

SHUBHAM KUMAWAT – Hibernate assignment

Hibernate example project using Maven, MySQL

Database Setup

- Open your MySQL client and create the database and table

```
CREATE DATABASE my_hibernate_example;  
USE my_hibernate_example;  
CREATE TABLE employee (  
    id INT PRIMARY KEY AUTO_INCREMENT,  
    name VARCHAR(50),  
    salary DOUBLE  
);
```

Project Structure

- Create a Maven project

```
my-hibernate-example/  
|  
├─ pom.xml  
├─ src  
|   └─ main  
|       └─ java  
|           └─ com  
|               └─ myexample  
|                   └─ Employee.java  
|                   └─ MainApp.java  
|       └─ resources  
|           └─ Employee.hbm.xml  
|           └─ hibernate.cfg.xml
```

1. Create a Persistent Class

Create the Employee class in src/main/java/com/myexample/Employee.java:

```
package com.myexample;

public class Employee {
    private int id;
    private String name;
    private double salary;

    public Employee() {}

    public Employee(String name, double salary) {
        this.name = name;
        this.salary = salary;
    }

    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }
}
```

```
    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public double getSalary() {
        return salary;
    }

    public void setSalary(double salary) {
        this.salary = salary;
    }
}
```

2. Create the Mapping File for the Persistent Class

Create the Employee.hbm.xml file in src/main/resources/Employee.hbm.xml:

```
<!DOCTYPE hibernate-mapping PUBLIC "-//Hibernate/Hibernate Mapping DTD//EN"
"http://hibernate.sourceforge.net/hibernate-mapping-3.0.dtd">
<hibernate-mapping>
  <class name="com.myexample.Employee" table="employee">
    <id name="id" column="id">
      <generator class="native"/>
    </id>
    <property name="name" column="name"/>
    <property name="salary" column="salary"/>
  </class>
</hibernate-mapping>
```

3. Create the Hibernate Configuration File

Create the hibernate.cfg.xml file in src/main/resources/hibernate.cfg.xml:

```
<!DOCTYPE hibernate-configuration PUBLIC "-//Hibernate/Hibernate Configuration DTD//EN"
"http://hibernate.sourceforge.net/hibernate-configuration-3.0.dtd">
<hibernate-configuration>
  <session-factory>
    <property name="hibernate.dialect">org.hibernate.dialect.MySQLDialect</property>
    <property name="hibernate.connection.driver_class">com.mysql.cj.jdbc.Driver</property>
    <property name="hibernate.connection.url">jdbc:mysql://localhost:3306/my_hibernate_examp</property>
    <property name="hibernate.connection.username">root</property>
    <property name="hibernate.connection.password">password</property>
    <property name="hibernate.hbm2ddl.auto">update</property>
    <mapping resource="Employee.hbm.xml"/>
  </session-factory>
</hibernate-configuration>
```

4. Create the Main Application Class

Create the MainApp class in src/main/java/com/myexample/MainApp.java:

```
package com.myexample;

import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.Transaction;
import org.hibernate.cfg.Configuration;

public class MainApp {
    public static void main(String[] args) {
        SessionFactory factory = new Configuration().configure().buildSessionFactory();
        Session session = factory.openSession();
        Transaction tx = session.beginTransaction();

        Employee emp = new Employee("Jane Doe", 45000);
        session.save(emp);

        tx.commit();
        session.close();
    }
}
```

5. Configure Maven Dependencies

Create the pom.xml file in the root of your project:

```
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0"
    >
    <modelVersion>4.0.0</modelVersion>
    <groupId>com.myexample</groupId>
    <artifactId>my-hibernate-example</artifactId>
    <version>1.0-SNAPSHOT</version>
    <dependencies>
        <dependency>
            <groupId>org.hibernate</groupId>
            <artifactId>hibernate-core</artifactId>
            <version>5.4.32.Final</version>
        </dependency>
        <dependency>
```

```
</dependency>
<dependency>
  <groupId>mysql</groupId>
  <artifactId>mysql-connector-java</artifactId>
  <version>8.0.25</version>
</dependency>
</dependencies>
</project>
```

6. Run the Application

1. `cd path/to/your/project/my-hibernate-example`
2. `mvn compile`
3. `mvn exec:java -Dexec.mainClass="com.myexample.MainApp"`