

# **Generate Hibernate Mapping for Oracle Database**

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<u>Hibernate</u> is a popular and high performance <u>object/relational persistence Java</u> development framework. <u>Visual Paradigm</u> provides comprehensive development environment for Java developers to design and generate persistence layer. This tutorial shows you how to transform database design, which is the ERD, to class diagram, and eventually generate source files and Hibernate mapping layer from it.

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# Creating object model from entity model

- 1. Download <u>Computer Sales.vpp</u>. You can also find this file at the bottom of this tutorial, under the **Resources** section.
- Open the downloaded project file in Visual Paradigm. You can open a project by selecting Project > Open from the application toolbar.
- 3. Before we continue, there is one important point to note here. In this tutorial, we are going to generate ORM code and Hibernate mapping that can work with an Oracle database. It is important to configure database setting by selecting Oracle as your database. Let's check. Select Tools > DB > Database Configuration... from the application toolbar. We have selected Oracle for you in the Database Configuration window. Do remember to do this yourself in real case. Besides, make sure you have entered the connection details as well in real usage. But to complete this tutorial, we can leave the connection settings unfilled. Let's close the Database Configuration now.

<b>\$</b>	Database Configuration	×
Language : Java V MySQL MariaDB MS SQL Server Voracle CyHSQL Sybase ASE	Database Setting Driver : Oracle9i/10g (or above) Driver file : Connection URL :	<ul> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> <li>Production ✓</li> <li>✓</li> </ul>
Sybase SQL Anywhere Sybase SQL Anywhere PostgreSQL Cloudscape/Derby DB2 Ingres	Hostname :     Database name :     idbc:oracle:thin:@ <host_name>:<port< th=""><th>: number&gt;:<database_name></database_name></th></port<></host_name>	: number>: <database_name></database_name>

4. Open the Entity Relationship Diagram (ERD) *Computer Sales* and take a look. The diagram contains a number of entities related to an ordering system designed for storing computer sales records.



5. In order to generate the Hibernate mapping and ORM source files, you need to synchronize the ERD and class diagram first. Right-click on the ERD and select **Synchronize to Class Diagram**.

6. The **Synchronize from Entity Relationship Diagram to Class Diagram** window appear. Enter *Class Model* as the class diagram name and click **OK**.

1	Synchronize from Entity Relationship Diagram to Class Diagram				
	Entity Relationship Diagram Computer Sales	Class Diagram Class Model	Preview Preview (791 x Stretch v		
	Reset Ignore Entities when	Synchronizing	OK Cancel		

7. The **Synchronize to Class Diagram** screen appear. We just keep the class and attribute names as suggested. Click **OK** to continue.

Entity / Column	Class / Attribute	
Customer	Customer	~
id	id	
cellphone	cellphone	
email_address	email_address	
Addresses	Addresses	
id	id	
address_1	address_1	
address_2	address_2	
address_3	address_3	
city	city	
country	country	
zip_code	zip_code	_
Parts_Sold	Parts_Sold	_
id	id	
computer_id	computer_id	_
agreed_price	agreed_price	
date	date	
remark	remark	_
Computers_Sold	Computers_Sold	_
id	id	_
agreed_price	agreed_price	
date	date	
remark	remark	
Computer_Payments	Computer_Payments	
Export Mapping Import Mappi	ing Type Mapping Option	
	-	

## 8. A class diagram is produced, based on the ERD.



# **Generating ORM Source and Hibernate Mapping**

1. There is a package header on top of the diagram, on the left hand side. The package header specifies the package where the classes under this diagram are stored. It affects both the structuring of model and the generated code. Without specifying any package header there, classes will all be placed at root, both in model and in generated code. Let's enter a package name. Double click on the package header and enter *com.computersales* as package header.



2. To generate Hibernate mapping, select **Tools > Hibernate > Generate Code...** from the application toolbar.

3. In the **Database Code Generation** window, specify the output path of source files, Hibernate mapping files, DDL and library files.

Database Code Generation				
Generate :	Code and Database	¥		
Language :	Java 🗸			
Output Path :	C:\Users\Peter\Documents\ComputerSales v			
Deploy To :	Standalone Application		~	
Code Database				
Framework :		Hibernate XML	~	
Error Handling :		Throw PersistentException	~	
Logging :		Print to Error Stream	~	

- 4. Click **OK** to start the generation.
- 5. Let's take a look at the generated files.



### 6. The source files are placed at **\${outputPath}\src**.

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	AddressesSetCollection.java	3/16/2016 5:20 PM	JAVA File	4 K
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	🧾 Computer_CategoryCriteria.java	3/16/2016 5:20 PM	JAVA File	2 K
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7. Let's open the generated source file.



8. The Hibernate mapping files are placed at **\${outputPath}\src\ormmapping**.

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	Parts_Sold.hbm.xml	3/16/2016 5:20 PM	XML File	2 KB
	Payment_Status.hbm.xml	3/16/2016 5:20 PM	XML File	1 KB
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9. Let's open the generated Hibernate mapping file.

PSPad - [C:\Users\Peter\Documents\ComputerSales\src\ormmapping\com\computersales\Address	es.hbm.xml] 🚽 🗖 🗙
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1 Addresses.hbm.xml	
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<pre>#?xml version="1.0" encoding="utf-8" ?&gt;</pre>	
Licensee: Peter	
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< DOCTYPE hibernate-mapping PUBLIC "-//Hibernate/Hibernate Mapping DTD 3.0//EN" "http://www.hibe	rnate.org/dtd/hibernate-maps
<hibernate-mapping></hibernate-mapping>	
<class lazy="false" name="com.computersales.Addresses" table="Addresses"></class>	
<id column="id" name="id" type="integer" unsaved-value="0"></id>	
<pre><generator class="native"></generator></pre>	
1d	
<pre><many-to-one <="" cascade="lock" class="com.computersales.Customer" column="cust_id" name="cust" pre=""></many-to-one></pre>	not-null="true" lazy="proxy"
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#### Resources

1. <u>Computer Sales.vpp</u>

#### **Related Links**

https://www.visual-paradigm.com/tutorials/generatehibernatemapwithoracledb.jsp

- <u>Tutorial Define Custom Implementations for ORM Persistable class</u>
- User's Guide Generating ORM Code from Database
- More database engineering features
- What is Entity Relationship Diagram (ERD)?

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