HIBERNATE

----------------Create the student java class and change the xml file and configure it in InsertEmployee.java.---------------------------------------------------------------

CREATING THE TABLE USING HIBERNATE:

JAVA class:

Student.java

**package** com.hexa.entity;

**import** java.util.Date;

**import** javax.persistence.Column;

**import** javax.persistence.Entity;

**import** javax.persistence.Id;

**import** javax.persistence.Table;

@Entity // to say hibernate that we using java class to map tyhe table

@Table(name="student")//it should map to student table

**public** **class** Student {

@Id //specifying the primary key

@Column(name="stu\_id")

**private** **int** stuId;

@Column(name="stu\_name", length=45)

**private** String StName;

@Column(name="stu\_dept", length=10)

**private** String dept;

@Column(name="stu\_dob")

**private** Date dob;

@Column(name="stu\_marks")

**private** **int** marks;

**public** **int** getStuId() {

**return** stuId;

}

@Override

**public** String toString() {

**return** "Student [stuId=" + stuId + ", StName=" + StName + ", dept=" + dept + ", dob=" + dob + ", marks=" + marks

+ "]";

}

**public** **void** setStuId(**int** stuId) {

**this**.stuId = stuId;

}

**public** String getStName() {

**return** StName;

}

**public** **void** setStName(String stName) {

StName = stName;

}

**public** String getDept() {

**return** dept;

}

**public** **void** setDept(String dept) {

**this**.dept = dept;

}

**public** Date getDob() {

**return** dob;

}

**public** **void** setDob(Date dob) {

**this**.dob = dob;

}

**public** **int** getMarks() {

**return** marks;

}

**public** **void** setMarks(**int** marks) {

**this**.marks = marks;

}

}

---

HIBERNATE.CFG.XML FILE:

<?xml version=*'1.0'* encoding=*'utf-8'*?>

<!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.connection.driver\_class"*>

com.mysql.jdbc.Driver</property>

<property name=*"hibernate.connection.url"*>

jdbc:mysql://localhost:3306/test</property>

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

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

<property name=*"hibernate.connection.pool\_size"*>5</property>

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

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

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

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

<!-- <mapping resource="product.hbm.xml" /> -->

<mapping class=*"com.hexa.entity.Student"*/>

</session-factory>

</hibernate-configuration>

--

InsertEmployee.java

**package** com.hexa.demos;

**import** org.hibernate.SessionFactory;

**import** org.hibernate.cfg.AnnotationConfiguration;

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

**public** **class** InsertEmployee {

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

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

cfg.configure();//loads hiberate.cfg.xml

SessionFactory sfac= cfg.buildSessionFactory();

System.***out***.println("table created");

}

}

INSERTING THE VALUES TO THE TABLE

DAO CONNECTION:

DAOIMP1.java:

**package** com.hexa.dao;

**import** org.hibernate.HibernateException;

**import** org.hibernate.Session;

**import** org.hibernate.SessionFactory;

**import** org.hibernate.Transaction;

**import** org.hibernate.cfg.AnnotationConfiguration;

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

**import** com.hexa.entity.Student;

**public** **class** DaoImp1 **implements** IDao {

**private** **static** SessionFactory *sfac*;

**static** {

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

cfg.configure();//loads hiberate.cfg.xml

*sfac*= cfg.buildSessionFactory();

}

@Override

**public** **int** addStudent(Student stu) {

Session sess=**null**;

Transaction tx = **null**;

**try** {

sess =*sfac*.openSession();

tx=sess.beginTransaction();

sess.save(stu);

tx.commit();

**return** 1;

} **catch**(HibernateException ex) {

System.***out***.println(ex.getMessage());

**if**(tx!=**null**) {

tx.rollback();

}

} **finally** {

**if**(sess!=**null**){

sess.close();

}

}

**return** 0;

}

}

---

DAO.java(INTERFACE)

