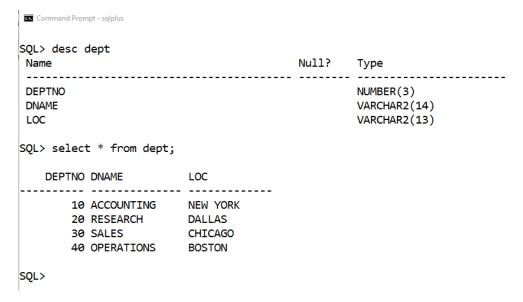
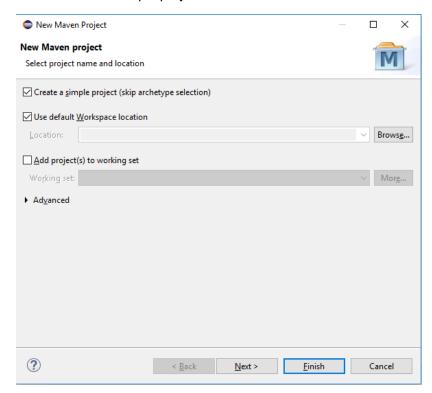
First Hibernate Demo Program

Step by Step creation of Hibernate application using maven

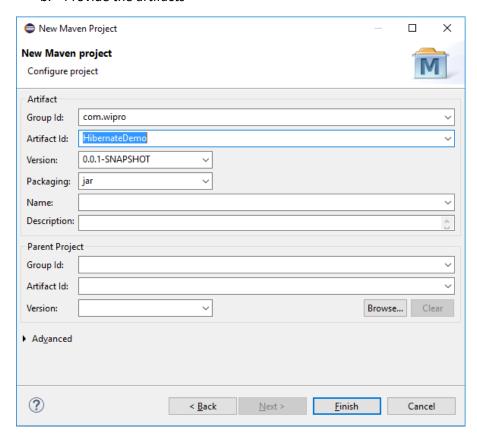
- 1. To start with let us take any table from any database.
 - a. Here we would be using Oracle 11g
 - b. Login into SCOTT schema
 - c. Verify dept table.



- 2. Now let us Create a maven Project using hibernate to insert a record into the dept table.
 - a. Create a simple project



b. Provide the artifacts



- 3. Add the hibernate and Oracle dpendency in the POM file
 - a. To get the required version details check the below link https://mvnrepository.com/artifact/org.hibernate/hibernate-core
 - b. Add the dependency code and save POM file

```
<dependency>
<groupId>org.hibernate</groupId>
<artifactId>hibernate-core</artifactId>
<version>5.4.9.Final</version>
</dependency>
<dependency>
<dependency>
<groupId>oracle</groupId>
<artifactId>ojdbc6</artifactId>
<version>11.2.0.3.0</version>
</dependency></dependency>
```

```
🎦 Project Explorer 🌣 📅 🗖 🔝 HibernateDemo1/pom.xml 🕸
                           > # src/main/java
                                                    <modelVersion>4.0.0</modelVersion>
  > 🕮 src/main/resources
                                                   <groupId>com.wipro</groupId>
                                                   <artifactId>HibernateDemo1</artifactId>
<version>0.0.1-SNAPSHOT</version>
  > 乃 src/test/java
  > # src/test/resources
                                          8⊖ <dependencies
  > A JRE System Library [J2SE-1.5]
                                          9

10⊖ ⟨dependency⟩

11 ⟨groupId⟩org.hibernate⟨groupId⟩

12 ⟨artifactId⟩hibernate-core⟨fartifactId⟩

13 ⟨version>5.4.9.Final⟨version⟩

14 ⟨dependency⟩

16 ⟨groupId⟩com.oracle⟨groupId⟩

17 ⟨artifactId⟩ojdbc6⟨fartifactId⟩

18 ⟨version>11.2.0€⟨version⟩

19 ⟨dependency⟩
  > 📂 target
    M pom.xml
                                                     </dependency>
                                                   </dependencies>
                                           22 </project>
```

