



Experiment - 9

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Aim:

Perform CRUD (Create, Read, Update, Delete) operations on a Student entity using Hibernate ORM with MySQL.

Objective:

To learn Hibernate configuration, entity mapping, and CRUD execution with MySQL.

Apparatus / Input Used:

Java, Hibernate, MySQL, Eclipse / IntelliJ, hibernate.cfg.xml

Requirements:

- Create Student entity (id, name, age)
- Configure Hibernate using hibernate.cfg.xml
- Implement SessionFactory
- Perform Insert, Read, Update, Delete

Procedure:

1. Configure MySQL database and add Hibernate dependencies.
2. Create hibernate.cfg.xml with DB credentials.
3. Create Student.java with @Entity, @Id, @GeneratedValue annotations.
4. Create HibernateUtil class for SessionFactory.
5. Implement CRUD using session.save(), session.get(), session.update(),

Code

Student.java

```
@Entity  
public class Student
```

```
{  
    @Id  
    @GeneratedValue(strategy = GenerationType.IDENTITY)  
    private int id;  
    private String name;  
    private int age;  
    //getters, setters, constructors  
}
```

Main.java

```
Session session=HibernateUtil.getSessionFactory().openSession();  
Transaction tx = session.beginTransaction();  
Student s = new Student();  
s.setName("John");  
s.setAge(22);  
session.save(s);  
Student st = session.get(Student.class,1);  
st.setAge(23);  
session.update(st);  
session.delete(st);  
tx.commit();  
session.close();
```

SAMPLE OUTPUT:

```
Insert Success!  
Fetch: ID=1, Name=John, Age=22  
Update Success: Age changed to 23  
Delete Success!
```