

**Oracle® Database**

Sample Schemas

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Oracle Database Sample Schemas 10g Release 1 (10.1)

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**Part No. B10771-01**

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# Preface

Oracle used the schema SCOTT with its two prominent tables EMP and DEPT tables for many years. With advances in Oracle Database technology, these tables have become inadequate to show even the most basic features of Oracle Database and other Oracle products. As a result, many other schemas have been created over the years to suit the needs of product documentation, courseware, software development, and application demos.

This preface contains these topics:

- [Audience](#)
- [About the Sample Schemas](#)
- [Customer Benefits of the Sample Schemas](#)
- [Oracle Database Sample Schemas Design Principles](#)
- [Organization](#)
- [Related Documentation](#)
- [Conventions](#)
- [Documentation Accessibility](#)

## Audience

The Sample Schemas are for all users of the seed database, which is installed when you install Oracle Database.

## About the Sample Schemas

The new Oracle Database Sample Schemas provide a common platform for examples in each release of Oracle Database. All Oracle Database documentation and training materials are being converted to the Sample Schemas environment as those materials are updated.

The Oracle Database Sample Schemas are a set of interlinked schemas. This set of schemas provides a layered approach to complexity:

- A simple schema (Human Resources, `HR`) is useful for introducing basic topics. An extension to this schema supports Oracle Internet Directory demos.
- A second schema (Order Entry, `OE`) is useful for dealing with matters of intermediate complexity. Many datatypes are available in this schema, including nonscalar datatypes.
- The Online Catalog (`OC`) subschema is a collection of object-relational database objects built inside the `OE` schema.
- The Product Media schema (`PM`) is dedicated to multimedia datatypes.
- A set of schemas gathered under the main schema name `IX` (Information Exchange) can demonstrate Oracle Advanced Queuing capabilities.
- The Sales History schema (`SH`) is designed to allow for demos with large amounts of data. An extension to this schema provides support for advanced analytic processing.

## Customer Benefits of the Sample Schemas

- **Continuity of context.** When encountering the same set of tables everywhere, users, students, and developers can spend less time becoming familiar with the schema and more time understanding or explaining the technical concepts.
- **Usability.** Customers can use these schemas in the seed database to run examples that are shown in Oracle documentation and training materials. This first-hand access to examples facilitates both conceptual understanding and application development.
- **Quality.** Through central maintenance and testing of both the creation scripts that build the Sample Schemas and the examples that run against the schemas, the quality of Oracle documentation and training materials is enhanced.

# Oracle Database Sample Schemas Design Principles

The Sample Schemas have been created and are enhanced with the following design principles in mind:

- **Simplicity and Ease of Use.** The HR and OE schemas are intentionally simple. They will not become overly complex by the addition of features. Rather, they are intended to provide a graduated path from the simple to intermediate levels of database use.
- **Relevance for Typical Users.** The base schemas and the extensions bring to the foreground the functionality that customers typically use. Only the most commonly used database objects are built automatically in the schemas. The entire set of schemas provides a foundation upon which one can expand to illustrate additional functionality.
- **Extensibility.** The Sample Schemas provide a logical and physical foundation for adding objects to demonstrate functionality beyond the fundamental scope.
- **Relevance.** The Sample Schemas are designed to be applicable to e-business and other significant industry trends (for example, XML). When this goal conflicts with the goal of simplicity, schema extensions are used to showcase the trends in focus.

## Organization

This document contains the following chapters:

### **Chapter 1, "Installation"**

This chapter describes how to install the Oracle Database Sample Schemas.

### **Chapter 2, "Rationale"**

This chapter describes the fictitious company on which the Sample Schemas are based.

### **Chapter 3, "Diagrams"**

This chapter contains diagrams of the Sample Schemas.

### **Chapter 4, "Sample Schema Scripts and Object Descriptions"**

This chapter lists the Sample Schema creation scripts and describes the Sample Schema objects.

## Related Documentation

In North America, printed documentation is available for sale in the Oracle Store at  
<http://oraclestore.oracle.com/>

Customers in Europe, the Middle East, and Africa (EMEA) can purchase documentation from

<http://www.oraclebookshop.com/>

Other customers can contact their Oracle representative to purchase printed documentation.

To download free release notes, installation documentation, white papers, or other collateral, please visit the Oracle Technology Network (OTN). You must register online before using OTN; registration is free and can be done at

<http://otn.oracle.com/admin/account/membership.html>

If you already have a username and password for OTN, then you can go directly to the documentation section of the OTN Web site at

<http://otn.oracle.com/docs/index.htm>

To access the database documentation search engine directly, please visit

<http://tahiti.oracle.com>

## Conventions

This section describes the conventions used in the text and code examples of this documentation set. It describes:

- [Conventions in Text](#)
- [Conventions in Code Examples](#)

### Conventions in Text

We use various conventions in text to help you more quickly identify special terms. The following table describes those conventions and provides examples of their use.

Convention	Meaning	Example
<b>Bold</b>	Bold typeface indicates terms that are defined in the text or terms that appear in a glossary, or both.	When you specify this clause, you create an <b>index-organized table</b> .
<i>Italics</i>	Italic typeface indicates book titles or emphasis.	<i>Oracle Database Concepts</i> Ensure that the recovery catalog and target database do <i>not</i> reside on the same disk.
UPPERCASE monospace (fixed-width) font	Uppercase monospace typeface indicates elements supplied by the system. Such elements include parameters, privileges, datatypes, RMAN keywords, SQL keywords, SQL*Plus or utility commands, packages and methods, as well as system-supplied column names, database objects and structures, usernames, and roles.	You can specify this clause only for a NUMBER column.  You can back up the database by using the BACKUP command.  Query the TABLE_NAME column in the USER_TABLES data dictionary view.  Use the DBMS_STATS.GENERATE_STATS procedure.

Convention	Meaning	Example
lowercase monospace (fixed-width) font	<p>Lowercase monospace typeface indicates executables, filenames, directory names, and sample user-supplied elements. Such elements include computer and database names, net service names, and connect identifiers, as well as user-supplied database objects and structures, column names, packages and classes, usernames and roles, program units, and parameter values.</p> <p><b>Note:</b> Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.</p>	<p>Enter <code>sqlplus</code> to open SQL*Plus.</p> <p>The password is specified in the <code>orapwd</code> file.</p> <p>Back up the datafiles and control files in the <code>/disk1/oracle/dbs</code> directory.</p> <p>The <code>department_id</code>, <code>department_name</code>, and <code>location_id</code> columns are in the <code>hr.departments</code> table.</p> <p>Set the <code>QUERY_REWRITE_ENABLED</code> initialization parameter to <code>true</code>.</p> <p>Connect as <code>oe</code> user.</p> <p>The <code>JRepUtil</code> class implements these methods.</p>
<i>lowercase italic monospace (fixed-width) font</i>	Lowercase italic monospace font represents placeholders or variables.	<p>You can specify the <code>parallel_clause</code>.</p> <p>Run <code>Uold_release.SQL</code> where <code>old_release</code> refers to the release you installed prior to upgrading.</p>

## Conventions in Code Examples

Code examples illustrate SQL, PL/SQL, SQL\*Plus, or other command-line statements. They are displayed in a monospace (fixed-width) font and separated from normal text as shown in this example:

```
SELECT username FROM dba_users WHERE username = 'MIGRATE';
```

The following table describes typographic conventions used in code examples and provides examples of their use.