**package** com.hexa.dao;

**import** com.hexa.entity.Student;

**public** **interface** IDao {

**public** **int** addStudent(Student stu);

/\*public Student getStudent(int sid);

public int updateStudent(int sid, int marks);

public int updateStudent(Student stu);

public int deleteStudent(int sid);\*/

}

-----

INSERTEMPLOYEE.java

**package** com.hexa.demos;

**import** java.text.ParseException;

**import** java.text.SimpleDateFormat;

**import** java.util.Date;

**import** org.hibernate.SessionFactory;

**import** org.hibernate.cfg.AnnotationConfiguration;

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

**import** com.hexa.dao.DaoImp1;

**import** com.hexa.dao.IDao;

**import** com.hexa.entity.Student;

**public** **class** InsertEmployee {

**private** **static** IDao *dao* = **new** DaoImp1();

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

Student stu = **new** Student();

stu.setStuId(1001);

stu.setStName("durga");

stu.setDept("ECE");

stu.setMarks(75);

SimpleDateFormat sdf = **new** SimpleDateFormat("dd/MM/yyyy");

Date dt = sdf.parse("12/04/1995");

stu.setDob(dt);

stu.setStuId(1002);

stu.setStName("devi");

stu.setDept("EEE");

stu.setMarks(95);

SimpleDateFormat sdf1 = **new** SimpleDateFormat("dd/MM/yyyy");

Date dt1 = sdf1.parse("12/04/1995");

stu.setDob(dt1);

**int** res1 = *dao*.addStudent(stu);

stu.setStuId(1003);

stu.setStName("nisha");

stu.setDept("CSE");

stu.setMarks(100);

SimpleDateFormat sdf2 = **new** SimpleDateFormat("dd/MM/yyyy");

Date dt2 = sdf2.parse("12/04/1995");

stu.setDob(dt2);

**int** res2 = *dao*.addStudent(stu);

stu.setStuId(1004);

stu.setStName("saras");

stu.setDept("IT");

stu.setMarks(90);

SimpleDateFormat sdf3 = **new** SimpleDateFormat("dd/MM/yyyy");

Date dt3 = sdf3.parse("12/04/1995");

stu.setDob(dt3);

**int** res3 = *dao*.addStudent(stu);

System.***out***.println("table created");

}

}

GET VS LOAD:

**package** com.hexa.demos;

**import** org.hibernate.Session;

**import** org.hibernate.SessionFactory;

**import** org.hibernate.cfg.AnnotationConfiguration;

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

**import** com.hexa.entity.Student;

**public** **class** GetVsLoadDemo {

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

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

cfg.configure();

SessionFactory sfac= cfg.buildSessionFactory();

Session sess = sfac.openSession();

//Student stu =(Student)sess.get(Student.class, 1005);//when id is given is not there table it give null

//Student stu =(Student)sess.load(Student.class, 1005);//when id is given is not there table it will throw NotFoundException

Student stu =(Student)sess.get(Student.**class**, 1003); // get method gets the session object early

**if**(stu!=**null**) {

System.***out***.println(stu);

} **else** {

System.***out***.println("not found");

}

sess.close();

}

}

DISPLAYING VALUES:

DAO.java:

**package** com.hexa.dao;

**import** com.hexa.entity.Student;

**public** **interface** IDao {

**public** **int** addStudent(Student stu);

**public** Student getStudent(**int** sid);

/\*public int updateStudent(int sid, int marks);

public int updateStudent(Student stu);

public int deleteStudent(int sid);\*/

}

--

IDaoImp1.java

**package** com.hexa.dao;

**import** org.hibernate.HibernateException;

**import** org.hibernate.Session;

**import** org.hibernate.SessionFactory;

**import** org.hibernate.Transaction;

**import** org.hibernate.cfg.AnnotationConfiguration;

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

**import** com.hexa.entity.Student;

**public** **class** DaoImp1 **implements** IDao {

**private** **static** SessionFactory *sfac*;

**static** {

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

cfg.configure();//loads hiberate.cfg.xml

*sfac*= cfg.buildSessionFactory();

}

@Override

**public** **int** addStudent(Student stu) {

Session sess=**null**;

Transaction tx = **null**;

**try** {

sess =*sfac*.openSession();

tx=sess.beginTransaction();

sess.save(stu);

tx.commit();

**return** 1;

} **catch**(HibernateException ex) {

System.***out***.println(ex.getMessage());

**if**(tx!=**null**) {

tx.rollback();

}

} **finally** {

**if**(sess!=**null**){

sess.close();

}

}

**return** 0;

}

@Override

**public** Student getStudent(**int** sid) {

Session sess = *sfac* .openSession();

Student stu = (Student) sess.get(Student.**class**, sid);

sess.close();

