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**Program Name: - HQL-App**

```
package com.app.bean;
```

```
import javax.persistence.Entity;
```

```
import javax.persistence.Id; import
```

```
javax.persistence.Table;
```

```
@Entity
```

```
@Table(name = "employee_hql")
```

```
public class Employee {
```

```
    @Id
```

```
    private int empId;
```

```
private String empName;
```

```
private String empAddress;
```

```
private double empSal;
```

```
public int getEmpId() {
```

```
    return empId;
```

```
}
```

```
public void setEmpId(int empId) {
```

```
    this.empId = empId;
```

```
}
```

```
public String getEmpName() {
```

```
    return empName;
```

```
}
```

```
public void setEmpName(String empName) {
```

```
    this.empName = empName;
```

```
}
```

```
public String getEmpAddress() {
```

```
    return empAddress;
```

```
}
```

```
public void setEmpAddress(String empAddress) {
```

```

        this.empAddress = empAddress;
    }

    public double getEmpSal() {
        return empSal;
    }

    public void setEmpSal(double empSal) {
        this.empSal = empSal;
    }

    public Employee(int empld, String empName, String empAddress, double empSal) {
        super();
        this.empld = empld;
        this.empName = empName;
        this.empAddress = empAddress;
        this.empSal = empSal;
    }

    public Employee() {
        super();
        // TODO Auto-generated constructor stub
    }
}

```

---

```

package com.app.factory;

```

```

import com.app.dao.EmployeeDao; import
com.app.dao.impl.EmployeeDaoImpl;

```

```

public class EmployeeFactory {    public static
EmployeeDao getEmployeeDao() {
        return new EmployeeDaoImpl();
    }
}

```

---

```

package com.app.dao;

```

```
import java.util.List;

import com.app.bean.Employee;

public interface EmployeeDao {

    int updateData(Employee emp);

    int insertData(Employee emp); int

    deleteData(int id);

    List<Employee> listEmployee();

    List<Employee> getEmployee(int id);

}
```

---

```
package com.app.dao.impl;
```

```
import java.util.List;
```

```
import org.hibernate.Session; import
org.hibernate.Transaction; import
org.hibernate.query.Query;
```

```
import com.app.bean.Employee; import
com.app.dao.EmployeeDao; import
com.app.utility.EmployeeUtil;
```

```
public class EmployeeDaoImpl implements EmployeeDao{

    public int updateData(Employee emp) {

        // TODO Auto-generated method stub

        Session session=EmployeeUtil.getSession();

        Transaction tx=null;

        try {

            tx=session.beginTransaction();

            Query<Employee>query=session.createQuery("update Employee set
empAddress='"+emp.getEmpAddress()+"' where empId='"+emp.getEmpId());
```

```

        session.update(emp);
        tx.commit();
        EmployeeUtil.closeSession();
        return 1;

    } catch (Exception e) {
        // TODO: handle exception
        e.printStackTrace();
tx.rollback();

        return 0;
    }

}

public int insertData(Employee emp) {
    // TODO Auto-generated method stub
Session session=EmployeeUtil.getSession(); Transaction
tx=null;
try {
    tx=session.beginTransaction();
session.persist(emp);
    tx.commit();
    EmployeeUtil.closeSession();
    return 1;

} catch (Exception e) {
    // TODO: handle exception
    e.printStackTrace();
tx.rollback();    return 0;
}

}

```

```

public int deleteData(int id) {
    // TODO Auto-generated method stub
    Session session=EmployeeUtil.getSession(); Transaction
    tx=null;
    try {
        tx=session.beginTransaction();

String hql="delete from Employee where empId =" +id;
        Query<Employee>query=session.createQuery(hql);

        int row=query.executeUpdate();
        tx.commit();
        EmployeeUtil.closeSession();
        return row;
    } catch (Exception e) {
        // TODO: handle exception
        e.printStackTrace();
        tx.rollback();
return 0;
    }
}

```

```

public List<Employee> listEmployee() {
    // TODO Auto-generated method stub
    Session session=EmployeeUtil.getSession();
    Transaction tx=null;
    String hql="From Employee";
    Query<Employee>query=session.createQuery(hql);
    List<Employee> list=query.list();
    EmployeeUtil.closeSession();
return list;

}

```

```

    public List<Employee> getEmployee(int id) {
        // TODO Auto-generated method stub
        // TODO Auto-generated method stub
        Session session=EmployeeUtil.getSession();
        Transaction tx=null;
        String hql="From Employee Where empId =" +id;
        Query<Employee>query=session.createQuery(hql);
        //query.setParameter(1, id);
        List<Employee> list=query.list();
EmployeeUtil.closeSession();
        return list;
    }
}

```

---

```

package com.app.utility;

```

```

import org.hibernate.Session; import
org.hibernate.SessionFactory; import
org.hibernate.cfg.Configuration;

```

```

public class EmployeeUtil {
    private static SessionFactory factory;
    static {
        try {
            factory = new
Configuration().configure("com/app/config/employee.cfg.xml").buildSessionFactory();

        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}