Convention	Meaning	Example
[ ]	Brackets enclose one or more optional items. Do not enter the brackets.	DECIMAL ( <i>digits</i> [ , <i>precision</i> ])
{ }	Braces enclose two or more items, one of which is required. Do not enter the braces.	{ENABLE   DISABLE}
	A vertical bar represents a choice of two or more options within brackets or braces. Enter one of the options. Do not enter the vertical bar.	{ENABLE   DISABLE} [COMPRESS   NOCOMPRESS]
...	Horizontal ellipsis points indicate either:	<p>CREATE TABLE ... AS <i>subquery</i>;</p> <p>SELECT <i>col1</i>, <i>col2</i>, ... , <i>coln</i> FROM employees;</p>
.	That we have omitted parts of the code that are not directly related to the example	
.	That you can repeat a portion of the code	
.	Vertical ellipsis points indicate that we have omitted several lines of code not directly related to the example.	<p>SQL&gt; SELECT NAME FROM V\$DATAFILE; NAME ----- ----- /fs1/dbs/tbs_01.dbf /fs1/dbs/tbs_02.dbf . . . /fs1/dbs/tbs_09.dbf 9 rows selected.</p>
Other notation	You must enter symbols other than brackets, braces, vertical bars, and ellipsis points as shown.	acctbal NUMBER(11,2); acct CONSTANT NUMBER(4) := 3;

Convention	Meaning	Example
<i>Italics</i>	Italicized text indicates placeholders or variables for which you must supply particular values.	CONNECT SYSTEM/ <i>system_password</i> DB_NAME = <i>database_name</i>
UPPERCASE	Uppercase typeface indicates elements supplied by the system. We show these terms in uppercase in order to distinguish them from terms you define. Unless terms appear in brackets, enter them in the order and with the spelling shown. However, because these terms are not case sensitive, you can enter them in lowercase.	SELECT last_name, employee_id FROM employees; SELECT * FROM USER_TABLES; DROP TABLE hr.employees;
lowercase	Lowercase typeface indicates programmatic elements that you supply. For example, lowercase indicates names of tables, columns, or files.  <b>Note:</b> Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.	SELECT last_name, employee_id FROM employees; sqlplus hr/hr CREATE USER mjones IDENTIFIED BY ty3MU9;

## Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For additional information, visit the Oracle Accessibility Program Web site at

<http://www.oracle.com/accessibility/>

**Accessibility of Code Examples in Documentation** JAWS, a Windows screen reader, may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, JAWS may not always read a line of text that consists solely of a bracket or brace.

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# Installation

During a complete installation of Oracle Database, the Sample Schemas can be installed automatically with the seed database. If for some reason the seed database is removed from your system, you will need to reinstall the Sample Schemas before you can duplicate the examples you find in Oracle documentation and training materials.

This chapter describes how to install the Sample Schemas. It contains the following sections:

- [Using the Database Configuration Assistant](#)
- [Manually Installing the Sample Schemas](#)
- [Resetting the Sample Schemas](#)

---

**Caution:** By installing any of the Oracle Database Sample Schemas, you will destroy any previously installed schemas that use any of the following user names:

- HR
- OE
- PM
- SH
- IX

Data contained in any of the these schemas will be lost by running any of the installation scripts described in this section. You should not use Oracle Database Sample Schemas for your personal or business data and applications. They are meant to be used for demonstration purposes only.

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## Using the Database Configuration Assistant

Using DBCA is by far the most intuitive and simple way to install the Sample Schemas. Step 9 of the database creation process lets you configure the Sample Schemas you wish to use in your database.

- The checkbox "Example Schemas" needs to be checked for any Sample Schema to be created.
- DBCA installs all five schemas (HR, OE, PM, IX, SH) in your database.

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**Note:** At the end of the installation process, a window displays the accounts that have been created and their lock status. All of the Sample Schemas are locked. You can unlock the accounts at this point in the installation process. Alternatively, after installation is complete, you can unlock the schemas with an `ALTER USER ... ACCOUNT UNLOCK` statement.

---

The Sample Schemas and objects that are available to you depend on the edition of Oracle you install and its configuration. Please consult the following table to see which schemas you can install (limitations apply):

Schema	Oracle Database Personal Edition	Oracle Database Standard Edition	Oracle Database Enterprise Edition
HR	OK	OK	OK
OE	OK	OK	OK
PM	OK	OK	OK
IX	OK	OK	OK
SH	Not available	Not available	Needs Partitioning Option installed

## Manually Installing the Sample Schemas

This section describes how to install the Sample Schemas manually.

### Schema Dependencies

Various dependencies have been established among the schemas. Therefore, when you create the schemas manually, you must create them in the following order: HR, OE, PM, IX, and SH.

Use this sequence to create the schemas:

1. Create the HR schema.
2. Create the OE schema: The HR schema must already be present, and you must know the password for the HR schema so that you can grant HR object privileges to OE. Some HR tables are visible to the OE user through the use of private synonyms. In addition, some OE tables have foreign key relationships to HR tables.

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**Note:** The OE schema requires the database to be enabled for spatial data. You can accomplish this during installation or afterward using the Database Configuration Assistant.

---

3. Create the PM schema: Foreign key relationships require that the OE schema already exist when the PM schema is created. You need to know the password for OE to grant to PM the right to establish and use these foreign keys.

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**Note:** The PM schema requires the database to be enabled for the Java Virtual Machine (JVM) and *interMedia*. You can accomplish this during installation or afterward using the Database Configuration Assistant.

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4. Create the IX schema: The information exchange schema IX is based on order entry data in OE. Again, foreign key relationships require that the OE schema already be present when the IX schema is created. You need to know the password for OE to grant to IX the right to establish and use these foreign keys.
5. Create the SH schema. The SH schema logically depends on the OE schema, although nothing prevents you from creating this schema on its own, without the four other schemas.