- c. In case oracle depency throws Missing artifact error, load the ojdbc6.jar as external jar file [Just like how we do for JDBC apps]
- 4. Create the Department bean class to represent the dept table structure
 - a. Create a package called com.wipro.bean
 - b. Under the package create class called Department

```
package com.wipro.bean;
public class Department {
      private int deptno;
      private String deptName;
      private String location;
      public Department() {
      public Department(int deptno, String deptName, String location) {
             super();
             this.deptno = deptno;
             this.deptName = deptName;
             this.location = location;
      public int getDeptno() {
             return deptno;
      }
      public void setDeptno(int deptno) {
             this.deptno = deptno;
      public String getDeptName() {
             return deptName;
      public void setDeptName(String deptName) {
             this.deptName = deptName;
      }
      public String getLocation() {
             return location;
      public void setLocation(String location) {
             this.location = location;
      }
```

```
@Override
    public String toString() {
        return "Department [deptno=" + deptno + ", deptName=" + deptName
+ ", location=" + location + "]";
    }
}
```

```
_ _
🏊 Project Explorer 💢
                                                             Department.java ⋈
                                   M HibernateDemo1/pom.xml
                                       package com.wipro.bean;
public class Department {
  private int deptno;
    v 🌐 com.wipro.bean
                                           private String deptName;
                                     5
                                           private String location;
      > Department.java
                                     6
                                     78
                                           public Department() {
  > # src/main/resources
                                     8
  > # src/test/java
  > # src/test/resources
                                            public Department(int deptno, String deptName, String location) {
                                    10⊝
  > M JRE System Library [J2SE-1.5]
                                    11
                                                super();
```

- 5. Create a xml file name department.hbm.xml in src/main/resources
 - a. Hibernate mapping file to map the Department class and variables with dept table and columns in Oracle database.
 - b. Right click on src/main/resources new → others → XML → XML file

```
_ _
Project Explorer 🔀
                                M HibernateDemo1/pom.xml
                                                        🕱 department.hbm.xml 🖂
                                 1 <?xml version="1.0" encoding="UTF-8"?>
                                6 2 <!DOCTYPE hibernate-mapping</pre>

▼ 

HibernateDemo1

                                 3 PUBLIC "-//Hibernate/Hibernate Mapping DTD 3.0//EN"
  4 "http://hibernate.sourceforge.net/hibernate-mapping-3.0.dtd">
    🗸 🌐 com.wipro.bean
                                  5⊖ <hibernate-mapping>
                                  6⊖ <class name="com.wipro.bean.Department" table="dept">
      > Department.java
                                      <id name="deptno" column="deptno" type="int">
  <generator class="assigned"></generator>
     x department.hbm.xml
                                 9
  > # src/test/java
                                 10
                                        cproperty name="deptName" column="dname" type="string">
  > 乃 src/test/resources
                                        12 </class>
  > March JRE System Library [J2SE-1.5]
                                 13
  Mayen Dependencies
                               14 </hibernate-mapping>
  > A Referenced Libraries
  > 🗁 src
```

6. Create Hibernate configuration file in src/main/resources called **hibernate.cfg.xml** here this name is important as it is the default name the config method would search

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE hibernate-configuration
PUBLIC "-//Hibernate/Hibernate Configuration DTD 3.0//EN"
"http://hibernate.sourceforge.net/hibernate-configuration-3.0.dtd">
<hibernate-configuration>
<session-factory>
      property name="hibernate.dialect">
org.hibernate.dialect.Oracle10gDialect</property>
      property name="hibernate.connection.driver class">
oracle.jdbc.OracleDriver</property>
      cproperty name="hibernate.connection.url">
jdbc:oracle:thin:@localhost:1521:orcl</property>
      cproperty name="hibernate.connection.username">scott
      cproperty name="hibernate.connection.password">tiger
      cproperty name="hibernate.show_sql">true
      <mapping resource="department.hbm.xml"/>
</session-factory>
</hibernate-configuration>
```

