**Hibernate Project – 1**

**pom.xml**

<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>com.hibernate.ex1</groupId>

<artifactId>HibernateProject1</artifactId>

<version>0.0.1-SNAPSHOT</version>

<packaging>jar</packaging>

<name>HibernateProject1</name>

<url>http://maven.apache.org</url>

<properties>

<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>

</properties>

<dependencies>

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>3.8.1</version>

<scope>test</scope>

</dependency>

<!-- https://mvnrepository.com/artifact/org.hibernate/hibernate-core -->

<dependency>

<groupId>org.hibernate</groupId>

<artifactId>hibernate-core</artifactId>

<version>5.6.15.Final</version>

</dependency>

<!-- https://mvnrepository.com/artifact/mysql/mysql-connector-java -->

<dependency>

<groupId>mysql</groupId>

<artifactId>mysql-connector-java</artifactId>

<version>8.0.28</version>

</dependency>

</dependencies>

</project>

**hibernate.cfg.xml**

<!DOCTYPE hibernate-configuration PUBLIC

"-//Hibernate/Hibernate Configuration DTD 3.0//EN"

"http://www.hibernate.org/dtd/hibernate-configuration-3.0.dtd">

<hibernate-configuration>

<session-factory>

<property name=*"hibernate.connection.driver\_class"*>com.mysql.cj.jdbc.Driver</property>

<property name=*"hibernate.connection.url"*>jdbc:mysql://localhost:3306/jdbc\_database</property>

<property name=*"hibernate.connection.username"*>root</property>

<property name=*"hibernate.connection.password"*>KODNEST123</property>

<property name=*"hibernate.dialect"*>org.hibernate.dialect.MySQL5Dialect</property>

<property name=*"hibernate.show\_sql"*>true</property>

<property name=*"hibernate.hbm2ddl.auto"*>create</property>

<mapping class=*"com.hibernate.ex1.HibernateProject1.Student"*/>

</session-factory>

</hibernate-configuration>

**Student.java**

**package** com.hibernate.ex1.HibernateProject1;

**import** javax.persistence.Entity;

**import** javax.persistence.Id;

@Entity

**public** **class** Student

{

@Id

**int** rollNo;

String name;

**int** age;

**public** Student()

{

}

**public** Student(**int** rollNo, String name, **int** age) {

**this**.rollNo = rollNo;

**this**.name = name;

**this**.age = age;

}

**public** **int** getRollNo() {

**return** rollNo;

}

**public** **void** setRollNo(**int** rollNo) {

**this**.rollNo = rollNo;

}

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

**public** **int** getAge() {

**return** age;

}

**public** **void** setAge(**int** age) {

**this**.age = age;

}

}

**App.java**

**package** com.hibernate.ex1.HibernateProject1;

**import** org.hibernate.Session;

**import** org.hibernate.SessionFactory;

**import** org.hibernate.Transaction;

**import** org.hibernate.cfg.Configuration;

**public** **class** App {

**public** **static** **void** main(String[] args) {

Configuration cfg = **new** Configuration();

cfg.configure();

SessionFactory factory = cfg.buildSessionFactory();

Session session = factory.openSession();

Transaction trans = session.beginTransaction();

Student st = **new** Student(12, "Amit" , 29);

session.save(st);

trans.commit();

System.***out***.println("Student object is saved");

}

}

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**Hibernate Project – 2 (One to One Mapping)**

**pom.xml**

<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>com.hibernate.ex1</groupId>

<artifactId>HibernateProject1</artifactId>

<version>0.0.1-SNAPSHOT</version>

<packaging>jar</packaging>

<name>HibernateProject1</name>

<url>http://maven.apache.org</url>

<properties>

<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>

</properties>

<dependencies>

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>3.8.1</version>

<scope>test</scope>

</dependency>

<!-- https://mvnrepository.com/artifact/org.hibernate/hibernate-core -->

<dependency>

<groupId>org.hibernate</groupId>

<artifactId>hibernate-core</artifactId>

<version>5.6.15.Final</version>

</dependency>

<!-- https://mvnrepository.com/artifact/mysql/mysql-connector-java -->

<dependency>

<groupId>mysql</groupId>

<artifactId>mysql-connector-java</artifactId>

<version>8.0.28</version>

</dependency>

</dependencies>

</project>

**hibernate.cfg.xml**

<!DOCTYPE hibernate-configuration PUBLIC

"-//Hibernate/Hibernate Configuration DTD 3.0//EN"

"<http://www.hibernate.org/dtd/hibernate-configuration-3.0.dtd>">

<hibernate-configuration>

<session-factory>

<property name=*"hibernate.connection.driver\_class"*>com.mysql.cj.jdbc.Driver</property>

<property name=*"hibernate.connection.url"*>jdbc:mysql://localhost:3306/jdbc\_database</property>