## Installing the Human Resources (HR) Schema

All scripts necessary to create this schema reside in \$ORACLE\_HOME/demo/schema/human\_resources.

You need to call only one script, `hr_main.sql`, to create all objects and load the data. Running `hr_main.sql` accomplishes the following tasks:

1. Prompts for passwords and tablespace names used within the scripts.
2. Removes any previously installed HR schema.
3. Creates the user HR and grants the necessary privileges.
4. Connects as HR.
5. Calls the scripts that create and populate the schema objects.

For a complete listing of the scripts and their functions, please refer to [Table 4-1](#) on page 4-6.

A pair of optional scripts, `hr_dn_c.sql` and `hr_dn_d.sql`, is provided as a schema extension. To prepare the Human Resources schema for use with the Directory capabilities of Oracle Internet Directory, run the `hr_dn_c.sql` create script. If you want to return to the initial setup of the HR schema, use the script `hr_dn_d.sql` to reverse the effects of `hr_dn_c.sql` and remove the column added by this extension.

The file used to drop the HR schema is `hr_drop.sql`.

## Installing the Order Entry (OE) Schema and its Online Catalog (OC) Subschema

All scripts necessary to create this schema reside in \$ORACLE\_HOME/demo/schema/order\_entry.

You need to call only one script, oe\_main.sql, to create all objects and load the data. Running oe\_main.sql accomplishes the following tasks:

1. Prompts for passwords and tablespace names used within the scripts.
2. Removes any previously installed OE schema.
3. Creates the user OE and grants the necessary privileges.
4. Connects as OE.
5. Calls the scripts that create and populate the schema objects.

For a complete listing of the scripts and their functions, please refer to [Table 4-2](#) on page 4-9.

The files used to drop the OE schema and OC subschema are oe\_drop.sql and oc\_drop.sql.

## Installing the Product Media (PM) Schema

All files necessary to create this schema reside in \$ORACLE\_HOME/demo/schema/product\_media.

You need to call only one script, pm\_main.sql, to create all objects and load the data. Running pm\_main.sql accomplishes the following tasks:

1. Prompts for passwords and tablespace names used within the scripts, as well as datafile and log file directories.
2. Removes any previously installed PM schema.
3. Creates the user PM and grants the necessary privileges.
4. Connects as PM.
5. Calls the following scripts that create and populate the schema objects.

For a complete listing of the scripts and their functions, please refer to [Table 4-3](#) on page 4-16.

The file used to drop the PM schema is pm\_drop.sql.

---

**Note:** The SQL\*Loader data file `pm_p_lob.dat` contains hard-coded absolute path names that have been set during installation. Before attempting to load the data in a different environment, you should first edit the path names in this file.

---

## Installing the Information Exchange (IX) Schema

All files necessary to create this schema reside in `$ORACLE_HOME/demo/schema/info_exchange`.

You need to call only one script, `ix_main.sql`, to create all objects and load the data. Running `ix_main.sql` accomplishes the following tasks:

1. Prompts for passwords and tablespace names used within the scripts.
2. Removes any previously installed `IX` schema.
3. Creates the user `IX` and grants the necessary privileges.
4. Connects as `IX`.
5. Calls the scripts that create and populate the schema.

For a complete listing of the scripts and their functions, please refer to **Table 4–4** on page 4-18.

The file used for dropping all queues in an orderly fashion is `ix_drop.sql`.

## Installing the Sales History (SH) Schema

All files necessary to create this schema reside in `$ORACLE_HOME/demo/schema/sales_history`.

You need to call only one script, `sh_main.sql`, to create all objects and load the data. Running `sh_main.sql` accomplishes the following tasks:

1. Prompts for passwords and tablespace names used within the scripts, as well as datafile and log file directories.
2. Removes any previously installed `SH` schema.
3. Creates the user `SH` and grants the necessary privileges.
4. Connects as `SH`.
5. Calls the scripts that create and populate the schema objects.

For a complete listing of the scripts and their functions, please refer to [Table 4–5](#) on page 4-24.

---

**Note:** The dimension tables PROMOTIONS, CUSTOMERS, PRODUCTS and the fact table SALES are loaded by SQL\*Loader. Then, two directory paths are created inside the database to point to the load and log file locations. This allows the loading of the table COSTS by using the external table sales\_transactions\_ext.

---

A pair of optional scripts, sh\_olp\_c.sql and sh\_olp\_d.sql, is provided as a schema extension. To prepare the Sales History schema for use with the advanced analytic capabilities of OLAP Services, run the sh\_olp\_c.sql create script. If you want to return to the initial setup of the SH schema, use the script sh\_olp\_d.sql to erase the effects of sh\_olp\_c.sql and reinstate dimensions as they were before.

The file used to drop the SH schema is sh\_drop.sql.

## Resetting the Sample Schemas

To reset the Sample Schemas to their initial state, from the SQL\*Plus command-line interface, use the following syntax:

```
@?/demo/schema/mksample systempwd syspwd hrpwd oepwd pmpwd ixpwd shpwd
```

In place of the parameters *systempwd*, *syspwd*, *hrpwd*, *oepwd*, *pmpwd*, *ixpwd*, and *shpwd* provide the passwords for SYSTEM and SYS, and the HR, OE, PM, and IX schemas.

The mksample script produces several log files located in the directory \$ORACLE\_HOME/demo/schema/log/:

- *mkverify.log* is the Sample Schema creation log file.
- *hr\_main.log* is the HR schema creation log file.
- *oe\_oc\_main.log* is the OE schema creation log file.
- *pm\_main.log* is the PM schema creation log file.
- *pm\_p\_lob.log* is the SQL\*Loader log file for PM.PRINT\_MEDIA.
- *ix\_main.log* is the IX schema creation log file.
- *sh\_main.log* is the SH schema creation log file.

- `cust.log` is the SQL\*Loader log file for SH.CUSTOMERS.
- `prod.log` is the SQL\*Loader log file for SH.PRODUCTS.
- `promo.log` is the SQL\*Loader log file for SH.PROMOTIONS.
- `sales.log` is the SQL\*Loader log file for SH.SALES.
- `sales_ext.log` is the external table log file for SH.COSTS.

In most situations, there is no difference between installing a particular Sample Schema for the first time or reinstalling it over a previously installed version. The `*_main.sql` scripts drop the schema users and all their objects.