```
_ _
🏊 Project Explorer 🛭
                              M HibernateDemo1/pom.xml
                                                                                          x hibernate.cfg.xml 🖂
                                                      Department.java
                                                                       x department.hbm.xml
                                1 <?xml version="1.0" encoding="UTF-8"?>
                    2 <!DOCTYPE hibernate-configuration
3 PUBLIC "-//Hibernate/Hibernate Configuration DTD 3.0//EN"
  4 "http://hibernate.sourceforge.net/hibernate-configuration-3.0.dtd">
   🗸 🌐 com.wipro.bean
      > 🗾 Department.java
                                6⊖ <hibernate-configuration>
                               cyroperty name="hibernate.dialect">org.hibernate.dialect.Oracle10gDialect/property>
      department.hbm.xml
                                      x hibernate.cfg.xml
                               10
                                      property name="hibernate.connection.username">scott/property>
cproperty name="hibernate.connection.password">tiger/property>
  > 乃 src/test/java
  > # src/test/resources
                               13 property name="hibernate.show_sql">true
  > 🔼 JRE System Library [J2SE-1.5]
                               14
  > Maven Dependencies
                               15
  > Neferenced Libraries
                                       <mapping resource="department.hbm.xml"/>
  > 🗁 src
                                17 </session-factory
                                18 </hibernate-configuration>
  > 📂 target
    nom vml
```

7. Create the main class named DepartmentAdmin under the package com.wipro.service to insert records into the dept table.

```
package com.wipro.services;

import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.Transaction;
import org.hibernate.cfg.Configuration;
import com.wipro.bean.Department;
```

```
public class DepartmentAdmin {
           public static void main(String[] args) {
                       Configuration cfg = new Configuration().configure();
                       SessionFactory sf = cfg.buildSessionFactory();
                       Session session = sf.openSession();
                       Transaction transaction = session.beginTransaction();
                      Department deptobj = new Department(50, "TT", "NJ");
                       session.save(deptobj);
                       transaction.commit();
                       System.out.println("Record inserted");
                      System.out.println(deptobj);
                       session.close();
           }
🊹 Project Explorer 🛭
                          department.hbm.xml
                                                                                                      x hibernate.cfg.xml
                                                                                                                         package com.wipro.services;

→ 

→ HibernateDemo1

                                     3⊖ import org.hibernate.Session;
  4 import org.hibernate.SessionFactory;
5 import org.hibernate.Transaction;
    🗸 🌐 com.wipro.bean
                                    6 import org.hibernate.cfg.Configuration;
      > 🚺 Department.java

→ 

⊕ com.wipro.services

                                  8 import com.wipro.bean.Department;
      > DepartmentAdmin.java
  10 public class DepartmentAdmin {
                                          blic class DepartmentAdmin {
  public static void main(String[] args) {
    Configuration cfg = new Configuration().configure();
    SessionFactory sf = cfg.buildSessionFactory();
    Session session = sf.openSession();
    Transaction transaction = session.beginTransaction();
    Department deptobj = new Department(50, "TT", "NJ");
    session.save(deptobj);
    transaction commit();

      department.hbm.xml
      x hibernate.cfg.xml
                                    12
  > 🍱 src/test/java
  > 乃 src/test/resources
                                    15
16
17
  > A JRE System Library [J2SE-1.5]
  > 🛋 Maven Dependencies
                                    18
                                                transaction.commit();
System.out.println("Record inserted");
  > 🛋 Referenced Libraries
  > 🗁 src
                                    20
                                                System.out.println(deptobj);
  > 🗁 target
                                    21
                                                session.close();
    m pom.xml
                                           }
                                    23 }
```

8. Run the application

a. Eclipse Console output

```
בארן: ועפאטשטיש: Using Jtariattorm implementation: porg.nipernate.engine.transaction.jta.plat
Hibernate: insert into dept (dname, loc, deptno) values (?, ?, ?)
Record inserted
Department [deptno=50, deptName=TT, location=NJ]
```

b. Database output

SQL> select * from dept;

DEPTNO	DNAME	LOC
	ACCOUNTING	NEW YORK
	RESEARCH SALES	DALLAS CHICAGO
	OPERATIONS TT	BOSTON NJ