Java Hibernate - CRUD Operation - Update

Package :->   org.studyeasy
Class   :->   App
Source Code :-

1. SessionFactory

```java
//Session Factory
SessionFactory factory = new Configuration()
                        .configure("hibernate.cfg.xml")
                        .addAnnotatedClass(Users.class)
                        .buildSessionFactory();
```

2. Session

```java
//Session
Session session = factory.getCurrentSession();
```

3. Close the session

```java
//Close the session
try {
//Create Object of Entity Class Type
Users user = new Users();
//Start Transaction
session.beginTransaction();
//Perform operation
user = session.get(Users.class, 2);
//One line change for the update operation
user.setPassword("8981");
//Commit Transaction
session.getTransaction().commit();
System.out.println(user);

}finally {
session.close();
factory.close();
}
```

Full Source Code:

```java
package org.studyeasy;

import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
import org.studyeasy.entity.Users;

public class App {
package org.studyeasy;

import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
import org.studyeasy.entity.Users;

public class App {

    public static void main(String[] args) {
        //Session Factory
        SessionFactory factory = new Configuration()
                .configure("hibernate.cfg.xml")
                .addAnnotatedClass(Users.class)
                .buildSessionFactory();

        //Session
        Session session = factory.getCurrentSession();

        //Close the session
        try {
            //Create Object of Entity Class Type
            Users user = new Users();

            //Start Transaction
            session.beginTransaction();

            //Perform operation
            user = session.get(Users.class, 4);

            //One line change for the update operation
            user.setPassword("8981");

            //Commit Transaction
            session.getTransaction().commit();
            System.out.println(user);

        }finally {
            session.close();
            factory.close();
        }
    }
}
```

THIS IS THE FINAL CODE (App.java) FOR THE CRUD OPERATION WITH THE DEPENDANCIES

App.java

```java
package org.studyeasy;

import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
import org.studyeasy.entity.Users;

public class App {

    public static void main(String[] args) {
        //Session Factory
        SessionFactory factory = new Configuration()
                .configure("hibernate.cfg.xml")
                .addAnnotatedClass(Users.class)
                .buildSessionFactory();

        //Session
        Session session = factory.getCurrentSession();

        //Close the session
        try {
            //Create Object of Entity Class Type
            Users user = new Users();

            //Start Transaction
            session.beginTransaction();

            //Perform operation
            user = session.get(Users.class, 4);

            //One line change for the update operation
            user.setPassword("8981");

            //Commit Transaction
            session.getTransaction().commit();
            System.out.println(user);

        }finally {
            session.close();
            factory.close();
        }}}
```

Hibernate.cfg.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>

<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
<modelVersion>4.0.0</modelVersion>

<groupId>org.studyeasy</groupId>
<artifactId>H03_HIBERNATE_CrudOperationCreate</artifactId>
<version>0.0.1-SNAPSHOT</version>
<packaging>war</packaging>

<name>H03_HIBERNATE_CrudOperationCreate Maven Webapp</name>
<!-- FIXME change it to the project's website -->
<url>http://www.example.com</url>

<properties>
<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
<maven.compiler.source>1.7</maven.compiler.source>
<maven.compiler.target>1.7</maven.compiler.target>
</properties>

<dependencies>

<dependency>
<groupId>junit</groupId>
<artifactId>junit</artifactId>
<version>4.11</version>
<scope>test</scope>
</dependency>

<dependency>
<groupId>javax.servlet</groupId>
<artifactId>servlet-api</artifactId>
<version>2.5</version>
<scope>provided</scope>
</dependency>

<!--
https://mvnrepository.com/artifact/jakarta.servlet/jakarta.servlet-api -->
<dependency>
<groupId>jakarta.servlet</groupId>
<artifactId>jakarta.servlet-api</artifactId>
<version>5.0.0</version>
<scope>provided</scope>
</dependency>
```

```xml
<!-- https://mvnrepository.com/artifact/mysql/mysql-connector-java -->
<dependency>
<groupId>mysql</groupId>
<artifactId>mysql-connector-java</artifactId>
<version>8.0.33</version>
</dependency>

<!--
https://mvnrepository.com/artifact/jakarta.servlet.jsp/jakarta.servlet.jsp-
api -->
<dependency>
<groupId>jakarta.servlet.jsp</groupId>
<artifactId>jakarta.servlet.jsp-api</artifactId>
<version>3.1.0</version>
<scope>provided</scope>
</dependency>

<!--
https://mvnrepository.com/artifact/jakarta.servlet.jsp/jakarta.servlet.jsp-
api -->
<dependency>
<groupId>jakarta.servlet.jsp</groupId>
<artifactId>jakarta.servlet.jsp-api</artifactId>
<version>3.1.0</version>
<scope>provided</scope>
</dependency>