In some cases, complex interobject relationships in the OE or IX schemas prevent the `DROP USER ... CASCADE` operations from completing normally. To correct these rare cases, use one of the following procedures:

For the OC catalog subschema of the OE schema:

1. Connect as the user OE.
2. Execute the script `oc_drop.sql`.
3. Connect as SYSTEM.
4. Ensure that no user is connected as OE:

```
SELECT username FROM v$session;
```

5. Drop the user:

```
DROP USER oe CASCADE;
```

For the IX schemas:

1. Connect as SYSTEM.
  2. Ensure that no user is connected as a IX user:
- ```
SELECT username FROM v$session WHERE username like 'IX%';
```
3. Drop the schemas by executing the script `dix.sql`. You will be prompted for the passwords for the individual users.

# 2

---

## Rationale

The Oracle Database Sample Schemas are based on a fictitious company that sells goods through various channels. This chapter describes the fictitious company and contains these sections:

- [Overall Description](#)
- [Human Resources \(HR\)](#)
- [Order Entry \(OE\)](#)
- [Product Media \(PM\)](#)
- [Information Exchange \(IX\)](#)
- [Sales History \(SH\)](#)

### Overall Description

The sample company portrayed by the Oracle Database Sample Schemas operates worldwide to fill orders for several different products. The company has several divisions:

- The Human Resources division tracks information on company employees and facilities.
- The Order Entry division tracks product inventories and sales of company products through various channels.
- The Product Media division maintains descriptions and detailed information on each product sold by the company.
- The Information Exchange division manages shipping through B2B applications.

- The Sales division tracks business statistics to facilitate business decisions.

Each of these divisions is represented by a schema.

## Human Resources (HR)

In the human resource records, each employee has an identification number, email address, job identification code, salary, and manager. Some employees earn a commission in addition to their salary.

The company also tracks information about jobs within the organization. Each job has an identification code, job title, and a minimum and maximum salary range for the job. Some employees have been with the company for a long time and have held different positions within the company. When an employee switches jobs, the company records the start date and end date of the former job, the job identification number, and the department.

The sample company is regionally diverse, so it tracks the locations of not only its warehouses but also of its departments. Each company employee is assigned to a department. Each department is identified by a unique department number and a short name. Each department is associated with one location. Each location has a full address that includes the street address, postal code, city, state or province, and country code.

For each location where it has facilities, the company records the country name, currency symbol, currency name, and the region where the county resides geographically.

## Order Entry (OE)

The company sells several categories of products, including computer hardware and software, music, clothing, and tools. The company maintains information that includes product identification numbers, the category into which the product falls, the weight group (for shipping purposes), the warranty period if applicable, the supplier, the availability status of the product, a list price, a minimum price at which a product will be sold, and a URL address for manufacturer information. Inventory information is also recorded for all products, including the warehouse where the product is available and the quantity on hand. Because products are sold worldwide, the company maintains the names of the products and their descriptions in several languages.

The company maintains warehouses in several locations to facilitate filling customer orders. Each warehouse has a warehouse identification number, name, facility description, and location identification number.

Customer information is tracked in some detail. Each customer is assigned an identification number. Customer records include name, street address, city or province, country, phone numbers (up to five phone numbers for each customer), and postal code. Some customers order through the Internet, so email addresses are also recorded. Because of language differences among customers, the company records the native language and territory of each customer.

The company places a credit limit on its customers to limit the amount they can purchase at one time. Some customers have an account manager, and this information is also recorded.

When a customer places an order, the company tracks the date of the order, how the order was placed, the current status of the order, shipping mode, total amount of the order, and the sales representative who helped place the order. The sales representative may or may not be the same person as the account manager for a customer. In the case of an order over the Internet, no sales representative is recorded. In addition to the order information, the company also tracks the number of items ordered, the unit price, and the products ordered.

For each country in which it does business, the company records the country name, currency symbol, currency name, and the region where the county resides geographically. This data is useful for customers living in different geographic regions around the world.

### **Online Catalog (OC) Description**

The OC subschema of the OE schema addresses an online catalog merchandising scenario. The same customers and products are used as in the OE schema proper, but the OC subschema organizes the categories to which the OE products belong into a hierarchy of parent categories and subcategories. This hierarchy corresponds to the arrangement on an e-commerce portal site, where users navigate to specific products by drilling down through increasingly specialized categories of products.

## **Product Media (PM)**

The company stores multimedia and print information about its products in the database. Examples of such information are:

- Promotional audio and video clips

- Product images and thumbnails for web publishing
- Press release texts
- Print media ads
- Other promotion texts and translations

## Information Exchange (IX)

The company has decided to test the use of messaging to manage its proposed B2B applications. The plan calls for a small test that will allow a user from outside the firewall to place an order and track its status. The order needs to be booked into the main system. Then, depending on the location of the customer, the order is routed to the nearest region for shipping.

Eventually, the company intends to expand beyond its current in-house distribution system to a system that will allow other businesses to provide the shipping.

Therefore, the messages sent between the businesses must also travel over HTTP and be in a self-contained format. XML is the perfect format for the message, and both the Advanced Queueing Servlet and Oracle Internet Directory provide the appropriate routing between the queues.

After the orders are either shipped or back ordered, a message needs to be sent back to appropriate employees to inform them of the order status and to initiate the billing cycle. It is critical that the message be delivered only once and that there be a system for tracking and reviewing messages to facilitate resolution of any discrepancies with the order.

For the purpose of this test application, the company utilizes a single database server and a single application server. The application provides a mechanism for examining the XML messages as well as looking at the queues. To demonstrate connectivity from outside the firewall, both the generation of a new order and customer service reporting are performed using queues. The new order application directly enqueues a queue, while the customer service queries require XML messaging to dequeue a queue.

## Sales History (SH)

The sample company does a high volume of business, so it runs business statistics reports to aid in decision support. Many of these reports are time-based and nonvolatile. That is, they analyze past data trends. The company loads data into its data warehouse regularly to gather statistics for these reports. These reports include annual, quarterly, monthly, and weekly sales figures by product.

The company also runs reports on distribution channels through which its sales are delivered. When the company runs special promotions on its products, it analyzes the impact of the promotions on sales. It also analyzes sales by geographical area.