<property name=*"hibernate.connection.username"*>root</property>

<property name=*"hibernate.connection.password"*>KODNEST123</property>

<property name=*"hibernate.dialect"*>org.hibernate.dialect.MySQL5Dialect</property>

<property name=*"hibernate.show\_sql"*>true</property>

<property name=*"hibernate.hbm2ddl.auto"*>create</property>

<mapping class=*"com.hibernate.ex1.HibernateProject1.Student"*/>

<mapping class=*"com.hibernate.ex1.HibernateProject1.Bike"*/>

</session-factory>

</hibernate-configuration>

**Student.java**

package com.hibernate.ex1.HibernateProject1;

import javax.persistence.Entity;

import javax.persistence.Id;

import javax.persistence.OneToOne;

@Entity

public class Student

{

@Id

int rollNo;

String name;

int age;

@OneToOne

Bike bike;

public Student()

{

}

public Student(int rollNo, String name, int age, Bike bike) {

super();

this.rollNo = rollNo;

this.name = name;

this.age = age;

this.bike = bike;

}

public int getRollNo() {

return rollNo;

}

public void setRollNo(int rollNo) {

this.rollNo = rollNo;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public int getAge() {

return age;

}

public void setAge(int age) {

this.age = age;

}

public Bike getBike() {

return bike;

}

public void setBike(Bike bike) {

this.bike = bike;

}

}

**Bike.java**

package com.hibernate.ex1.HibernateProject1;

import javax.persistence.Entity;

import javax.persistence.Id;

import javax.persistence.OneToOne;

@Entity

public class Bike

{

@Id

int bikeId;

String brand;

String color;

@OneToOne

Student st;

public Bike() {

super();

// TODO Auto-generated constructor stub

}

public Bike(int bikeId, String brand, String color, Student st) {

super();

this.bikeId = bikeId;

this.brand = brand;

this.color = color;

this.st = st;

}

public int getBikeId() {

return bikeId;

}

public void setBikeId(int bikeId) {

this.bikeId = bikeId;

}

public String getBrand() {

return brand;

}

public void setBrand(String brand) {

this.brand = brand;

}

public String getColor() {

return color;

}

public void setColor(String color) {

this.color = color;

}

public Student getSt() {

return st;

}

public void setSt(Student st) {

this.st = st;

}

}

**App.java**

package com.hibernate.ex1.HibernateProject1;

import org.hibernate.Session;

import org.hibernate.SessionFactory;

import org.hibernate.Transaction;

import org.hibernate.cfg.Configuration;

public class App {

public static void main(String[] args) {

//Creating the objects of Bike class

Bike bk1 = new Bike();

Bike bk2 = new Bike();

Bike bk3 = new Bike();

//Creating the objects of Student class

Student st1 = new Student(11, "Ajay" , 24, bk1);

Student st2 = new Student(12, "Amit" , 25 , bk2);

Student st3 = new Student(13, "Anuj" , 23 , bk3);

bk1.setBikeId(1);

bk1.setBrand("Hero");

bk1.setColor("Black");

bk1.setSt(st1);

bk2.setBikeId(2);

bk2.setBrand("KTM");

bk2.setColor("Red");

bk2.setSt(st2);

bk3.setBikeId(3);

bk3.setBrand("Honda");

bk3.setColor("Blue");

bk3.setSt(st3);

Configuration cfg = new Configuration().configure();

SessionFactory factory = cfg.buildSessionFactory();

Session session = factory.openSession();

Transaction trans = session.beginTransaction();

//Saving the student objects

session.save(st1);

session.save(st2);

session.save(st3);

//saving the bike objects

session.save(bk1);

session.save(bk2);

session.save(bk3);

trans.commit();

System.out.println("Objects are saved");

}

}

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**Hibernate Project – 3 (One to Many / Many to One Mapping)**

**pom.xml**

<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>com.hibernate.ex1</groupId>

<artifactId>HibernateProject1</artifactId>

<version>0.0.1-SNAPSHOT</version>

<packaging>jar</packaging>

<name>HibernateProject1</name>

<url>http://maven.apache.org</url>

<properties>

<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>

</properties>

<dependencies>

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>3.8.1</version>

<scope>test</scope>

</dependency>

<!-- https://mvnrepository.com/artifact/org.hibernate/hibernate-core -->

<dependency>

<groupId>org.hibernate</groupId>

<artifactId>hibernate-core</artifactId>

<version>5.6.15.Final</version>

</dependency>

<!-- https://mvnrepository.com/artifact/mysql/mysql-connector-java -->

<dependency>

<groupId>mysql</groupId>

<artifactId>mysql-connector-java</artifactId>

<version>8.0.28</version>

</dependency>

</dependencies>

</project>

**hibernate.cfg.xml**

<!DOCTYPE hibernate-configuration PUBLIC

"-//Hibernate/Hibernate Configuration DTD 3.0//EN"

"<http://www.hibernate.org/dtd/hibernate-configuration-3.0.dtd>">

<hibernate-configuration>

<session-factory>

<property name=*"hibernate.connection.driver\_class"*>com.mysql.cj.jdbc.Driver</property>