<!-- https://mvnrepository.com/artifact/org.hibernate.orm/hibernate-core -->
<dependency>
<groupId>org.hibernate.orm</groupId>
<artifactId>hibernate-core</artifactId>
<version>6.4.4.Final</version>
</dependency>
</dependencies>

<build>
<finalName>H03_HIBERNATE_CrudOperationCreate</finalName>
<pluginManagement><!-- lock down plugins versions to avoid using Maven
defaults (may be moved to parent pom) -->
<plugins>
<plugin>
<artifactId>maven-clean-plugin</artifactId>
<version>3.1.0</version>
</plugin>
<!-- see
http://maven.apache.org/ref/current/maven-core/default-bindings.html#Plugin
_bindings_for_war_packaging -->
<plugin>
<artifactId>maven-resources-plugin</artifactId>
<version>3.0.2</version>
</plugin>
<plugin>
<artifactId>maven-compiler-plugin</artifactId>
<version>3.8.0</version>
</plugin>
<plugin>
<artifactId>maven-surefire-plugin</artifactId>
```

```xml
<version>2.22.1</version>
</plugin>
<plugin>
<artifactId>maven-war-plugin</artifactId>
<version>3.2.2</version>
</plugin>
<plugin>
<artifactId>maven-install-plugin</artifactId>
<version>2.5.2</version>
</plugin>
<plugin>
<artifactId>maven-deploy-plugin</artifactId>
<version>2.8.2</version>
</plugin>
</plugins>
</pluginManagement>
</build>
</project>
```

Dependancies to be installed

```xml
<dependency>
<groupId>javax.servlet</groupId>
<artifactId>servlet-api</artifactId>
<version>2.5</version>
<scope>provided</scope>
</dependency>

<!--
https://mvnrepository.com/artifact/jakarta.servlet/jakarta.servlet-api -->
<dependency>
<groupId>jakarta.servlet</groupId>
<artifactId>jakarta.servlet-api</artifactId>
<version>5.0.0</version>
<scope>provided</scope>
</dependency>

<!-- https://mvnrepository.com/artifact/mysql/mysql-connector-java -->
<dependency>
<groupId>mysql</groupId>
<artifactId>mysql-connector-java</artifactId>
<version>8.0.33</version>
</dependency>

<!--
https://mvnrepository.com/artifact/jakarta.servlet.jsp/jakarta.servlet.jsp-
api -->
<dependency>
<groupId>jakarta.servlet.jsp</groupId>
<artifactId>jakarta.servlet.jsp-api</artifactId>
<version>3.1.0</version>
<scope>provided</scope>
</dependency>
```
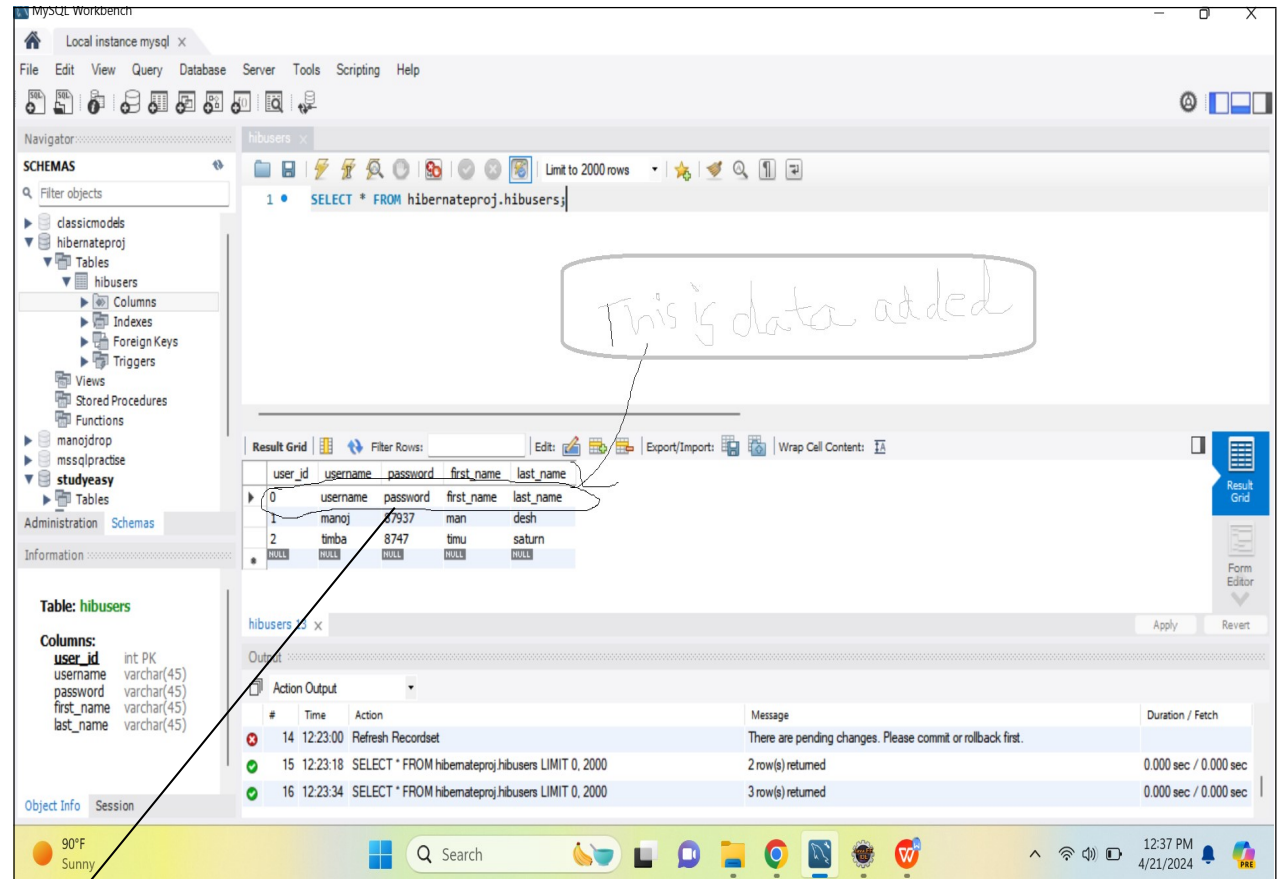
```xml
<!-- https://mvnrepository.com/artifact/org.hibernate.orm/hibernate-core -->
<dependency>
<groupId>org.hibernate.orm</groupId>
<artifactId>hibernate-core</artifactId>
<version>6.4.4.Final</version>
</dependency>
</dependencies>
```

Log Report looks like below