## Sales History (SH)

---

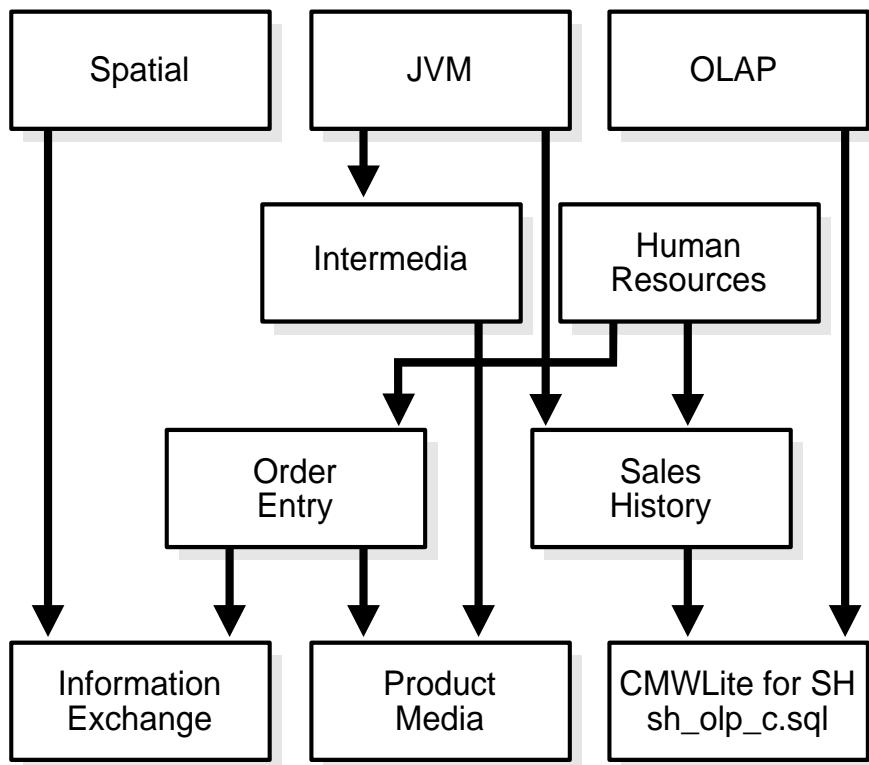
# 3

---

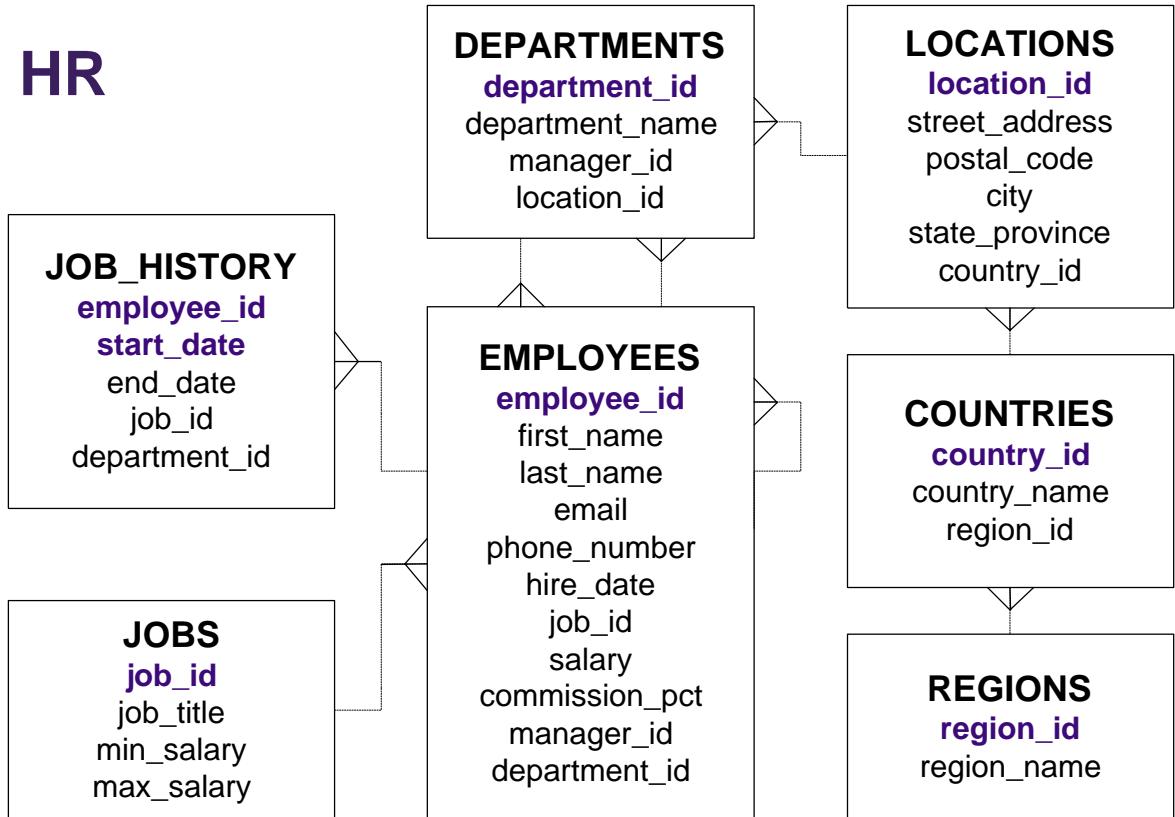
## Diagrams

This chapter contains diagrams of the Sample Schemas. The first diagram shows the build order and prerequisites of the Sample Schemas. The remaining diagrams illustrate the configuration of the various components of each schema.