```

```

        static ThreadLocal<Session> local=new
ThreadLocal(); static Session session=null; public static
Session getSession() {
    try {
        if(local.get()==null) {
            session=factory.openSession();
            local.set(session);
            return session; }else {
                return local.get();
            }
        } catch (Exception e) {
            // TODO: handle exception
            return null;
        }
    }
    public static void closeSession() {
        try {
            session.close();
        } catch (Exception e) {
            // TODO: handle exception
            e.printStackTrace();
        }
    }
}

```

---

```

package com.app.test;

```

```

import java.util.List; import
java.util.Scanner;

```

```

import com.app.bean.Employee; import
com.app.dao.EmployeeDao; import
com.app.factory.EmployeeFactory;

```

```

public class Client {

    public static void main(String[] args) {

        // TODO Auto-generated method stub

        EmployeeDao
empDao=EmployeeFactory.getEmployeeDao(); Scanner sn
=new Scanner(System.in); int choice; String conti; do {

            System.out.println("!-----HQL Operation-----!");

            System.out.println("1. insert data");

            System.out.println("2. update data");

            System.out.println("3. delete data");

            System.out.println("4. Get All data");

            System.out.println("5. get Single data");

            System.out.println("!-----End-----!");

System.out.println("Enter you choice:");

            choice=sn.nextInt();

            switch (choice) {

                case 1:

                    System.out.println("Enter your id:");

                    int id=sn.nextInt();

                    System.out.println("Enter your name:");

                    String name=sn.next();

                    System.out.println("Enter your Address:");

                    String address=sn.next();

                    System.out.println("Enter your Salary:");

                    double sal=sn.nextDouble();

                    Employee emp=new Employee(id, name, address, sal);

                    int i=empDao.insertData(emp);

                    if(i==1)

                    {

                        System.out.println("Data inserted successfully.");

```



```
    }else {  
        System.out.println("Data Not Inserted something went wrong..!");  
    }  
    break;
```

case 2:

```
    System.out.println("Enter your id:");  
    int id2=sn.nextInt();  
    System.out.println("Enter your name:");  
    String name1=sn.next();  
    System.out.println("Enter your Address:");  
    String address1=sn.next();  
    System.out.println("Enter your Salary:");  
    double sal1=sn.nextDouble();  
    Employee emp5=new Employee(id2, name1, address1, sal1);  
    int i2=empDao.updateData(emp5);  
    if(i2==1)  
    {  
        System.out.println("Data update successfully.");  
    }else {  
        System.out.println("Data Not Inserted something went wrong..!");  
    }  
    break;
```

case 3:

```
    System.out.println("Enter your id:");  
    int id1=sn.nextInt();  
  
    int row=empDao.deleteData(id1);  
    if(row==1)  
    {  
        System.out.println("Data deleted successfully.");  
    }else {  
        System.out.println("Data Not Inserted something went wrong..!");  
    }
```

```
}  
break;
```

case 4:

```
List<Employee> list=empDao.listEmployee();  
if(list!=null)  
{  
    for(Employee e:list) {  
        System.out.println(e.getEmpId()+"\t"+e.getEmpName()+"\t"  
+e.getEmpAddress()+"\t"+e.getEmpSal());  
    }  
}else {  
    System.out.println("something went wrong..!");  
}  
break;
```

case 5:

```
System.out.println("Enter your id:");  
int empId=sn.nextInt();  
  
List<Employee> emp1=empDao.getEmployee(empId);  
if(emp1!=null)  
{  
    for(Employee e:emp1) {  
        System.out.println(e.getEmpId()+"\t"+e.getEmpName()+"\t"  
+e.getEmpAddress()+"\t"+e.getEmpSal());  
    }  
}else {  
    System.out.println("Data Not Inserted something went wrong..!");  
}  
break;
```

