

Java Full Stack Development

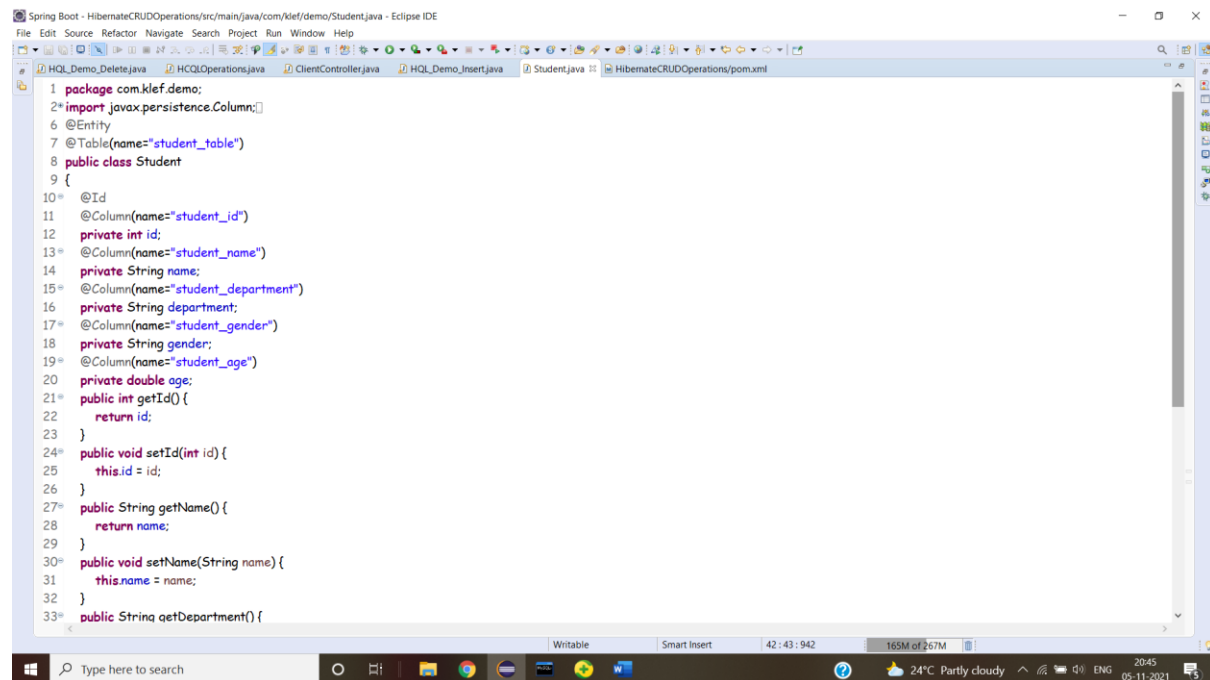
Skilling-6

ID NO: 190030677

Name: K. Sravani

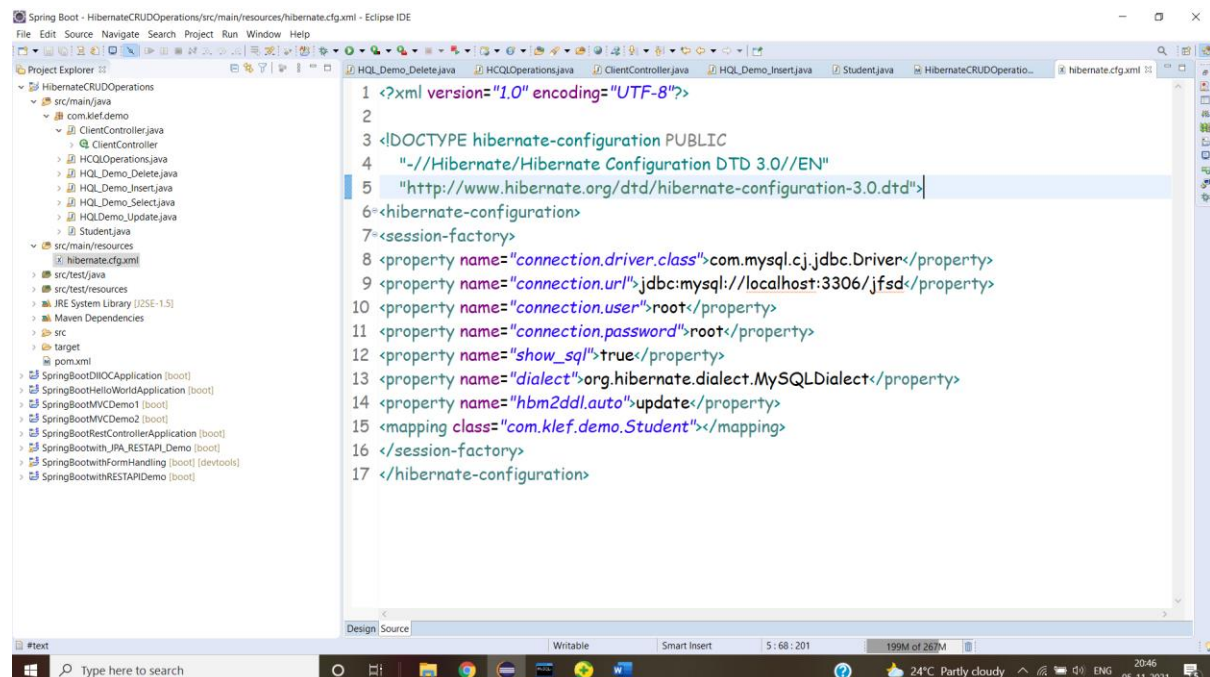
Hibernate CRUD Operations with Maven

Student.java



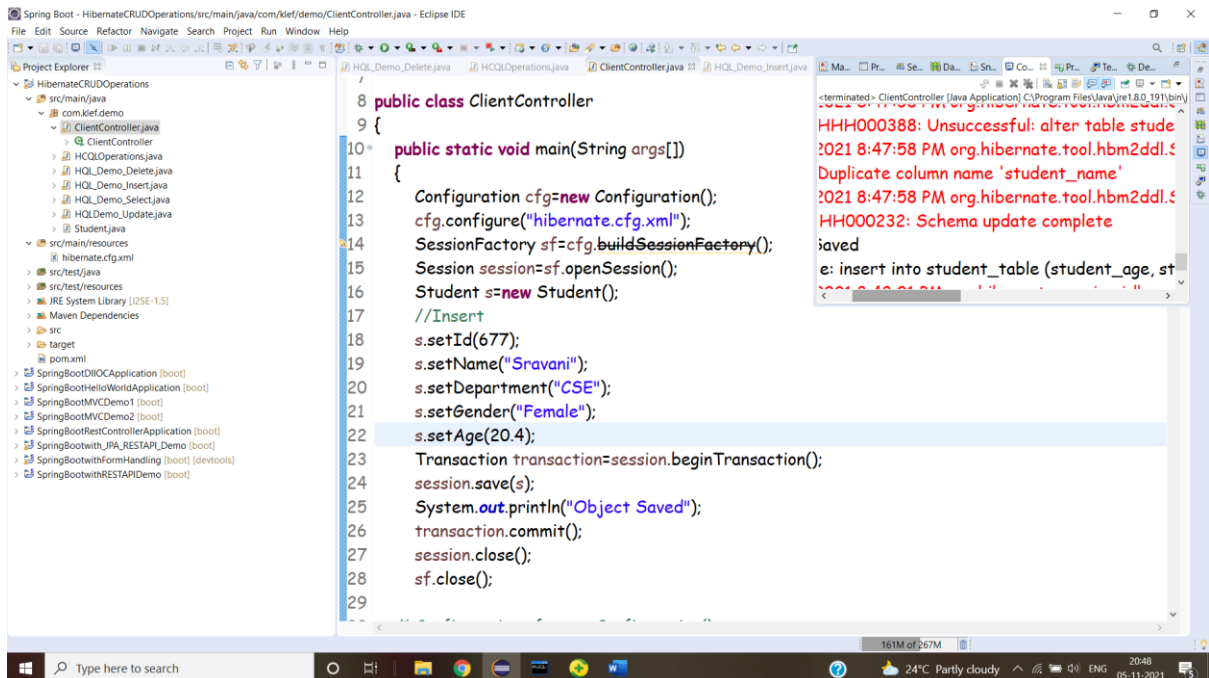
```
1 package com.klef.demo;
2 import javax.persistence.Column;
3 import javax.persistence.Entity;
4 import javax.persistence.Table;
5 @Entity
6 @Table(name="student_table")
7 public class Student
8 {
9     @Id
10    @Column(name="student_id")
11    private int id;
12    @Column(name="student_name")
13    private String name;
14    @Column(name="student_department")
15    private String department;
16    @Column(name="student_gender")
17    private String gender;
18    @Column(name="student_age")
19    private double age;
20    public int getId() {
21        return id;
22    }
23    public void setId(int id) {
24        this.id = id;
25    }
26    public String getName() {
27        return name;
28    }
29    public void setName(String name) {
30        this.name = name;
31    }
32    public String getDepartment() {
33        return department;
34    }
35    public void setDepartment(String department) {
36        this.department = department;
37    }
38 }
```

