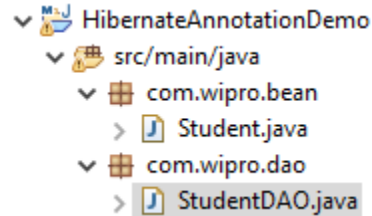Sample Appliction for Hibernate Query Language

Let us learn to create some Queries to retrive data from the database.

1. Let us take the Annotation demo project
2. For querying data let us create a separate dao class under a new package called com.wipro.dao
    a. Create a package called com.wipro.dao
    b. Under the package create class called StudentDAO

    - ✓ HibernateAnnotationDemo
        - ✓ src/main/java
            - ✓ com.wipro.bean
                - › Student.java
            - ✓ com.wipro.dao
                - › StudentDAO.java

3. Edit the StudentDAO to add methods for querying the database using HQL

```java
package com.wipro.dao;

import java.util.List;

import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
import org.hibernate.query.Query;
import org.hibernate.type.Type;

import com.wipro.bean.Student;

public class StudentDAO {
    SessionFactory factory;
    /**
     * Default Constructor
     * It initializes the SessionFactory based on configuration details
     * provided from the myconfig.cfg.xml file
     */
    public StudentDAO() {
        Configuration cfg = new Configuration().configure("myconfig.cfg.xml");
        factory = cfg.buildSessionFactory();
    }

    /**
     * This method returns all the records from the Student_TBL table
     * @return
     */
    public List<Student> getStudents(){
        Session session = factory.openSession();
        Query<Student> query = session.createQuery("From Student");
        return query.list();
    }

    /**
     * This method takes course and input
     * and returns only records matching to the given condition
```
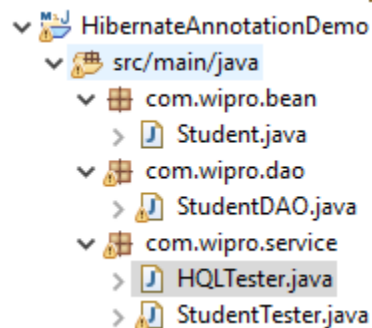
```java
 * @param course
 * @return
 */
public List<Student> getStudentsByCourse(String course){
        Session session = factory.openSession();
        Query<Student> query = session.createQuery("From Student std where
std.course = ?0");
        query.setParameter(0,course);
        return query.list();
}

/**
 * This method returns First 3 the records from the Student_TBL table
 * Based on Names
 * @return
 */
public List<Student> getStudentsTop3(){
        Session session = factory.openSession();
        Query<Student> query = session.createQuery("From Student std order by
std.studentName");
        query.setMaxResults(3);
        return query.list();
}


}
```

4. Let us create the tester class with main method to test the queries
    a. Under com.wipro.service package create a class called HQLTester

    b. Write the following code

```java
package com.wipro.service;

import java.util.List;

import com.wipro.bean.Student;
import com.wipro.dao.StudentDAO;

public class HQLTester {
public static void main(String[] args) {
        StudentDAO dao = new StudentDAO();

        /**
```

```
         * Display all the records
         */
        List<Student> result = dao.getStudents();
        System.out.println("Student Records");
        for(Student ob : result)
                System.out.println(ob);
        System.out.println("*************************************************
**");

        /**
         * Display all the records of course java
         */
        List<Student> result1 = dao.getStudentsByCourse("Java");
        System.out.println("JAVA Student Records");
        for(Student ob : result1)
                System.out.println(ob);
        System.out.println("*************************************************
**");

        /**
         * Display First 3 the records of course java
         */
        List<Student> result2 = dao.getStudentsTop3();
        System.out.println("First 3 Student Records");
        for(Student ob : result2)
                System.out.println(ob);
        System.out.println("*************************************************
**");

}
}
```

5. Run the application

```
Hibernate: select student0_.stdid as stdid1_0_, student0_.course as course2_0_,
student0_.stdName as stdName3_0_ from STUDENT_TBL student0_

Student Records
Student [studentId=101, studentName=Harry, course=Java]
Student [studentId=102, studentName=Harry, course=Oracle]
Student [studentId=103, studentName=TOM, course=Oracle]
Student [studentId=105, studentName=JAMES, course=Mainframe]
Student [studentId=106, studentName=ALLEN, course=Java]
*****************************************************

Hibernate: select student0_.stdid as stdid1_0_, student0_.course as course2_0_,
student0_.stdName as stdName3_0_ from STUDENT_TBL student0_ where
student0_.course=?

JAVA Student Records
Student [studentId=101, studentName=Harry, course=Java]
Student [studentId=106, studentName=ALLEN, course=Java]
*****************************************************
```

```
Hibernate: select * from ( select student0_.stdid as stdid1_0_, student0_.course
as course2_0_, student0_.stdName as stdName3_0_ from STUDENT_TBL student0_ order
by student0_.stdName ) where rownum <= ?

First 3 Student Records
Student [studentId=106, studentName=ALLEN, course=Java]
Student [studentId=101, studentName=Harry, course=Java]
Student [studentId=102, studentName=Harry, course=Oracle]
****************************************************
```