<property name=*"hibernate.connection.url"*>jdbc:mysql://localhost:3306/jdbc\_database</property>

<property name=*"hibernate.connection.username"*>root</property>

<property name=*"hibernate.connection.password"*>KODNEST123</property>

<property name=*"hibernate.dialect"*>org.hibernate.dialect.MySQL5Dialect</property>

<property name=*"hibernate.show\_sql"*>true</property>

<property name=*"hibernate.hbm2ddl.auto"*>create</property>

<mapping class=*"com.hibernate.OTM.HiberOTM.Customer"*/>

<mapping class=*"com.hibernate.OTM.HiberOTM.Product"*/>

</session-factory>

</hibernate-configuration>

**Product.java**

package com.hibernate.OTM.HiberOTM;

import javax.persistence.Entity;

import javax.persistence.Id;

import javax.persistence.ManyToOne;

@Entity

public class Product

{

@Id

int p\_id;

String p\_name;

int p\_cost;

@ManyToOne

Customer cust;

public Product() {

super();

// TODO Auto-generated constructor stub

}

public Product(int p\_id, String p\_name, int p\_cost, Customer cust) {

super();

this.p\_id = p\_id;

this.p\_name = p\_name;

this.p\_cost = p\_cost;

this.cust = cust;

}

public int getP\_id() {

return p\_id;

}

public void setP\_id(int p\_id) {

this.p\_id = p\_id;

}

public String getP\_name() {

return p\_name;

}

public void setP\_name(String p\_name) {

this.p\_name = p\_name;

}

public int getP\_cost() {

return p\_cost;

}

public void setP\_cost(int p\_cost) {

this.p\_cost = p\_cost;

}

public Customer getCust() {

return cust;

}

public void setCust(Customer cust) {

this.cust = cust;

}

}

Customer.java

**package com.hibernate.OTM.HiberOTM;**

**import java.util.List;**

**import javax.persistence.Entity;**

**import javax.persistence.Id;**

**import javax.persistence.OneToMany;**

**@Entity**

**public class Customer**

**{**

**@Id**

**int cust\_id;**

**String cust\_name;**

**int cust\_age;**

**@OneToMany**

**List<Product> product;**

**public Customer() {**

**super();**

**// TODO Auto-generated constructor stub**

**}**

**public Customer(int cust\_id, String cust\_name, int cust\_age, List<Product> product) {**

**super();**

**this.cust\_id = cust\_id;**

**this.cust\_name = cust\_name;**

**this.cust\_age = cust\_age;**

**this.product = product;**

**}**

**public int getCust\_id() {**

**return cust\_id;**

**}**

**public void setCust\_id(int cust\_id) {**

**this.cust\_id = cust\_id;**

**}**

**public String getCust\_name() {**

**return cust\_name;**

**}**

**public void setCust\_name(String cust\_name) {**

**this.cust\_name = cust\_name;**

**}**

**public int getCust\_age() {**

**return cust\_age;**

**}**

**public void setCust\_age(int cust\_age) {**

**this.cust\_age = cust\_age;**

**}**

**public List<Product> getProduct() {**

**return product;**

**}**

**public void setProduct(List<Product> product) {**

**this.product = product;**

**}**

**}**

**App.java**

package com.hibernate.OTM.HiberOTM;

import java.util.\*;

import org.hibernate.Session;

import org.hibernate.SessionFactory;

import org.hibernate.Transaction;

import org.hibernate.cfg.Configuration;

public class App

{

public static void main( String[] args )

{

Product p1 = new Product();

Product p2 = new Product();

Product p3 = new Product();

Product p4 = new Product();

List<Product> list1 = new ArrayList<Product>();

List<Product> list2 = new ArrayList<Product>();

list1.add(p1);

list1.add(p2);

list2.add(p3);

list2.add(p4);

Customer c1 = new Customer(11,"Ajay",23,list1);

Customer c2 = new Customer(12,"Amit",24,list2);

p1.setP\_id(1111);

p1.setP\_name("Watch");

p1.setP\_cost(4500);

p1.setCust(c1);

p2.setP\_id(2222);

p2.setP\_name("Mobile");

p2.setP\_cost(25000);

p2.setCust(c1);

p3.setP\_id(3333);

p3.setP\_name("Laptop");

p3.setP\_cost(85000);

p3.setCust(c2);

p4.setP\_id(4444);

p4.setP\_name("Bike");

p4.setP\_cost(120000);

p4.setCust(c2);

Configuration cfg = new Configuration().configure();

SessionFactory factory = cfg.buildSessionFactory();

Session session = factory.openSession();

Transaction trans = session.beginTransaction();

session.save(c1);

session.save(c2);

session.save(p1);

session.save(p2);

session.save(p3);

session.save(p4);

trans.commit();

System.out.println("Objects are saved");

}

}