Hibernate.cfg.xml



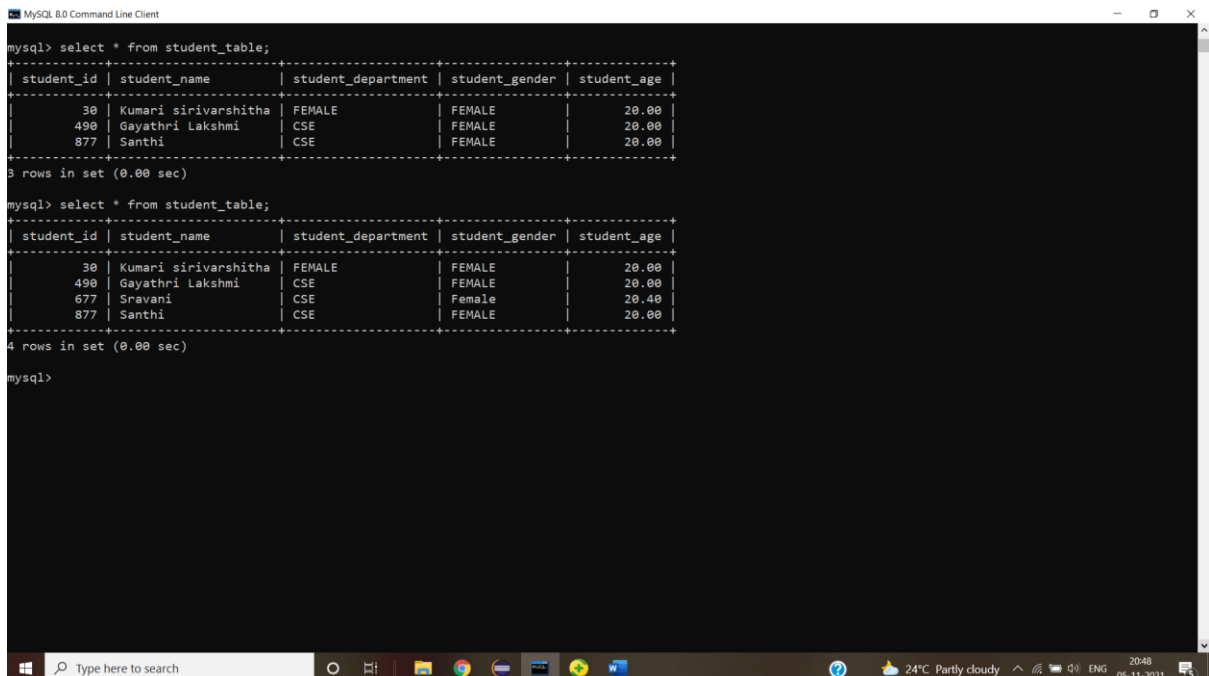
```
1 <?xml version="1.0" encoding="UTF-8"?>
2
3 <!DOCTYPE hibernate-configuration PUBLIC
4     "-//Hibernate/Hibernate Configuration DTD 3.0//EN"
5     "http://www.hibernate.org/dtd/hibernate-configuration-3.0.dtd">
6 <hibernate-configuration>
7     <session-factory>
8         <property name="connection.driver.class">com.mysql.cj.jdbc.Driver</property>
9         <property name="connection.url">jdbc:mysql://localhost:3306/jfsd</property>
10        <property name="connection.user">root</property>
11        <property name="connection.password">root</property>
12        <property name="show_sql">>true</property>
13        <property name="dialect">org.hibernate.dialect.MySQLDialect</property>
14        <property name="hbm2ddl.auto">update</property>
15        <mapping class="com.klef.demo.Student"></mapping>
16    </session-factory>
17 </hibernate-configuration>
```

