# Name\_ Sangharsh Sitaram Narwade Mob No 8308407924

#### **One To One Mapping Program**

#### 1)Professor.class

```
package com.demo;
import javax.persistence.CascadeType;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.ld;
import javax.persistence.OneToOne;
@Entity
public class Professor {
@Id
@@GeneratedValue
private int id;
@Column(name = "Professor_Name")
private String name;
@OneToOne(targetEntity = Subject.class,cascade = CascadeType.ALL,orphanRemoval = true)
private Subject subject;
public Subject getSubject() {
return subject;
}
public void setSubject(Subject subject) {
this.subject = subject;
```

```
}
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;
}
}
2)Subject.class
package com.demo;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.ld;
@Entity
public class Subject {
@ld
@GeneratedValue
private int id;
```

```
private String subjectName;
public int getId() {
  return id;
}
public void setId(int id) {
  this.id = id;
}
public String getSubjectName() {
  return subjectName;
}
public void setSubjectName(String subjectName) {
  this.subjectName = subjectName;
}
}
```

## 3)School.main.class

```
package com.demo;
import org.hibernate.Session;
import org.hibernate.Transaction;
import org.hibernate.cfg.Configuration;
public class School {
 public static void main(String[] args) {
  Configuration cfg=new Configuration().configure("hibernate.cfg.xml");
  Session session=cfg.buildSessionFactory().openSession();
  Transaction txn=session.beginTransaction();
```

```
Professor p=new Professor();
p.setName("sangharsh");
Subject s=new Subject();
s.setSubjectName("java");
p.setSubject(s);
session.save(p);
session.save(s);
txn.commit();
System.out.println("success");
session.close();
}
}
```

## 4)hibernate.cfg.xml

```
<property name = "hibernate.connection.password"></property>
<property name="show_sql">True</property>
<!-- List of XML mapping files -->
<mapping class="com.demo.Professor"/>
<mapping class="com.demo.Subject"/>
</session-factory>
</hibernate-configuration>
```

#### **Output**

# Name \_Sangharsh Sitaram Narwade Mob No 8308407924

## **Hibernate Many to One Mapping Program**

## 1)EmpDetails.class

```
package com.app.model;
import javax.persistence.CascadeType;
import javax.persistence.Entity;
import javax.persistence.FetchType;
import javax.persistence.ld;
import javax.persistence.JoinColumn;
import javax.persistence.ManyToOne;
@Entity
public class EmpDetails {
@ld
private int eNo;
public EmpDetails(int eNo, String eName, long salary, Department department) {
super();
this.eNo = eNo;
this.eName = eName;
this.salary = salary;
this.department = department;
public int geteNo() {
return eNo;
public void seteNo(int eNo) {
this.eNo = eNo;
public String geteName() {
return eName;
public void seteName(String eName) {
```

```
this.eName = eName;
public long getSalary() {
return salary;
public void setSalary(long salary) {
this.salary = salary;
public Department getDepartment() {
return department;
}
public void setDepartment(Department department) {
this.department = department;
private String eName;
private long salary;
@ManyToOne(targetEntity = Department.class, cascade = CascadeType.ALL, fetch =
FetchType.EAGER)
@JoinColumn(name = "deptNo", referencedColumnName = "deptNo")
private Department department;
```

# 2) Department. class

```
package com.app.model;
import javax.persistence.Entity;
import javax.persistence.Id;
@Entity
public class Department {
 @Id
 private int deptNo;
 private String deptName;
public Department(int deptNo, String deptName, String deptHead) {
 super();
 this.deptNo = deptNo;
 this.deptHead = deptHead;
```

```
private String deptHead;
public int getDeptNo() {
  return deptNo;
}
public void setDeptNo(int deptNo) {
  this.deptNo = deptNo;
}
public String getDeptName() {
  return deptName;
}
public void setDeptName(String deptName) {
  this.deptName = deptName;
}
public String getDeptHead() {
  return deptHead;
}
public void setDeptHead(String deptHead) {
  this.deptHead = deptHead;
}
}
```

## 3)Many to One Dao.class

```
package com.app.dao;

public interface ManyToOneDao {
  void addEmployeeWithDept();
  void displayEmpAndDept();
}
```

