

Assignment 3 - Software Engineering 3

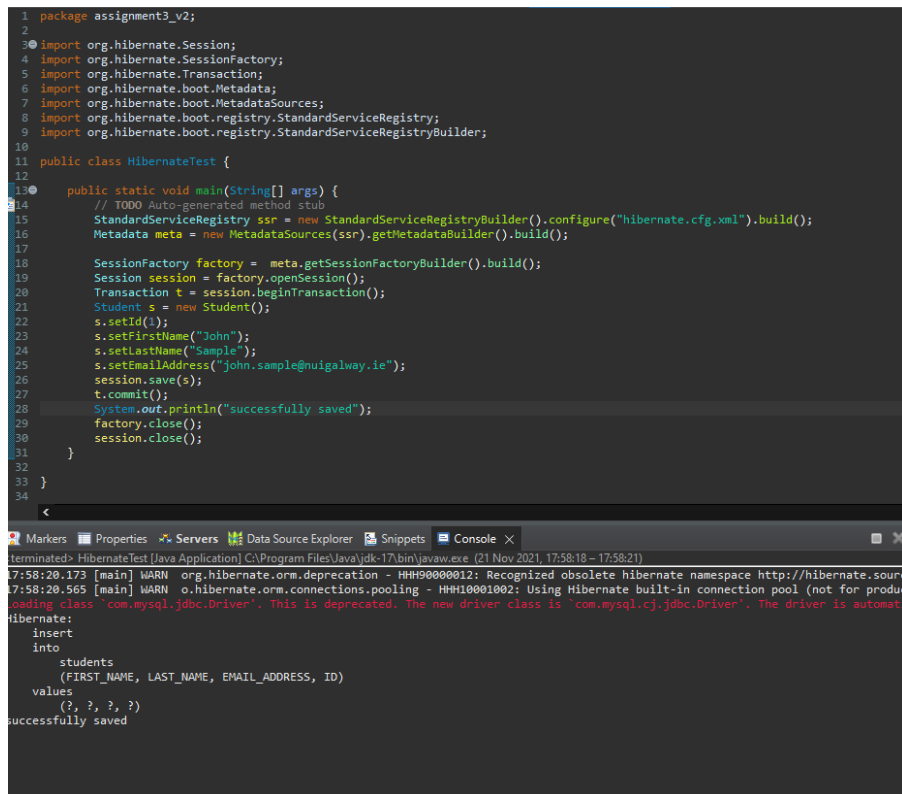
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1 Outline

1.1 Setup

In order to commence this assignment, I had to setup hibernate on my machine. I downloaded the archetype from the notes and it kept spitting out “does not opens java.lang to unnamed module” no matter what I did, it included rolling back to java 8 and several other fixes. After 5 hours I came up with a workaround In order to circumvent this I just used the simple-webapp archetype that was used in the previous two assignments. In order to verify that it worked, I wrote a simple script to connect to the database via hibernate and create an entry. It luckily worked first time.



```
1 package assignment3_v2;
2
3 import org.hibernate.Session;
4 import org.hibernate.SessionFactory;
5 import org.hibernate.Transaction;
6 import org.hibernate.boot.Metadata;
7 import org.hibernate.boot.MetadataSources;
8 import org.hibernate.boot.registry.StandardServiceRegistry;
9 import org.hibernate.boot.registry.StandardServiceRegistryBuilder;
10
11 public class HibernateTest {
12
13     public static void main(String[] args) {
14         // TODO Auto-generated method stub
15         StandardServiceRegistry ssr = new StandardServiceRegistryBuilder().configure("hibernate.cfg.xml").build();
16         Metadata meta = new MetadataSources(ssr).getMetadataBuilder().build();
17
18         SessionFactory factory = meta.getSessionFactoryBuilder().build();
19         Session session = factory.openSession();
20         Transaction t = session.beginTransaction();
21         Student s = new Student();
22         s.setId(1);
23         s.setFirstName("John");
24         s.setLastName("Sample");
25         s.setEmailAddress("john.sample@nuigalway.ie");
26         session.save(s);
27         t.commit();
28         System.out.println("successfully saved");
29         factory.close();
30         session.close();
31     }
32 }
33
34
```