Insert Operation:



The screenshot shows the Eclipse IDE with the `ClientController.java` file open. The code defines a `ClientController` class with a `main` method that configures Hibernate, opens a session, and inserts a new student record. The console window on the right displays the following error messages:

```
<terminated> ClientController [Java Application] C:\Program Files\Java\jre1.8.0_191\bin\java.exe: insert into student_table (student_age, student_name) values (20.4, 'Srivani'); Duplicate column name 'student_name'
```



The screenshot shows the MySQL 8.0 Command Line Client with the following queries and results:

```
mysql> select * from student_table;
```

student_id	student_name	student_department	student_gender	student_age
30	Kumari sirivarshitha	FEMALE	FEMALE	20.00
490	Gayathri Lakshmi	CSE	FEMALE	20.00
877	Santhi	CSE	FEMALE	20.00

3 rows in set (0.00 sec)

```
mysql> select * from student_table;
```

student_id	student_name	student_department	student_gender	student_age
30	Kumari sirivarshitha	FEMALE	FEMALE	20.00
490	Gayathri Lakshmi	CSE	FEMALE	20.00
677	Srivani	CSE	Female	20.40
877	Santhi	CSE	FEMALE	20.00

4 rows in set (0.00 sec)

```
mysql>
```

Update Operation

The screenshot shows the Eclipse IDE with the `ClientController.java` file open. The code includes a comment `/* Update */` and the following logic: a new `Configuration` is created, `hibernate.cfg.xml` is configured, a `SessionFactory` is built, a session is opened, an object is loaded by ID (677), its name is set to "Kadavakollu Sravani", the session is updated, the transaction is committed, and the session is closed. A console window on the right shows the following output:

```
<terminated> ClientController [Java Application] C:\Program Files\Java\jre1.8.0_191\bin\javaw.exe
Nov 05, 2021 8:50:24 PM org.hibernate.tool.hbm2ddl.SchemaGenerator generate
ERROR: HHH000388: Unsuccessful: alter table student_name
Nov 05, 2021 8:50:24 PM org.hibernate.tool.hbm2ddl.SchemaGenerator generate
ERROR: Duplicate column name 'student_name'
Nov 05, 2021 8:50:24 PM org.hibernate.tool.hbm2ddl.SchemaGenerator generate
INFO: HHH000232: Schema update complete
Hibernate: select student0_ student_id as student_id from student
Object updated
```

The screenshot shows the MySQL 8.0 Command Line Client with three queries executed on the `student_table`.

Query 1:

```
mysql> select * from student_table;
```

student_id	student_name	student_department	student_gender	student_age
30	Kumari sirivarshitha	FEMALE	FEMALE	20.00
490	Gayathri Lakshmi	CSE	FEMALE	20.00
877	Santhi	CSE	FEMALE	20.00

3 rows in set (0.00 sec)

Query 2:

```
mysql> select * from student_table;
```

student_id	student_name	student_department	student_gender	student_age
30	Kumari sirivarshitha	FEMALE	FEMALE	20.00
490	Gayathri Lakshmi	CSE	FEMALE	20.00
677	Sravani	CSE	Female	20.40
877	Santhi	CSE	FEMALE	20.00

4 rows in set (0.00 sec)