# 4)Many to One Dao Impl.class

```
package com.app.dao.impl;
import java.util.ArrayList;
import java.util.List;
```

```
import org.hibernate.Session;
import org.hibernate.Transaction;
import org.hibernate.query.Query;
import com.app.dao.ManyToOneDao;
import com.app.model.Department;
import com.app.model.EmpDetails;
import com.app.model.User;
import com.app.util.UtilityClass;
public class ManyToOneDaoImpl implements ManyToOneDao{
public void addEmployeeWithDept() {
Session session=UtilityClass.getSession();
Department dept=new Department(1, "HR", "Akash");
Department dept2=new Department(2, "devloper", "shubham");
EmpDetails emp1=new EmpDetails(2001, "sangharsh", 200020, dept);
EmpDetails emp2=new EmpDetails(2002, "Ajay", 30000, dept2);
Transaction tx=session.beginTransaction();
//session.save(emp1);
session.update(emp2);
tx.commit();
UtilityClass.closeSession();
List<EmpDetails>list=new ArrayList<EmpDetails>();
list.add(emp1);
list.add(emp2);
}
public void displayEmpAndDept() {
Session session=UtilityClass.getSession();
Query<EmpDetails>query=session.createQuery("from EmpDetails");
List<EmpDetails>list=query.list();
for(EmpDetails emp : list ) {
System.out.println(emp.geteName() + "\t" + emp.geteNo() + "\t" + emp.getSalary());
}
UtilityClass.closeSession();
}
}
```

#### 5)Many to One Dao Factory.class

```
package com.app.factory;
import com.app.dao.ManyToOneDao;
import com.app.dao.impl.ManyToOneDaoImpl;
public class ManyToOneFactory {
  public static ManyToOneDao getManyInstance() {
  return new ManyToOneDaoImpl();
  }
}
```

#### 6)Utility.class

```
package com.app.util;
import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
public class UtilityClass {
private static SessionFactory factory;
static {
try {
factory = new Configuration().configure("hibernate.cfg.xml").buildSessionFactory();
} catch (Exception e) {
// TODO: handle exception
e.printStackTrace();
}
static ThreadLocal<Session> threadLocal = new ThreadLocal<Session>();
static Session session = null;
public static Session getSession() {
```

```
try {
if(threadLocal.get()==null) {
session=factory.openSession();
return session;
}
else {
return threadLocal.get();
}catch (Exception e) {
// TODO: handle exception
return null;
}
public static void closeSession() {
try {
session.close();
} catch (Exception e) {
// TODO: handle exception
e.printStackTrace();
}
}
```

#### 7)hibernate.cfg.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<!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.dialect">org.hibernate.dialect.MySQLDialect

property name="hbm2ddl.auto">create
```

#### 8)Test.class

```
package com.app.client;
import com.app.dao.ManyToOneDao;
import com.app.factory.ManyToOneFactory;
public class Test {
  public static void main(String[] args) {
    ManyToOneDao dao = ManyToOneFactory.getManyInstance();
    dao.addEmployeeWithDept();
    System.out.println("success");
}
}
```

#### **Output:**

#### Name:Sangharsh Sitaram Narwade

Mob No: 8308407924

#### **Hibernate One to Many Mapping program**

#### 1) User.class

```
package com.app.model;
import java.util.List;
import javax.persistence.CascadeType;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.ld;
import javax.persistence.JoinColumn;
import javax.persistence.OneToMany;
import javax.persistence.OrderColumn;
import javax.persistence.Table;
@Entity
@Table(name = "user table")
public class User {
@Override
public String toString() {
return "User [UserId=" + UserId + ", fName=" + fName + ", IName=" + IName + "]";
}
@Id
@Column(name = "User id")
private int UserId;
@Column(name = "First name")
private String fName;
@Column(name = "Last name")
@OneToMany(targetEntity = PhoneNumber.class, cascade = CascadeType.ALL,
orphanRemoval = true)
@JoinColumn(name = "unid", referencedColumnName = "user id")
@OrderColumn(name = "list index")
private List<PhoneNumber> phoneNumbers;
public int getUserId() {
return UserId;
}
public void setUserId(int userId) {
UserId = userId;
}
```