## Sample Schema Diagrams

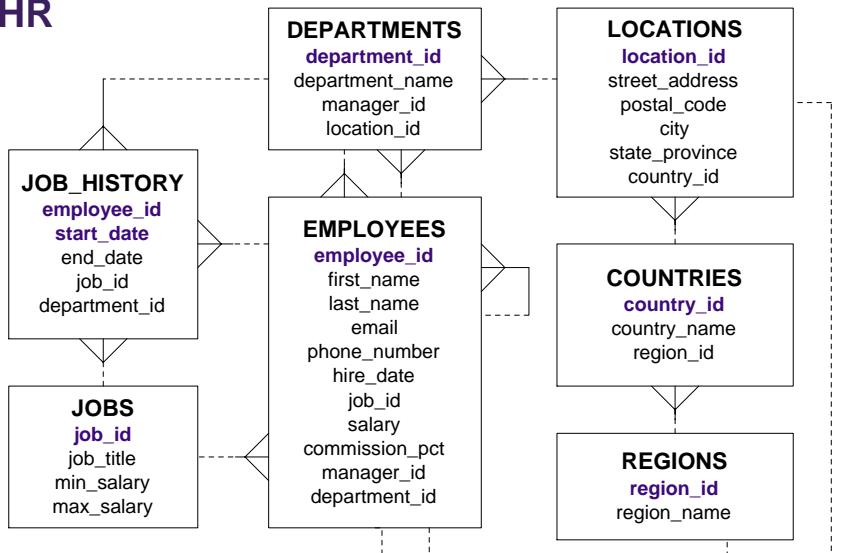


# HR

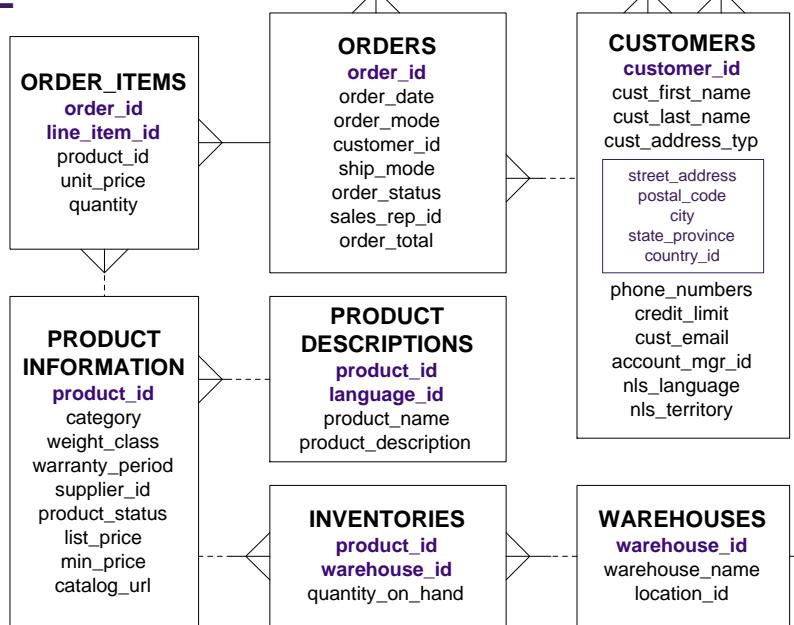


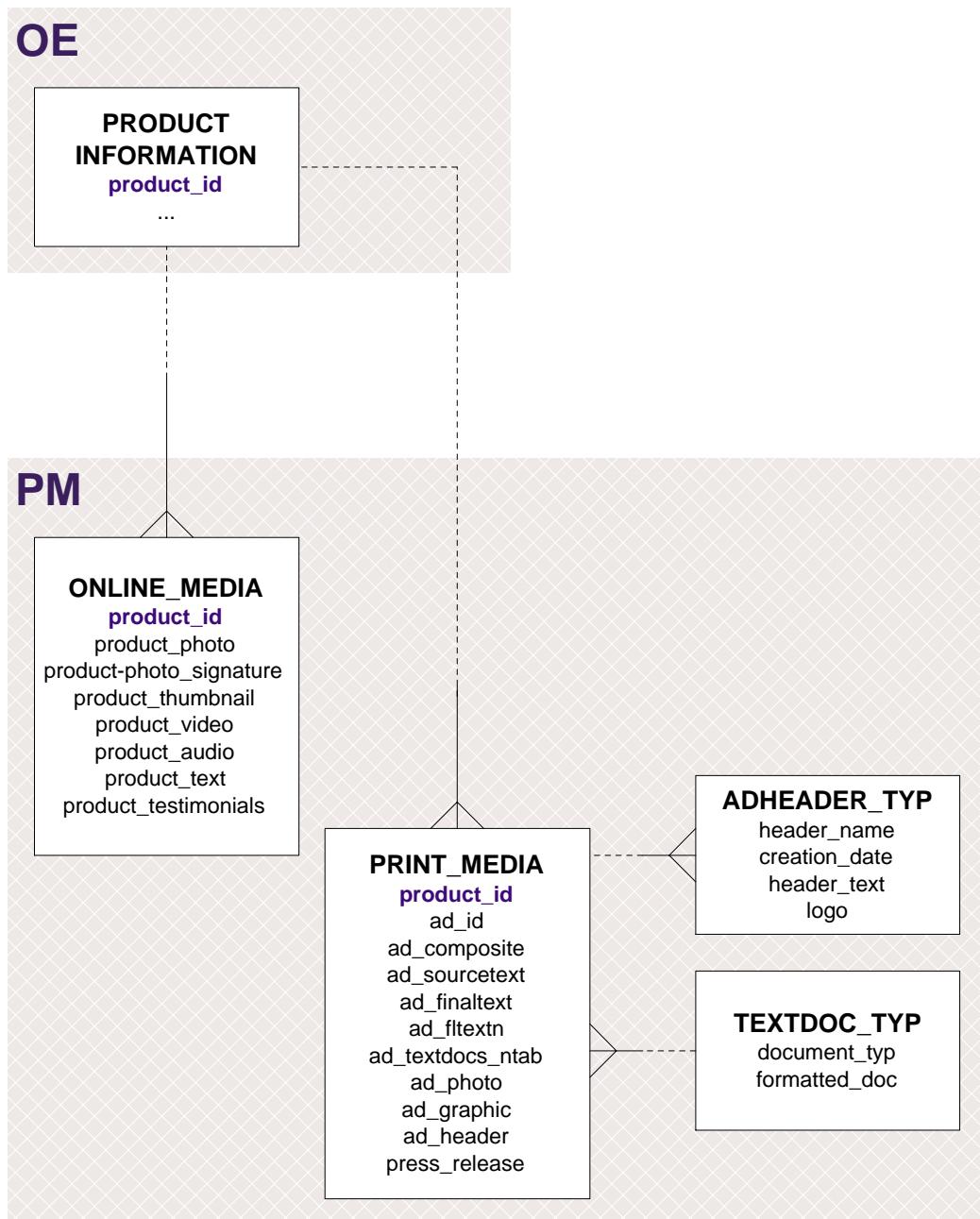
## Sample Schema Diagrams

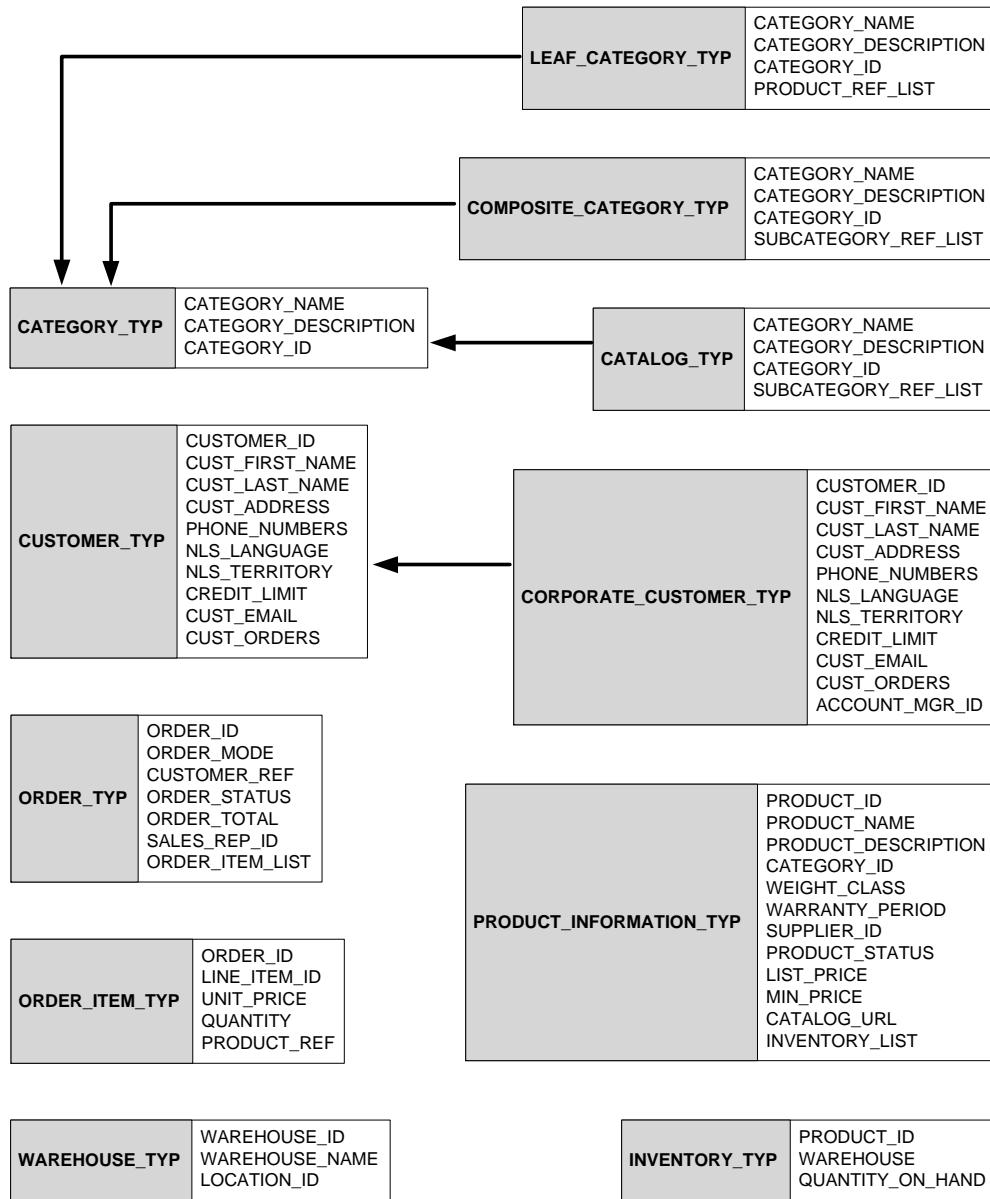
**HR**

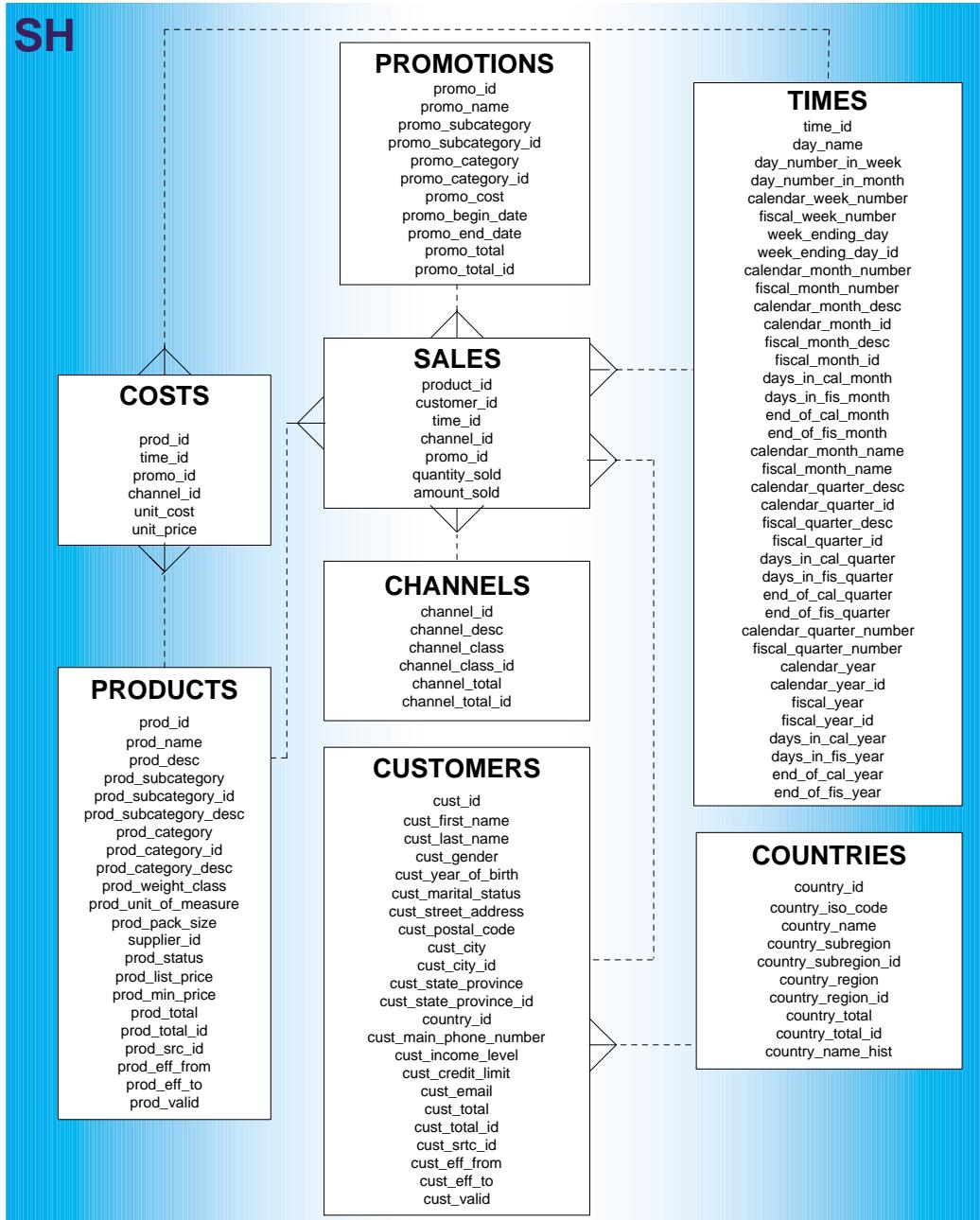


**OE**





**Online Catalog (OC) Subschema: Object Type Diagram**



## Sample Schema Diagrams

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# Sample Schema Scripts and Object Descriptions

This chapter describes the scripts used to generate the Oracle Database Sample Schemas. Each section corresponds to a separate schema. This chapter contains these sections:

- [About the Scripts](#)
- [Master Script](#)
- [HR Schema](#)
- [OE Schema](#)
- [PM Schema](#)
- [IX Schema](#)
- [SH Schema](#)

## About the Scripts

Each schema has two primary scripts:

- One script resets and creates all objects and data for a particular schema. This script is named `xx_main.sql`, where `xx` is the schema abbreviation. This main script calls all other scripts necessary to build and load the schema.
- One script removes all objects from a particular schema. This script is named `xx_drop.sql`, where `xx` is the schema abbreviation.