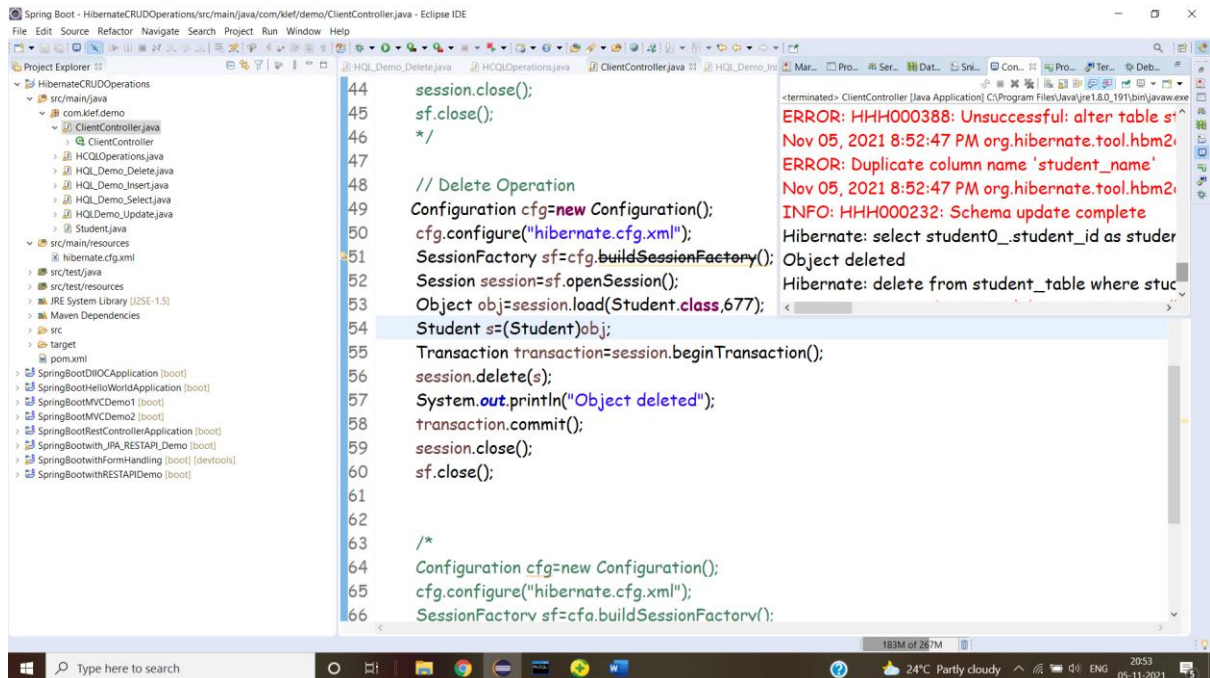
Query 3:

```
mysql> select * from student_table;
```

student_id	student_name	student_department	student_gender	student_age
30	Kumari sirivarshitha	FEMALE	FEMALE	20.00
490	Gayathri Lakshmi	CSE	FEMALE	20.00
677	Kadavakollu Sravani	CSE	Female	20.40
877	Santhi	CSE	FEMALE	20.00