**return** stu;

}

}

---

VIEWSTUDENT.java

**package** com.hexa.demos;

**import** com.hexa.dao.DaoImp1;

**import** com.hexa.dao.IDao;

**import** com.hexa.entity.Student;

**public** **class** ViewEmployee {

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

IDao dao = **new** DaoImp1();

Student stu = dao.getStudent(1004);

**if**(stu!=**null**) {

System.***out***.println(stu);

} **else** {

System.***out***.println("not found");

}

}

}

UPDATING AND DELETING ROW:

DAOImp.java

**package** com.hexa.dao;

**import** org.hibernate.HibernateException;

**import** org.hibernate.Session;

**import** org.hibernate.SessionFactory;

**import** org.hibernate.Transaction;

**import** org.hibernate.cfg.AnnotationConfiguration;

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

**import** com.hexa.entity.Student;

**public** **class** DaoImp1 **implements** IDao {

**private** **static** SessionFactory *sfac*;

**static** {

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

cfg.configure();//loads hiberate.cfg.xml

*sfac*= cfg.buildSessionFactory();

}

@Override

**public** **int** addStudent(Student stu) {

Session sess=**null**;

Transaction tx = **null**;

**try** {

sess =*sfac*.openSession();

tx=sess.beginTransaction();

sess.save(stu);

tx.commit();

**return** 1;

} **catch**(HibernateException ex) {

System.***out***.println(ex.getMessage());

**if**(tx!=**null**) {

tx.rollback();

}

} **finally** {

**if**(sess!=**null**){

sess.close();

}

}

**return** 0;

}

@Override

**public** Student getStudent(**int** sid) {

Session sess = *sfac* .openSession();

Student stu = (Student) sess.get(Student.**class**, sid);

sess.close();

**return** stu;

}

@Override

**public** **int** updateStudent(**int** sid, **int** marks) {

Session sess = *sfac*.openSession();

Student stu =(Student)sess.get(Student.**class**, sid);

Transaction tx = sess.beginTransaction();

stu.setMarks(marks);

tx.commit();

sess.close();

**return** 0;

}

@Override

**public** **int** deleteStudent(**int** sid) {

Session sess = *sfac*.openSession();

Student stu =(Student)sess.get(Student.**class**, sid);

Transaction tx = sess.beginTransaction();

**try** {

sess.delete(stu);

tx.commit();

**return** 1;

} **catch** (HibernateException e) {

System.***out***.println(e.getMessage());

}

**return** 0;

}

}

---

IDAO.java

**package** com.hexa.dao;

**import** com.hexa.entity.Student;

**public** **interface** IDao {

**public** **int** addStudent(Student stu);

**public** Student getStudent(**int** sid);

**public** **int** updateStudent(**int** sid, **int** marks);

/\*public int updateStudent(Student stu);\*/

**public** **int** deleteStudent(**int** sid);

}

---

UPDATEMARKS.java

**package** com.hexa.demos;

**import** com.hexa.dao.DaoImp1;

**import** com.hexa.dao.IDao;

**public** **class** UpdateMarks {

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

IDao dao = **new** DaoImp1();

**int** res = dao.updateStudent(1002, 100);

System.***out***.println("updated");

}

}

---

DELETESTUDENT.java

**package** com.hexa.demos;

**import** com.hexa.dao.DaoImp1;

**import** com.hexa.dao.IDao;

**public** **class** DeleteStudent {

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

IDao dao = **new** DaoImp1();

**int** res = dao.deleteStudent(1002);

System.***out***.println("deleted");

}

}

----

STUDENT.java

**package** com.hexa.entity;

**import** java.util.Date;

**import** javax.persistence.Column;

**import** javax.persistence.Entity;

**import** javax.persistence.Id;

**import** javax.persistence.Table;

@Entity // to say hibernate that we using java class to map tyhe table

@Table(name="student")//it should map to student table

**public** **class** Student {

@Id //specifying the primary key

@Column(name="stu\_id")

**private** **int** stuId;

@Column(name="stu\_name", length=45)

**private** String StName;

@Column(name="stu\_dept", length=10)

**private** String dept;

@Column(name="stu\_dob")

**private** Date dob;

@Column(name="stu\_marks")

**private** **int** marks;

**public** **int** getStuId() {

**return** stuId;

}

@Override

**public** String toString() {

**return** "Student [stuId=" + stuId + ", StName=" + StName + ", dept=" + dept + ", dob=" + dob + ", marks=" + marks

+ "]";