default:

```
break;
```

```
}
```

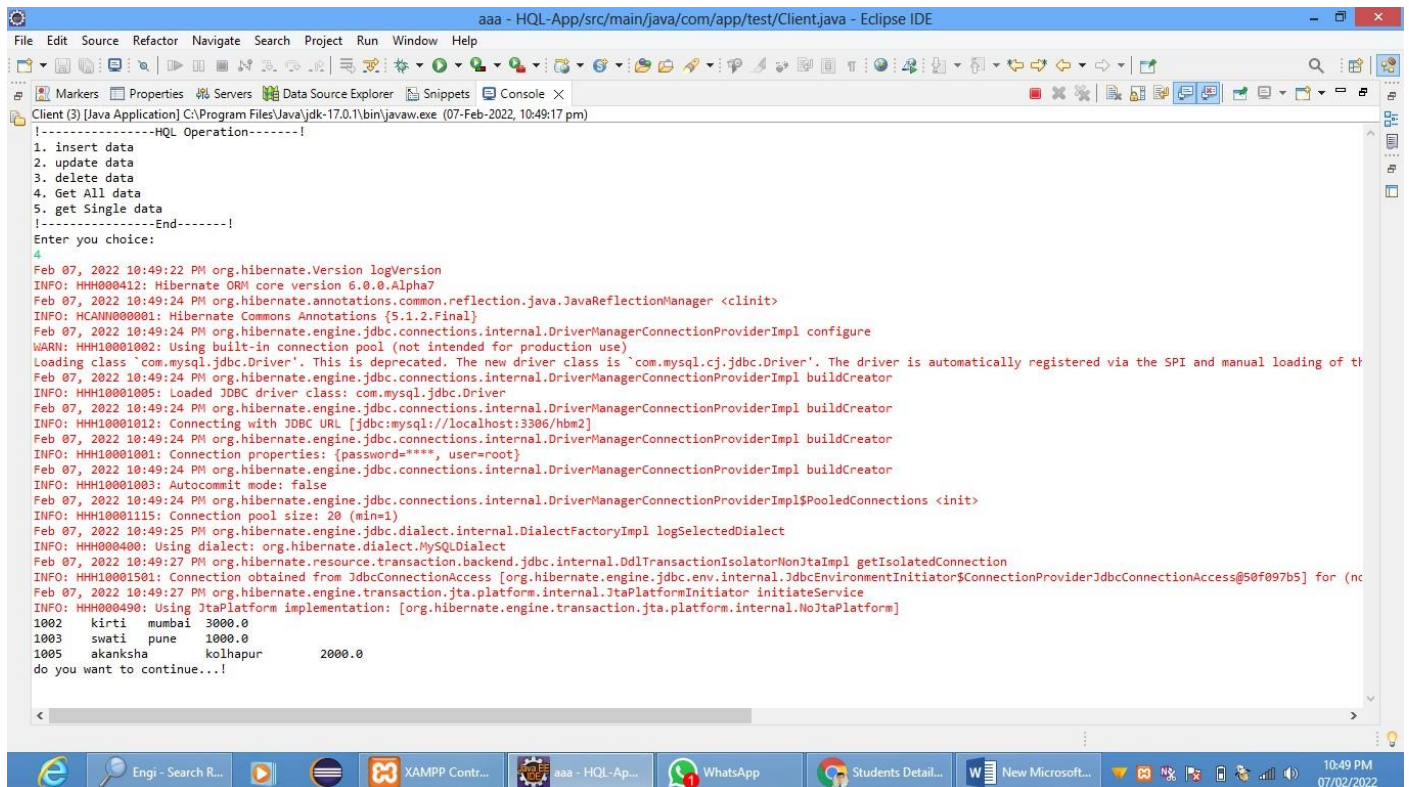
```
System.out.println("do you want to continue...!"); conti=sn.next();
```

```
}while(conti.equalsIgnoreCase("y"));
```

```
}
```

```
}
```

## Output



```
Client (3) [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe (07-Feb-2022, 10:49:17 pm)
!-----HQL Operation-----!
1. insert data
2. update data
3. delete data
4. Get All data
5. get Single data
!-----End-----!
Enter you choice:
4
Feb 07, 2022 10:49:22 PM org.hibernate.Version logVersion
INFO: HHH0000412: Hibernate ORM core version 6.0.0.Alpha7
Feb 07, 2022 10:49:24 PM org.hibernate.annotations.common.reflection.java.JavaReflectionManager <clinit>
INFO: HCAW0000001: Hibernate Commons Annotations {5.1.2.Final}
Feb 07, 2022 10:49:24 PM org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl configure
WARN: HHH10001002: Using built-in connection pool (not intended for production use)
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 SPI and manual loading of the
Feb 07, 2022 10:49:24 PM org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl buildCreator
INFO: HHH10001005: Loaded JDBC driver class: com.mysql.jdbc.Driver
Feb 07, 2022 10:49:24 PM org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl buildCreator
INFO: HHH10001012: Connecting with JDBC URL [jdbc:mysql://localhost:3306/hbm2]
Feb 07, 2022 10:49:24 PM org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl buildCreator
INFO: HHH10001001: Connection properties: {password=****, user=root}
Feb 07, 2022 10:49:24 PM org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl buildCreator
INFO: HHH10001003: Autocommit mode: false
Feb 07, 2022 10:49:24 PM org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl$PooledConnections <init>
INFO: HHH10001115: Connection pool size: 20 (min=1)
Feb 07, 2022 10:49:25 PM org.hibernate.engine.jdbc.dialect.internal.DialectFactoryImpl logSelectedDialect
INFO: HHH000400: Using dialect: org.hibernate.dialect.MySQLDialect
Feb 07, 2022 10:49:27 PM org.hibernate.resource.transaction.backend.jdbc.internal.DdlTransactionIsolatorNonJtaImpl getIsolatedConnection
INFO: HHH10001501: Connection obtained from JdbcConnectionAccess [org.hibernate.engine.jdbc.env.internal.JdbcEnvironmentInitiator$ConnectionProviderJdbcConnectionAccess@50f097b5] for (nc
Feb 07, 2022 10:49:27 PM org.hibernate.engine.transaction.jta.platform.internal.JtaPlatformInitiator initiateService
INFO: HHH000490: Using JtaPlatform implementation: [org.hibernate.engine.transaction.jta.platform.internal.NoJtaPlatform]
1002 kirti mumbai 3000.0
1003 swati pune 1000.0
1005 akanksha kolhapur 2000.0
do you want to continue...!
```