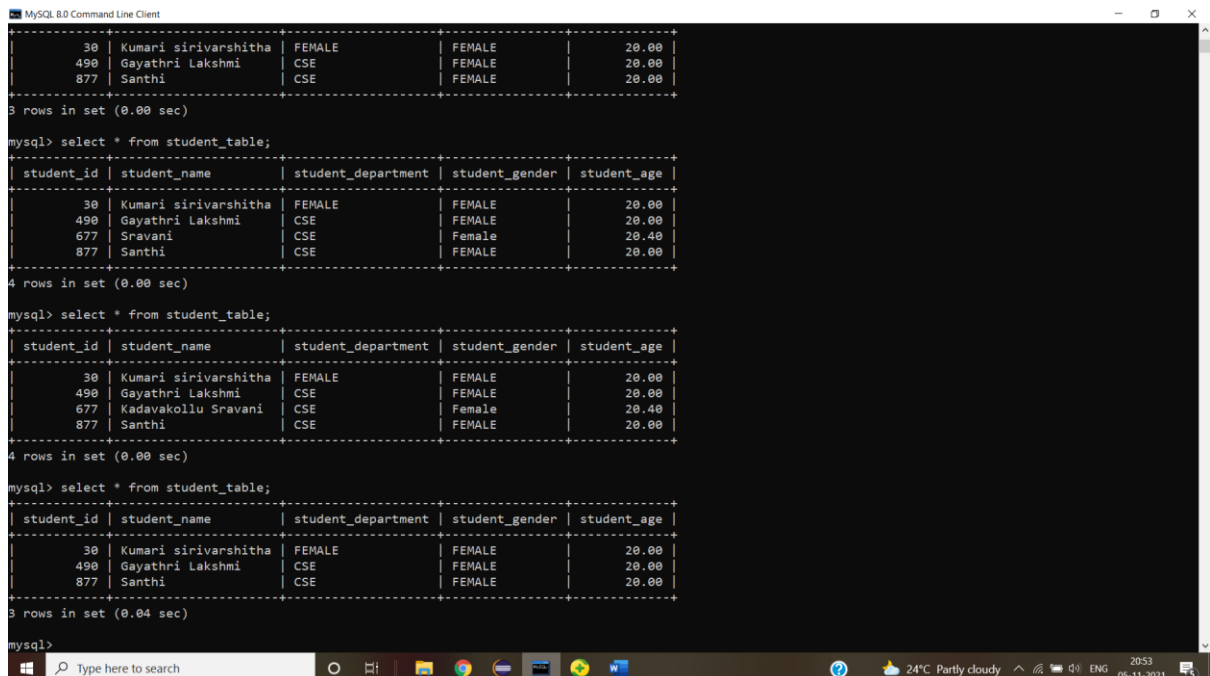
4 rows in set (0.00 sec)

Delete Operation



The screenshot shows the Eclipse IDE with a Java project named 'hibernateCRUDOperations'. The 'ClientController.java' file is open, showing a delete operation. The code includes session management, transaction handling, and a delete statement. The console window on the right displays the following messages:

```
<terminated> ClientController [Java Application] C:\Program Files\Java\jre1.8.0_191\bin\javaw.exe
ERROR: HHH000388: Unsuccessful: alter table 'student'
Nov 05, 2021 8:52:47 PM org.hibernate.tool.hbm2ddl.SchemaExporter alterTable
ERROR: Duplicate column name 'student_name'
Nov 05, 2021 8:52:47 PM org.hibernate.tool.hbm2ddl.SchemaExporter alterTable
INFO: HHH000232: Schema update complete
Hibernate: select student0__student_id as student_id from student_table where student_id=?
Object deleted
Hibernate: delete from student_table where student_id=?
```



