**Q2) Develop a restful web service to perform CRUD operations. Entities should have Student, Courses and Teachers.**

**Ans: Student.java**

package com.restful\_crud\_operations;

import java.io.Serializable;

import java.util.List;

import javax.persistence.CascadeType;

import javax.persistence.Column;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

import javax.persistence.OneToMany;

import javax.persistence.OneToOne;

import javax.persistence.Table;

@Entity

@Table(name = "Student")

public class Student implements Serializable{

/\*\*

\*

\*/

private static final long serialVersionUID = -5326101768774864410L;

@Id

@GeneratedValue(strategy = GenerationType.AUTO)

@Column(name = "StudentID") // naming column as specified name

private int studentID;

@Column(name = "StudentName")

private String studentName;

@Column(name = "StudentAddress")

private String studentAddress;

@Column(name = "StudentContact")

private long studentContact;

@OneToOne(cascade = CascadeType.ALL) // perform Operation on the child class

private Teachers teachers;

@OneToMany(cascade = CascadeType.ALL)

private List<Courses> fees;

public int getStudentID() {

return studentID;

}

public void setStudentID(int studentID) {

this.studentID = studentID;

}

public String getStudentName() {

return studentName;

}

public void setStudentName(String studentName) {

this.studentName = studentName;

}

public String getStudentAddress() {

return studentAddress;

}

public void setStudentAddress(String studentAddress) {

this.studentAddress = studentAddress;

}

public long getStudentContact() {

return studentContact;

}

public void setStudentContact(long studentContact) {

this.studentContact = studentContact;

}

public Teachers getTeachers() {

return teachers;

}

public void setTeachers(Teachers teachers) {

this.teachers = teachers;

}

public List<Courses> getTelephones() {

return fees;

}

public void setTelephones(List<Courses> telephones) {

this.fees = telephones;

}

}

**Teacher.java:**

package com.restful\_crud\_operations;

import java.io.Serializable;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

@Entity

public class Teachers implements Serializable{

/\*\*

\*

\*/

private static final long serialVersionUID = 8200960945324991376L;

@Id

@GeneratedValue(strategy = GenerationType.AUTO)

private int teacherId;

private String subject;

public int getTeacherId() {

return teacherId;

}

public void setTeacherId(int teacherId) {

this.teacherId = teacherId;

}

public String getSubject() {

return subject;

}

public void setSubject(String subject) {

this.subject = subject;

}

}

**Courses.java**

package com.restful\_crud\_operations;

import java.io.Serializable;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

@Entity

public class Courses implements Serializable{

/\*\*

\*

\*/

private static final long serialVersionUID = 8804092356325376228L;

@Id

@GeneratedValue(strategy = GenerationType.AUTO)

private int courseId, fees;

private String courseName;

public int getCourseId() {

return courseId;

}

public void setCourseId(int courseId) {

this.courseId = courseId;

}

public String getCourseName() {

return courseName;

}

public void setCourseName(String courseName) {

this.courseName = courseName;

}

public long getFees() {

return fees;

}

public void setFees(int fees) {

this.fees = fees;

}

}

**OneToManyRelationship.java**

package com.restful\_crud\_operations;

import java.util.ArrayList;

import java.util.List;

import org.hibernate.Session;

import org.hibernate.SessionFactory;

import org.hibernate.Transaction;

import org.hibernate.cfg.Configuration;

public class OneToManyRelationShip {

public static void main(String[] args) {

// TODO Auto-generated method stub

SessionFactory factory=new Configuration().configure("hibernate.cfg.xml").buildSessionFactory();

Session session = factory.openSession();

Transaction tx= session.beginTransaction();

// Process to execute the Query

Courses c1=new Courses();

c1.setCourseName("ECE");

c1.setFees(90000);

Courses c2=new Courses();

c2.setCourseName("CSE");

c2.setFees(150000);

List<Courses> fees = new ArrayList<Courses>();

fees.add(c2);

fees.add(c1);

Student student=new Student();

student.setStudentName("shweta gund");

student.setStudentContact(789456);

student.setStudentAddress("kolhapur");

session.save(c1);

session.save(c2);

session.save(student);

tx.commit(); // Saving Object Permanently ans closing session

factory.close(); // closing very expensive connection

}

}