**Name: - Shubham Nighot**

**Program Name: - Hibernate-App-oneToMany & Hibernate-App-ManyToOne**

```
package com.app.model;
import java.util.List;
import javax.persistence.CascadeType;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.Id;
import javax.persistence.JoinColumn;
import javax.persistence.OneToMany;
import javax.persistence.OrderColumn;
import javax.persistence.Table;
@Entity
@Table(name = "user_table")
public class User {
@Id
@Column(name = "user_id")
private int userId;
@Column(name = "first_name")
private String fName;
@Column(name = "last_Name")
private String lname;
@OneToMany(targetEntity = PhoneNumber.class, cascade = CascadeType.ALL,
orphanRemoval = true)
@JoinColumn(name="unid",referencedColumnName = "user_id")
@OrderColumn(name = "list_index")
private List<PhoneNumber> phoneNumber;
public int getUserId() {
return userId;
}
public void setUserId(int userId) {
this.userId = userId;
}
```

```
public String getfName() {
return fName;
}
public void setfName(String fName) {
this.fName = fName;
}
public String getLname() {
return lname;
}
public void setLname(String lname) {
this.lname = lname;
}
@Override
public String toString() {
return "User [userId=" + userId + ", fName=" + fName + ", lname=" + lname + ", phoneNumber=" +
phoneNumber
+ "]";
}
public User() {
super();
// TODO Auto-generated constructor stub
}
public User(int userId, String fName, String lname, List<PhoneNumber> phoneNumber) {
super();
this.userId = 001;
this.fName = "abc";
this.lname = "xyz";
this.phoneNumber = phoneNumber;
}
public List<PhoneNumber> getPhoneNumber() {
return phoneNumber;
}
public void setPhoneNumber(List<PhoneNumber> phoneNumber)
```

```
{ this.phoneNumber = phoneNumber;
}
}
package com.app.model;
import javax.persistence.Entity;
import javax.persistence.Id;
@Entity
public class Department {
@Id
private int deptno;
private String deptName;
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;
}
public Department() {
super();
// TODO Auto-generated constructor stub
```

```
}
public Department(int deptno, String deptName, String deptHead) {
super();
this.deptno = deptno;
this.deptName = deptName;
this.deptHead = deptHead;
}
}------------------------------------------------------------------------
- package com.app.model;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.Id;
import javax.persistence.Table;
@Entity
@Table(name = "phoneNumber")
public class PhoneNumber {
@Id
private int phone;
@Column(name = "number_type")
private String numberType;
public int getPhone() {
return phone;
}
public void setPhone(int 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 + "]";
}
}
package com.app.model;
import javax.persistence.CascadeType;
import javax.persistence.Entity;
import javax.persistence.FetchType;
import javax.persistence.Id;
import javax.persistence.JoinColumn;
import javax.persistence.ManyToOne;
@Entity
public class EmpDetails {
@Id
private int eno;
private String ename;
private long salary;
@ManyToOne(targetEntity = Department.class, cascade=CascadeType.ALL,fetch =FetchType.EAGER
)
@JoinColumn(name = "deptno",referencedColumnName = "deptno")
private 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;
}
public EmpDetails(int eno, String ename, long salary, Department department) {
super();
this.eno = eno;
this.ename = ename;
this.salary = salary;
this.department = department;
}
public EmpDetails() {
// TODO Auto-generated constructor stub
}
public void setDepartment() {
// TODO Auto-generated method stub
}
}
package com.app.model;
import javax.persistence.CascadeType;
import javax.persistence.Entity;
import javax.persistence.FetchType;
import javax.persistence.Id;
import javax.persistence.JoinColumn;
import javax.persistence.ManyToOne;
```

```
@Entity
public class EmpDetails {
@Id
private int eno;
private String ename;
private long salary;
@ManyToOne(targetEntity = Department.class, cascade=CascadeType.ALL,fetch =FetchType.EAGER
)
@JoinColumn(name = "deptno",referencedColumnName = "deptno")
private 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;
```

```
}
public EmpDetails(int eno, String ename, long salary, Department department) {
super();
this.eno = eno;
this.ename = ename;
this.salary = salary;
this.department = department;
