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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 empld;
```

```
    private String empName;
```

```
    private String empAddress;
```

```
    private double empSal;
```

```
    public int getEmpld() {
```

```
        return empld;
```

```
    }
```

```
    public void setEmpld(int empld) {
```

```
        this.empld = empld;
```

```
    }
```

```
    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 empId, String empName, String empAddress, double empSal) {
        super();
        this.empId = empId;
        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();

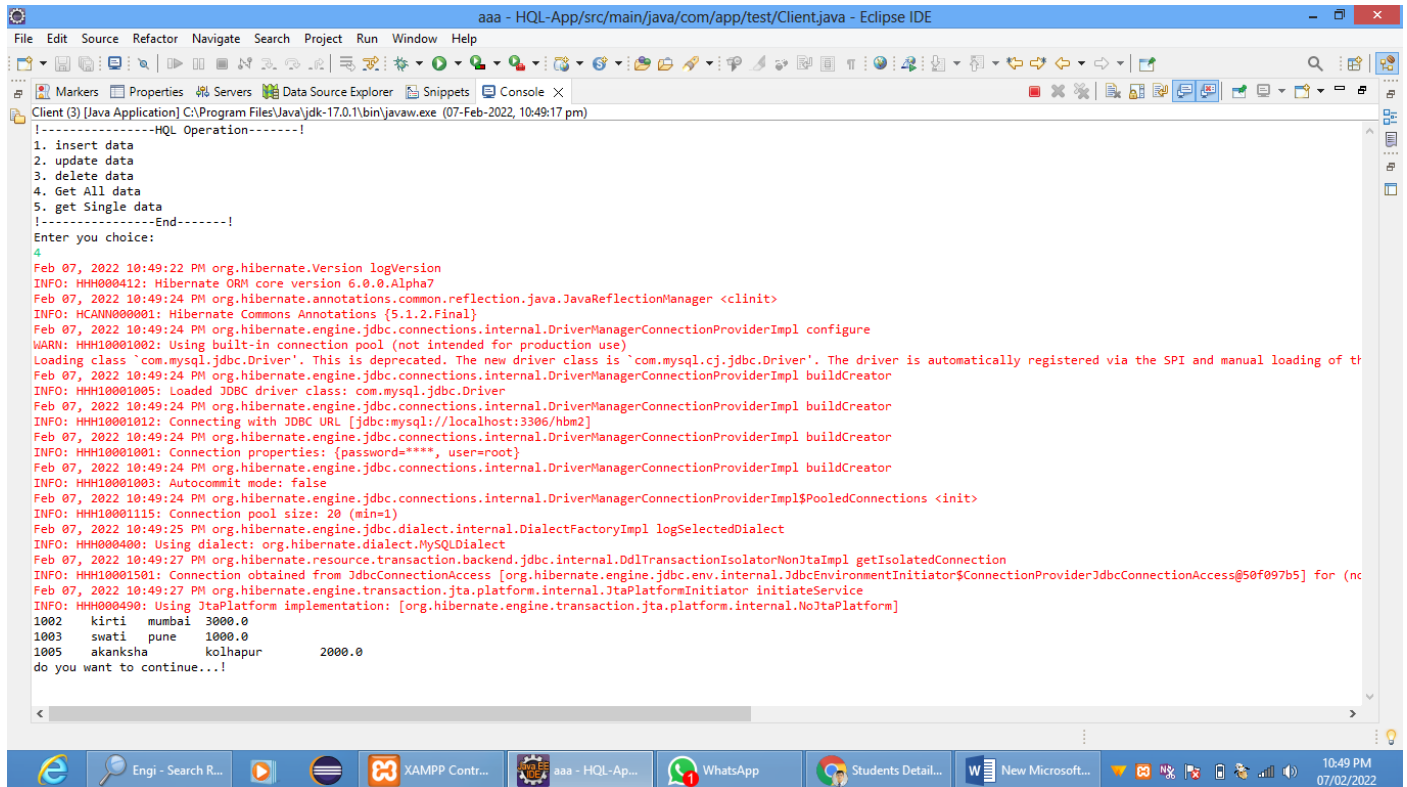
```

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

```
}
```

```
}
```

Output



The screenshot shows the Eclipse IDE interface with the console window open. The console displays the output of a Java application named 'HQL-App'. The output starts with a menu of options: 1. insert data, 2. update data, 3. delete data, 4. Get All data, 5. get Single data. The user has entered 'y' to continue. The application then logs various Hibernate and JDBC messages, including version information, connection pool configuration, and a warning about a deprecated driver class. Finally, it displays a table of data with columns 'id', 'name', 'age', and 'address'. The table contains three rows of data: (1002, kirti, mumbai, 3000.0), (1003, swati, pune, 1000.0), and (1005, akanksha, kolhapur, 2000.0). The application ends with the message 'do you want to continue...!'.

```
aaa - HQL-App/src/main/java/com/app/test/Client.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Markers Properties Servers Data Source Explorer Snippets Console X
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:
y
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: HCA00000001: 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 th
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...!
```