```
public String getfName() {
return fName;
}
public void setfName(String fName) {
this.fName = fName;
public String getIName() {
return lName;
}
public void setIName(String IName) {
this.lName = lName;
}
private String IName;
public List<PhoneNumber> getPhoneNumbers() {
return phoneNumbers;
}
public void setPhoneNumbers(List<PhoneNumber> phoneNumbers) {
this.phoneNumbers = phoneNumbers;
}
}
```

## 2) PhoneNumber.class

```
package com.app.model;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.Id;
import javax.persistence.Table;
@Entity
@Table(name = "phoneNumber_table")
public class PhoneNumber {
@Id
private long phone;
@Column(name = "number type")
```

```
private String numberType;
public long getPhone() {
  return phone;
}
public void setPhone(long phone) {
  this.phone = phone;
}
public String getNumberType() {
  return numberType;
}
public void setNumberType(String numberType) {
  this.numberType = numberType;
}
@Override
public String toString() {
  return "PhoneNumber [phone=" + phone + ", numberType=" + numberType + "]";
}
}
```

#### 3) One to many Dao.class

```
package com.app.dao;
public interface OneToManyDao {
  void insertData();
}
```

#### 4) One to many Dao Impl.class

```
package com.app.dao.impl;
import java.util.ArrayList;
import java.util.List;
import org.hibernate.Session;
import org.hibernate.Transaction;
import org.hibernate.query.Query;
import com.app.dao.OneToManyDao;
import com.app.model.PhoneNumber;
import com.app.model.User;
import com.app.util.UtilityClass;
```

```
public class OneToManyDaoimpl implements OneToManyDao {
public void insertData() {
Session session=UtilityClass.getSession();
Transaction tx=session.beginTransaction();
PhoneNumber phoneNumber=new PhoneNumber();
phoneNumber.setPhone(976882325);
phoneNumber.setNumberType("office");
PhoneNumber phoneNumber1=new PhoneNumber();
phoneNumber1.setPhone(830847223);
phoneNumber1.setNumberType("home");
List<PhoneNumber>list= new ArrayList<PhoneNumber>();
list.add(phoneNumber1);
list.add(phoneNumber);
User user=new User();
user.setfName("sangharsh");
user.setlName("Narwade");
user.setUserId(101);
user.setPhoneNumbers(list);
session.save(user);
tx.commit();
UtilityClass.closeSession();
}
}
```

## 5)One to many Dao Factory.class

```
package com.app.factory;
import com.app.dao.OneToManyDao;
import com.app.dao.impl.OneToManyDaoimpl;
public class OneToManyFactory {
public static OneToManyDao getInstance() {
return new OneToManyDaoimpl();
```

#### 6)Utility.class

```
package com.app.util;
import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
public class UtilityClass {
private static SessionFactory factory;
static {
try {
factory = new Configuration().configure("hibernate.cfg.xml").buildSessionFactory();
} catch (Exception e) {
// TODO: handle exception
e.printStackTrace();
}
static ThreadLocal<Session> threadLocal = new ThreadLocal<Session>();
static Session session = null;
public static Session getSession() {
try {
if(threadLocal.get()==null) {
session=factory.openSession();
return session;
}
else {
return threadLocal.get();
}
}catch (Exception e) {
// TODO: handle exception
return null;
}
```

```
}
public static void closeSession() {
try {
session.close();
} catch (Exception e) {
// TODO: handle exception
e.printStackTrace();
}
}
```

#### 7) hibernate.cfg.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE hibernate-configuration PUBLIC</p>
"-//Hibernate/Hibernate Configuration DTD 3.0//EN"
"http://www.hibernate.org/dtd/hibernate-configuration-3.0.dtd">
<hibernate-configuration>
<session-factory>
<!-- Assume test is the database name -->
connection.username">root
connection.password">
property name="show_sql">True
<!-- <pre><!-- <pre>cyline /property>
cproperty name="format sql">true/property> -->
<!-- List of XML mapping files -->
```

```
<mapping class="com.app.model.User"/>
<mapping class="com.app.model.PhoneNumber"/>
</session-factory>
</hibernate-configuration>

8)Test.class

package com.app.client;

import com.app.dao.OneToManyDao;
import com.app.factory.OneToManyFactory;

public class Test {
   public static void main(String[] args) {
     OneToManyDao dao = OneToManyFactory.getInstance();
     dao.insertData();
     System.out.println("success");
   }
}
```

#### **Output:**