}
public EmpDetails() {
// TODO Auto-generated constructor stub
}
public void setDepartment() {
// TODO Auto-generated method stub
}
}
package com.app.factory;
import com.app.dao.ManyToOneDao;
import com.app.dao.OneToManyDao;
import com.app.dao.impl.ManyToOneDaoImpl;
import com.app.dao.impl.OneToManyDaoImpl;
//OneToManyDao one= new OneToManyDaoImpl();
public class OneToManyFactory {
public static OneToManyDao getInstance() {
return new OneToManyDaoImpl();
}
public static ManyToOneDao getManyInstance() {
return new ManyToOneDaoImpl();
}
}
package com.app.dao;
public interface ManyToOneDao {
void addEmployeeWithDept();
}
package com.app.dao;
```

```
public interface OneToManyDao {
void insertData(); //public Abstract void insertData;
void listofData();
}
```

```
package com.app.dao.impl;
import java.util.ArrayList;
import java.util.List;
import org.hibernate.Session;
import org.hibernate.Transaction;
import com.app.dao.ManyToOneDao;
import com.app.model.Department;
import com.app.model.EmpDetails;
import com.app.util.UtilityClass;
public class ManyToOneDaoImpl implements ManyToOneDao {
public void addEmployeeWithDept() {
// TODO Auto-generated method stub
Session session=UtilityClass.getSession();
Department dept1= new Department(1,"HR","Wakle");
Department dept2=new Department(2,"Production","Shinde");
List<Department> dept=new ArrayList<Department>();
dept.add(dept1);
dept.add(dept2);
//EmpDetails emp1=new EmpDetails(5001,"atul",50098,dept);
//EmpDetails emp2=new EmpDetails(5002, "Anant", 6542, dept2);
EmpDetails em=new EmpDetails();
em.setDepartment(dept2);
em.setSalary(2020);
em.setEname("Pallavi");
em.setEno(5003);
Transaction tx=session.beginTransaction();
session.update(em);
//session.saveOrUpdate(emp1);
tx.commit();
```

```
UtilityClass.closeSession();
}
}
package com.app.dao.impl;
import java.util.ArrayList;
import java.util.List;
import org.hibernate.Transaction;
import org.hibernate.query.Query;
import org.hibernate.Session;
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() {
// TODO Auto-generated method stub
Session session=UtilityClass.getSession();
Transaction tx=session.beginTransaction();
PhoneNumber phoneNumber=new PhoneNumber();
phoneNumber.setNumberType("home");
phoneNumber.setPhone(97671343);
PhoneNumber phoneNumber1=new PhoneNumber();
phoneNumber1.setNumberType("office");
phoneNumber1.setPhone(876543);
List<PhoneNumber> list= new ArrayList<PhoneNumber> ();
list.add(phoneNumber1);
list.add(phoneNumber);
User user=new User();
user.setfName("Atul");
user.setLname("Wakle");
user.setUserId(101);
user.setPhoneNumber(list);
session.save(user);
```

```
tx.commit();
UtilityClass.closeSession();
}
public void listofData() {
// TODO Auto-generated method stub
Session session=UtilityClass.getSession();
Query<User>query=session.createQuery("from User");
List<User>list=query.list();
for(User user:list) {
System.out.println(user.getUserId()+"\t"+user.getfName()+"\t"+user.getLname()+"\t"+user.getPhon
eNumber());
}
UtilityClass.closeSession();
}
}
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("Hibernet-cfg.xml").buildSessionFactory();
/* Configuration configuration=new Configuration();
configuration.configure("Hibernate-cfg.xml");
factory=configuration.buildSessionFactory();
*/
} catch (Exception e) {
e.printStackTrace();
}
}
static ThreadLocal<Session> local=new ThreadLocal();
```

```
static Session session=null;
public static Session getSession() {
try {
if(local.get()==null) {
session=factory.openSession();
local.set(session);
return session;
}else {
return local.get();
}
} catch (Exception e) {
// TODO: handle exception
return null;
}
}
public static void closeSession() {
try {
session.close();
} catch (Exception e) {
// TODO: handle exception
e.printStackTrace();
}
}
}
package com.app.client;
import com.app.dao.ManyToOneDao;
import com.app.dao.OneToManyDao;
import com.app.factory.OneToManyFactory;
public class Test {
public static void main(String[] args) {
// TODO Auto-generated method stub
//OneToManyDao dao=OneToManyFactory.getInstance();
//dao.insertData();
```

```
//dao.listofData();
ManyToOneDao dao= OneToManyFactory.getManyInstance();
dao.addEmployeeWithDept();
System.out.println("Success");
}
}
```

# Output