The screenshot shows the MySQL 8.0 Command Line Client with the following queries and results:

```
mysql> select * from student_table;
+-----+-----+-----+-----+-----+
| student_id | student_name | student_department | student_gender | student_age |
+-----+-----+-----+-----+-----+
| 30 | Kumari sirivarshitha | FEMALE | FEMALE | 20.00 |
| 490 | Gayathri Lakshmi | CSE | FEMALE | 20.00 |
| 877 | Santhi | CSE | FEMALE | 20.00 |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

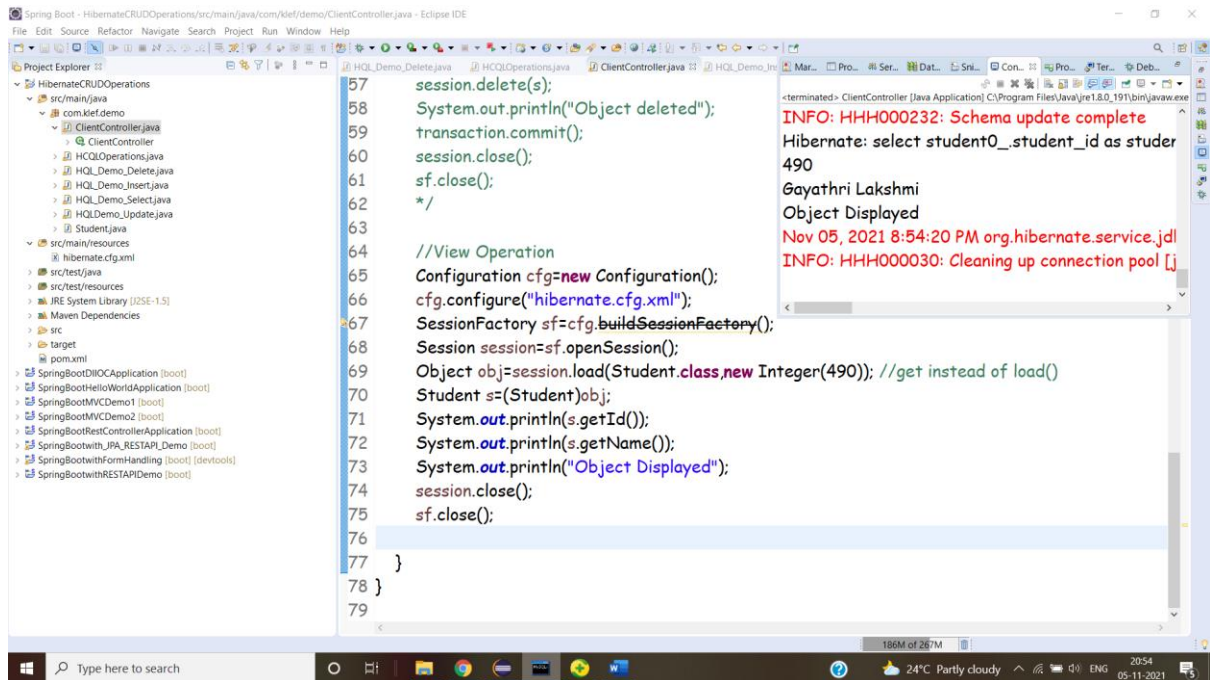
mysql> select * from student_table;
+-----+-----+-----+-----+-----+
| student_id | student_name | student_department | student_gender | student_age |
+-----+-----+-----+-----+-----+
| 30 | Kumari sirivarshitha | FEMALE | FEMALE | 20.00 |
| 490 | Gayathri Lakshmi | CSE | FEMALE | 20.00 |
| 677 | Sravani | CSE | Female | 20.40 |
| 877 | Santhi | CSE | FEMALE | 20.00 |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> select * from student_table;
+-----+-----+-----+-----+-----+
| student_id | student_name | student_department | student_gender | student_age |
+-----+-----+-----+-----+-----+
| 30 | Kumari sirivarshitha | FEMALE | FEMALE | 20.00 |
| 490 | Gayathri Lakshmi | CSE | FEMALE | 20.00 |
| 677 | Kadavakollu Sravani | CSE | Female | 20.40 |
| 877 | Santhi | CSE | FEMALE | 20.00 |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> select * from student_table;
+-----+-----+-----+-----+-----+
| student_id | student_name | student_department | student_gender | student_age |
+-----+-----+-----+-----+-----+
| 30 | Kumari sirivarshitha | FEMALE | FEMALE | 20.00 |
| 490 | Gayathri Lakshmi | CSE | FEMALE | 20.00 |
| 877 | Santhi | CSE | FEMALE | 20.00 |
+-----+-----+-----+-----+-----+
3 rows in set (0.04 sec)

mysql>
```