Markers Properties Servers Data Source Explorer Snippets Console X

terminated: HibernateTest [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (21 Nov 2021, 17:58:18 - 17:58:21)

17:58:20.173 [main] WARN org.hibernate.orm.deprecation - HHH90000012: Recognized obsolete hibernate namespace http://hibernate.sourceforge.org/hibernate-3.0. Use http://www.hibernate.org/hibernate-core-3.0 instead to avoid confusion with the Hibernate Search module.

17:58:20.565 [main] WARN org.hibernate.orm.connections.pooling - HHH10001002: Using Hibernate built-in connection pool (not for production)! To configure appropriate pool parameters that optimize for your database, open the hibernate.properties file and modify the following: pool.use_prepared_statements=

loading class 'com.mysql.jdbc.Driver'. This is deprecated. The new driver class is 'com.mysql.cj.jdbc.Driver'. The driver is automatically registered via the driver registry.

Hibernate: insert into students (FIRST_NAME, LAST_NAME, EMAIL_ADDRESS, ID) values (?, ?, ?, ?)

successfully saved

2 create

With this I had to create the create functionality. I took a lot of inspiration from the update servlet I wrote for the last assignment and wrote a Class to handle creating a hashmap of the query string as it made parsing much more scalable. then beyond this it was very straightforward. When it creates the the entry it shows it in the view students so you can get your email and idno as they are not decided by the user.

Additionally it handles with duplicate emails in the manner as requested

Create Student

First Name:

Last Name:

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Students Table

ID	First Name	Last Name	Email
2	John	Breslin	john.breslin@nuigalway.ie

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Students Table

ID	First Name	Last Name	Email
3	John	Breslin	john.breslin1@nuigalway.ie

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3 read

I wrote the Read servlet to handle either the id parameter or none, if none are passed I show everything otherwise I show the record associated with the ID. this is used to show the newly created records using create.

Student Search

ID

4 Delete

Delete Functionality only works on the id parameter

Delete

Delete student where ID =

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Students Table

ID	First Name	Last Name	Email
0	John	Smith	john.smith@nuigalway.ie
1	John	Sample	john.sample@nuigalway.ie
3	John	Breslin	john.breslin1@nuigalway.ie

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5 update

With Update I took a similar approach as I did for the previous assignment. with the batch email update function I check for duplicates on every email when I change them as there's a chance you're turning back to nuigalway.ie and then there might be a dupe.

Update

General Updates

Update Data Field	New Value
<input type="checkbox"/> First Name	<input type="text"/>
<input type="checkbox"/> Last Name	<input type="text"/>
<input type="checkbox"/> Email	<input type="text"/>

Where: =

Batch Email Update

New Email Domain: *fname.lname@*

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Students Table

ID	First Name	Last Name	Email
0	John	Smith	john.smith@gmit.ie
1	John	Sample	john.sample@gmit.ie
3	John	Breslin	john.breslin1@gmit.ie

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6 Extras

I allow you to perform batch updates on several fields with update and you do not need to update every parameter
Error page redirect If the operation is successful, you can immediately see it's result

Update

General Updates

Update Data Field	New Value
<input checked="" type="checkbox"/> First Name	<input type="text" value="Smith"/>
<input type="checkbox"/> Last Name	<input type="text"/>
<input type="checkbox"/> Email	<input type="text"/>

Where: =

Batch Email Update

New Email Domain: *fname.lname@*

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Students Table

ID	First Name	Last Name	Email
0	Smith	Smith	john.smith@gmit.ie
1	John	Sample	john.sample@gmit.ie
3	John	Breslin	john.breslin1@gmit.ie

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