```
Apr 21, 2024 3:22:46 PM org.hibernate.Version logVersion
INFO: HHH000412: Hibernate ORM core version 6.4.4.Final
Apr 21, 2024 3:22:47 PM org.hibernate.cache.internal.RegionFactoryInitiator initiateService
INFO: HHH000026: Second-level cache disabled
Apr 21, 2024 3:22:47 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl configure
WARN: HHH10001002: Using built-in connection pool (not intended for production use)
Loading class `com.mysql.jdbc.Driver`. This is deprecated. The new driver class is
`com.mysql.cj.jdbc.Driver`. The driver is automatically registered via the SPI and manual loading
of the driver class is generally unnecessary.
Apr 21, 2024 3:22:47 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl
buildCreator
INFO: HHH10001005: Loaded JDBC driver class: com.mysql.jdbc.Driver
Apr 21, 2024 3:22:47 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl
buildCreator
INFO: HHH10001012: Connecting with JDBC URL [jdbc:mysql://localhost:3306/hibernateproj]
Apr 21, 2024 3:22:47 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl
buildCreator
INFO: HHH10001001: Connection properties: {password=****, user=root}
Apr 21, 2024 3:22:47 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl
buildCreator
INFO: HHH10001003: Autocommit mode: false
Apr 21, 2024 3:22:47 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl$PooledConne
ctions <init>
INFO: HHH10001115: Connection pool size: 20 (min=1)
Apr 21, 2024 3:22:47 PM org.hibernate.engine.jdbc.dialect.internal.DialectFactoryImpl
constructDialect
WARN: HHH90000025: MySQLDialect does not need to be specified explicitly using 'hibernate.dialect'
(remove the property setting and it will be selected by default)
Hibernate: select u1_0.user_id,u1_0.first_name,u1_0.last_name,u1_0.password,u1_0.username from
hibusers u1_0 where u1_0.user_id=?
Hibernate: update hibusers set first_name=?,last_name=?,password=?,username=? where user_id=?
Users [userId=4, username=ash, password=8981, firstname=ketchum, lastname=triloki]
Apr 21, 2024 3:22:49 PM
org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl$PoolState
stop
INFO: HHH10001008: Cleaning up connection pool [jdbc:mysql://localhost:3306/hibernateproj]
```

Final Output in MYSQL Database

You will get error if you try to execute or run App.java again.

You have dependencies for both Hibernate Core and Hibernate EntityManager.

Since Hibernate EntityManager is part of Hibernate Core in version 5 and later, you typically don't need to include both dependencies explicitly.

However, it's harmless to have both included.