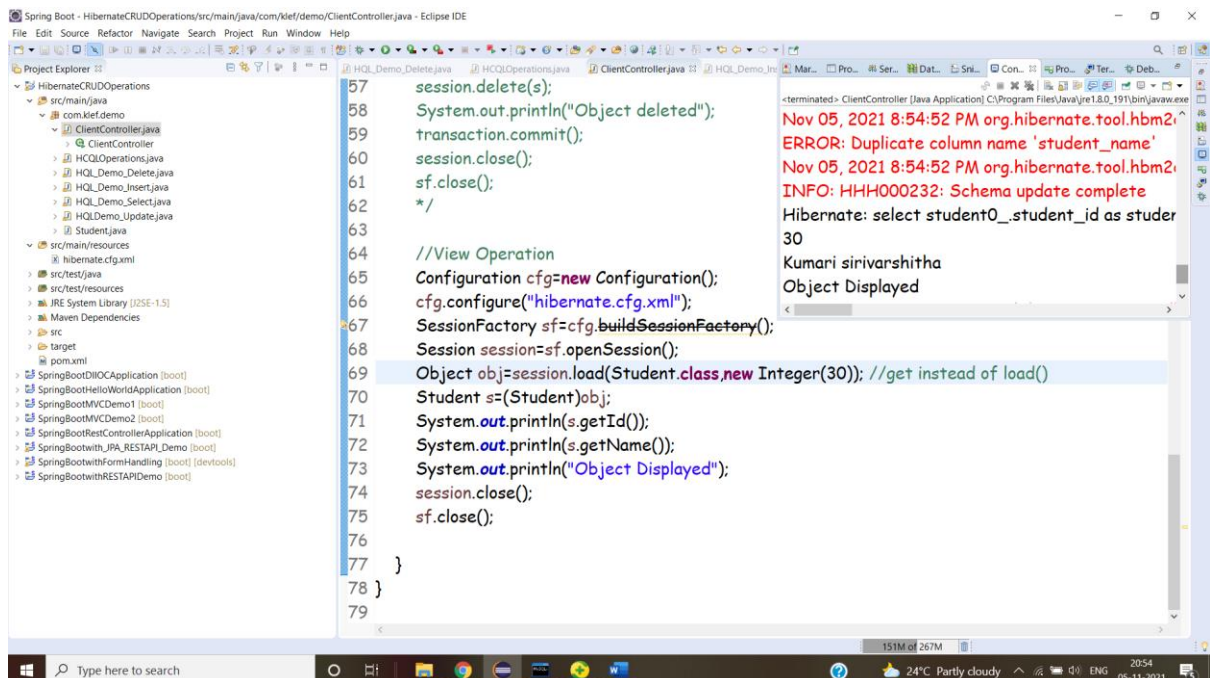

View Operation



```
57 session.delete(s);
58 System.out.println("Object deleted");
59 transaction.commit();
60 session.close();
61 sf.close();
62 */
63
64 //View Operation
65 Configuration cfg=new Configuration();
66 cfg.configure("hibernate.cfg.xml");
67 SessionFactory sf=cfg.buildSessionFactory();
68 Session session=sf.openSession();
69 Object obj=session.load(Student.class,new Integer(490)); //get instead of load()
70 Student s=(Student)obj;
71 System.out.println(s.getId());
72 System.out.println(s.getName());
73 System.out.println("Object Displayed");
74 session.close();
75 sf.close();
76
77 }
78 }
79 }
```

Console Output:

```
<terminated> ClientController [Java Application] C:\Program Files\Java\jre1.8.0_191\bin\javaw.exe
INFO: HHH000232: Schema update complete
Hibernate: select student0_student_id as studer
490
Gayathri Lakshmi
Object Displayed
Nov 05, 2021 8:54:20 PM org.hibernate.service.jdl
INFO: HHH000030: Cleaning up connection pool [j
```



```
57 session.delete(s);
58 System.out.println("Object deleted");
59 transaction.commit();
60 session.close();
61 sf.close();
62 */
63
64 //View Operation
65 Configuration cfg=new Configuration();
66 cfg.configure("hibernate.cfg.xml");
67 SessionFactory sf=cfg.buildSessionFactory();
68 Session session=sf.openSession();
69 Object obj=session.load(Student.class,new Integer(30)); //get instead of load()
70 Student s=(Student)obj;
71 System.out.println(s.getId());
72 System.out.println(s.getName());
73 System.out.println("Object Displayed");
74 session.close();
75 sf.close();
76
77 }
78 }
79 }
```

Console Output:

```
<terminated> ClientController [Java Application] C:\Program Files\Java\jre1.8.0_191\bin\javaw.exe
Nov 05, 2021 8:54:52 PM org.hibernate.tool.hbm2
ERROR: Duplicate column name 'student_name'
Nov 05, 2021 8:54:52 PM org.hibernate.tool.hbm2
INFO: HHH000232: Schema update complete
Hibernate: select student0_student_id as studer
30
Kumari sirivarshitha
Object Displayed
```