}

**public** **void** setStuId(**int** stuId) {

**this**.stuId = stuId;

}

**public** String getStName() {

**return** StName;

}

**public** **void** setStName(String stName) {

StName = stName;

}

**public** String getDept() {

**return** dept;

}

**public** **void** setDept(String dept) {

**this**.dept = dept;

}

**public** Date getDob() {

**return** dob;

}

**public** **void** setDob(Date dob) {

**this**.dob = dob;

}

**public** **int** getMarks() {

**return** marks;

}

**public** **void** setMarks(**int** marks) {

**this**.marks = marks;

}

}

DETACHED.JAVA

**package** com.hexa.demos;

**import** org.hibernate.Session;

**import** org.hibernate.SessionFactory;

**import** org.hibernate.Transaction;

**import** org.hibernate.cfg.AnnotationConfiguration;

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

**import** com.hexa.entity.Student;

**public** **class** DetachedDemo {

**private** **static** SessionFactory *sfac*;

**static** {

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

cfg.configure();//loads hiberate.cfg.xml

*sfac*= cfg.buildSessionFactory();

}

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

Student stu = *getStudent*(1003);

Session sess = *sfac*.openSession();

Transaction tx = sess.beginTransaction();

stu.setMarks(190);

sess.update(stu);// here we are making the session object from detached to persistance by update() or saveupdate()

tx.commit();

sess.close();

System.***out***.println("done");

}

**public** **static** Student getStudent(**int** sid) {

Session sess = *sfac*.openSession();

Student stu = (Student)sess.get(Student.**class**, sid);

sess.close();// here student becomes detached state

**return** stu;

}

}

updateSTUDeNT.java

DaoImp1.java:

**package** com.hexa.dao;

**import** org.hibernate.HibernateException;

**import** org.hibernate.Session;

**import** org.hibernate.SessionFactory;

**import** org.hibernate.Transaction;

**import** org.hibernate.cfg.AnnotationConfiguration;

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

**import** com.hexa.entity.Student;

**public** **class** DaoImp1 **implements** IDao {

**private** **static** SessionFactory *sfac*;

**static** {

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

cfg.configure();//loads hiberate.cfg.xml

*sfac*= cfg.buildSessionFactory();

}

@Override

**public** **int** addStudent(Student stu) {

Session sess=**null**;

Transaction tx = **null**;

**try** {

sess =*sfac*.openSession();

tx=sess.beginTransaction();

sess.save(stu);

tx.commit();

**return** 1;

} **catch**(HibernateException ex) {

System.***out***.println(ex.getMessage());

**if**(tx!=**null**) {

tx.rollback();

}

} **finally** {

**if**(sess!=**null**){

sess.close();

}

}

**return** 0;

}

@Override

**public** Student getStudent(**int** sid) {

Session sess = *sfac* .openSession();

Student stu = (Student) sess.get(Student.**class**, sid);

sess.close();

**return** stu;

}

@Override

**public** **int** updateStudent(**int** sid, **int** marks) {

Session sess = *sfac*.openSession();

Student stu =(Student)sess.get(Student.**class**, sid);

Transaction tx = sess.beginTransaction();

stu.setMarks(marks);

tx.commit();

sess.close();

**return** 0;

}

@Override

**public** **int** deleteStudent(**int** sid) {

Session sess = *sfac*.openSession();

Student stu =(Student)sess.get(Student.**class**, sid);

Transaction tx = sess.beginTransaction();

**try** {

sess.delete(stu);

tx.commit();

**return** 1;

} **catch** (HibernateException e) {

System.***out***.println(e.getMessage());

}

//System.out.println(stu);

sess.close();

**return** 0;

}

@Override

**public** **int** updateStudent(Student stu) {

Session sess = *sfac*.openSession();

Transaction tx = sess.beginTransaction();

sess.saveOrUpdate(stu);

tx.commit();

sess.close();

**return** 0;

}

}

--

IDao.java;

**package** com.hexa.dao;

**import** com.hexa.entity.Student;

**public** **interface** IDao {

**public** **int** addStudent(Student stu);

**public** Student getStudent(**int** sid);

**public** **int** updateStudent(**int** sid, **int** marks);

**public** **int** updateStudent(Student stu);

**public** **int** deleteStudent(**int** sid);

}

---