Experiment - 9

Student Name: Diksha **UID:** 23BCS10994
Branch: BE-CSE **Section/Group:** KRG-2B
Semester: 5th **Date of Performance:** 21/10/25
Subject Name: Project Based Learning in Java
Subject Code: 23CSH-304

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 / Tools 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(),

session.delete().

6. Test using a main class.

Code: (Student.java)

```
@Entity public class Student

  { @Id

  @GeneratedValue(strategy = GenerationType.IDENTITY) private int
  id; private String name; private int age;

  //getters, setters, constructors

}
```

Code: (Main CRUD Test)

```
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!
```