023-09-07 11:56:32.258 INFO 49381 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet : Initializing Servlet 'dispatcherServlet'
2023-09-07 11:56:32.259 INFO 49381 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet : Completed initialization in 1 ms
[]
```

2. Visit the application in your web browser.

A rendered webpage should appear, indicating that the application is running.



5. Push the Solution.

1. Push the solution

```
git add .
git commit -m "Adding configurations for establishing the database
connection"
git push -u origin lareza-farhan-wanaghi
```