Step 1: Prepare dynamic web project in eclips

**Download hibernate jar files from the link:** [**https://jar-download.com/download-handling.php**](https://jar-download.com/download-handling.php)

**Also download mysql connector jar file link:** [**https://dev.mysql.com/downloads/connector/j/?os=26**](https://dev.mysql.com/downloads/connector/j/?os=26)

Step2: Now go to your project right click on it and prepare source folder

As given name

**src/main/resources**

now right click on resources and prepare one xml file

names as below

**hibernate.cfg.xml**

**now copy below code**

<?xml version=*"1.0"* encoding=*"UTF-8"*?>

<!DOCTYPE hibernate-configuration PUBLIC

"-//Hibernate/Hibernate Configuration DTD 3.0//EN"

"http://www.hibernate.org/dtd/hibernate-configuration-3.0.dtd">

<hibernate-configuration>

<session-factory>

<property name=*"connection.driver\_class"*>com.mysql.cj.jdbc.Driver</property>

<property name=*"connection.url"*>jdbc:mysql://localhost:3306/ecommerce</property>

<property name=*"connection.username"*>root</property>

<property name=*"connection.password"*>Nikunj@123</property>

<property name=*"hbm2ddl.auto"*>update</property>

<property name=*"dialect"*>org.hibernate.dialect.MySQL8Dialect</property>

<property name=*"show\_sql"*>true</property>

</session-factory>

</hibernate-configuration>

Create student entity in src/main/java

**package** com.simplilearn;

**public** **class** Student {

**private** **int** id;

**private** String email;

**private** String password;

**private** String name;

**public** **int** getId() {

**return** id;

}

**public** **void** setId(**int** id) {

**this**.id = id;

}

**public** String getEmail() {

**return** email;

}

**public** **void** setEmail(String email) {

**this**.email = email;

}

**public** String getPassword() {

**return** password;

}

**public** **void** setPassword(String password) {

**this**.password = password;

}

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

}

Now again go to **src/main/resource**

And prepare new xml file with below name

**Student.hbm.xml**

And copy below code

<?xml version=*"1.0"* encoding=*"UTF-8"*?>

<!DOCTYPE hibernate-mapping PUBLIC

"-//Hibernate/Hibernate Mapping DTD 3.0//EN"

"http://www.hibernate.org/dtd/hibernate-mapping-3.0.dtd">

<hibernate-mapping package=*"com.simplilearn"*>

<class name=*"Student"* table=*"student"*>

<id name=*"id"* column=*"sid"*>

<generator class=*"increment"*></generator>

</id>

<property name=*"name"* type=*"string"*></property>

<property name=*"email"* type=*"string"*></property>

<property name=*"password"* type=*"string"*></property>

</class>

</hibernate-mapping>

Create a class with name HibernateUtil

**package** com.simplilearn;

**import** org.hibernate.SessionFactory;

**import** org.hibernate.boot.Metadata;

**import** org.hibernate.boot.MetadataSources;

**import** org.hibernate.boot.registry.StandardServiceRegistry;

**import** org.hibernate.boot.registry.StandardServiceRegistryBuilder;

**public** **class** HibernateUtil {

**private** **static** SessionFactory *sessionFactory*;

**static** {

**try** {

StandardServiceRegistry registry= **new** StandardServiceRegistryBuilder().

configure("hibernate.cfg.xml").build();

Metadata metadata= **new** MetadataSources(registry).getMetadataBuilder()

.build();

*sessionFactory*= metadata.getSessionFactoryBuilder().build();

}

**catch**(Exception e){

}

}

**public** **static** SessionFactory getSessionFactory() {

**return** *sessionFactory*;

}

}

**Go to src/main/web-app right click on it and prepare index.html file**

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<a href=*"init"*>Initialize Hibernate</a>

</body>

</html>

Prepare servlet named InitHibernate with mapping “/init”

**package** com.simplilearn;

**import** java.io.IOException;

**import** java.io.PrintWriter;

**import** javax.servlet.ServletException;

**import** javax.servlet.annotation.WebServlet;

**import** javax.servlet.http.HttpServlet;

**import** javax.servlet.http.HttpServletRequest;

**import** javax.servlet.http.HttpServletResponse;

**import** org.hibernate.Session;

**import** org.hibernate.SessionFactory;

@WebServlet("/init")

**public** **class** InitHibernate **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

**protected** **void** doGet(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

PrintWriter out= response.getWriter();

//connection pool

SessionFactory factory= HibernateUtil.*getSessionFactory*();

// connection

Session session= factory.openSession();

out.println("Hibernate Session Opened <br>");

session.close();

out.println("Hibernate Session closed <br>");

}

**protected** **void** doPost(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

// **TODO** Auto-generated method stub

doGet(request, response);

}

}

Run the project and check the out put

Now to prepare the same project by using annotation

Follow all the steps we had performed above

Just don’t prepare student.hbm.xml

Now go to the student.class and use annotations as mentioned below

**package** com.simplilearn;

**import** javax.persistence.Column;

**import** javax.persistence.Entity;

**import** javax.persistence.GeneratedValue;

**import** javax.persistence.GenerationType;

**import** javax.persistence.Id;

**import** javax.persistence.Table;

@Entity

@Table(name ="Student\_Table")

**public** **class** Student {

@Id

@Column(name="sid")

@GeneratedValue(strategy = GenerationType.***AUTO***)

**private** **int** id;

//@Column

**private** String email;

**private** String password;

**private** String name;

**public** **int** getId() {

**return** id;

}

**public** **void** setId(**int** id) {

**this**.id = id;

}

**public** String getEmail() {

**return** email;

}

**public** **void** setEmail(String email) {

**this**.email = email;

}

**public** String getPassword() {

**return** password;

}

**public** **void** setPassword(String password) {

**this**.password = password;

}

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

}

**LOG4J Integration**

Download jar file from: <http://www.java2s.com/Code/Jar/l/Downloadlog4jjar.htm>

Download slf4j jar from: <http://www.java2s.com/Code/Jar/s/Downloadslf4jjar.htm>

Prepare **log4j.properties** file inside resource folder

Change the path of your drive as per your requirenment

# Direct log messages to a log file

log4j.appender.file=org.apache.log4j.RollingFileAppender

log4j.appender.file.File=D:/hibernate.log

log4j.appender.file.MaxFileSize=1MB

log4j.appender.file.MaxBackupIndex=1

log4j.appender.file.layout=org.apache.log4j.PatternLayout

log4j.appender.file.layout.ConversionPattern=%d{ABSOLUTE} %5p %c{1}:%L - %m%n

# Direct log messages to stdout

log4j.appender.**stdout**=org.apache.log4j.ConsoleAppender

log4j.appender.**stdout**.Target=System.out

log4j.appender.**stdout**.layout=org.apache.log4j.PatternLayout

log4j.appender.**stdout**.layout.ConversionPattern=%d{ABSOLUTE} %5p %c{1}:%L - %m%n

# Root logger option

log4j.rootLogger=INFO, file, **stdout**

# Log everything. Good for troubleshooting

log4j.logger.org.hibernate=INFO

# Log all JDBC parameters

log4j.logger.org.hibernate.type=ALL

run your app once again and check the out put in console and file prepared inside your drive too