The Sample Schemas script directories are located in `$ORACLE_HOME/demo/schema`.

---

**Note:** This chapter does not include the scripts themselves, because they are very lengthy.

---

## Master Script

The master script, `mksample.sql`, sets up the overall Sample Schema environment and creates all of the schemas.

---

**Note:** In the master script (`mksample.sql`), which follows, you will notice variables such as `%s_pmPath%`, `%s_logPath%`, and `%s_shPath%`. These variables are instantiated upon installation.

---

### `mksample.sql`

The text of the `mksample.sql` script follows:

```
Rem
Rem $Header: mksample.sql.sbs 02-apr-2003.14:55:17 $
Rem
Rem mksample.sql
Rem
Rem Copyright (c) 2001, 2003, Oracle Corporation. All rights reserved.
Rem
Rem NAME
Rem mksample.sql - creates all 5 Sample Schemas
Rem
Rem DESCRIPTION
Rem This script rees and creates all Schemas belonging
Rem to the Oracle Database 10g Sample Schemas.
Rem If you are unsure about the prerequisites for the Sample Schemas,
Rem please use the Database Configuration Assistant DBCA to
Rem configure the Sample Schemas.
Rem
Rem NOTES
Rem - OUI instantiates this script during install and saves it
Rem as mksample.sql. The instantiated scripts matches
Rem the directory structure on your system
Rem - Tablespace EXAMPLE created with:
Rem CREATE TABLESPACE example
Rem NOLOGGING
Rem DATAFILE '<filename>' SIZE 150M REUSE
Rem AUTOEXTEND ON NEXT 640k
```

```
Rem MAXSIZE UNLIMITED
Rem EXTENT MANAGEMENT LOCAL
Rem SEGMENT SPACE MANAGEMENT AUTO;
Rem
Rem - CAUTION: This script will erase the following schemas:
Rem - HR
Rem - OE
Rem - PM
Rem - SH
Rem - IX
Rem - BI
Rem - CAUTION: Never use the above mentioned Sample Schemas for
Rem anything other than demos and examples
Rem - USAGE: To return the Sample Schemas to their initial
Rem state, you can call this script and pass the passwords
Rem for SYS, SYSTEM and the schemas as parameters.
Rem Example: @?/demo/schema/mksample mgr secure h1 o2 p3 q4 s5
Rem (please choose your own passwords for security purposes)
Rem
Rem MODIFIED (MM/DD/YY)
Rem
Rem

SET FEEDBACK 1
SET NUMWIDTH 10
SET LINESIZE 80
SET TRIMSPPOOL ON
SET TAB OFF
SET PAGESIZE 999
SET ECHO OFF
SET CONCAT '.'
SET SHOWMODE OFF

PROMPT
PROMPT specify password for SYSTEM as parameter 1:
DEFINE password_system = &1
PROMPT
PROMPT specify password for SYS as parameter 2:
DEFINE password_sys = &2
PROMPT
PROMPT specify password for HR as parameter 3:
DEFINE password_hr = &3
PROMPT
PROMPT specify password for OE as parameter 4:
DEFINE password_oe = &4
```

```
PROMPT
PROMPT specify password for PM as parameter 5:
DEFINE password_pm = &5
PROMPT
PROMPT specify password for IX as parameter 6:
DEFINE password_ix = &6
PROMPT
PROMPT specify password for SH as parameter 7:
DEFINE password_sh = &7
PROMPT
PROMPT specify password for BI as parameter 8:
DEFINE password_bi = &8
PROMPT
PROMPT specify default tablespace as parameter 9:
DEFINE default_ts = &9
PROMPT
PROMPT specify temporary tablespace as parameter 10:
DEFINE temp_ts = &10
PROMPT
PROMPT specify log file directory (including trailing delimiter) as parameter
11:
DEFINE logfile_dir = &11
PROMPT
PROMPT Sample Schemas are being created ...
PROMPT
DEFINE vrs = v3

CONNECT system/&&password_system

DROP USER hr CASCADE;
DROP USER oe CASCADE;
DROP USER pm CASCADE;
DROP USER ix CASCADE;
DROP USER sh CASCADE;
DROP USER bi CASCADE;

CONNECT system/&&password_system

SET SHOWMODE OFF

@?/demo/schema/human_resources/hr_main.sql &&password_hr &&default_ts &&temp_ts
&&password_sys &&logfile_dir

CONNECT system/&&password_system
SET SHOWMODE OFF
```

```
@?/demo/schema/order_entry/oe_main.sql &&password_oe &&default_ts &&temp_ts  
&&password_hr &&password_sys %s_oePath% &&logfile_dir &vrs

CONNECT system/&&password_system
SET SHOWMODE OFF

@?/demo/schema/product_media/pm_main.sql &&password_pm &&default_ts &&temp_ts  
&&password_oe &&password_sys %s_pmPath% &&logfile_dir %s_pmPath%

CONNECT system/&&password_system
SET SHOWMODE OFF

@?/demo/schema/info_exchange/ix_main.sql &&password_ix &&default_ts &&temp_ts  
&&password_sys &&logfile_dir &vrs

CONNECT system/&&password_system
SET SHOWMODE OFF

@?/demo/schema/sales_history/sh_main &&password_sh &&default_ts &&temp_ts  
&&password_sys %s_shPath% &&logfile_dir &vrs

CONNECT system/&&password_system
SET SHOWMODE OFF

@?/demo/schema/bus_intelligence/bi_main &&password_bi &&default_ts &&temp_ts  
&&password_sys &&password_oe &&password_sh &&logfile_dir &vrs

CONNECT system/&&password_system

SPOOL OFF

DEFINE veri_spool = &&logfile_dir.mkverify_&vrs..log

@?/demo/schema/mkverify &&password_system &veri_spool

EXIT
```

## HR Schema

This section lists the names of the scripts that create the human resources (HR) schema and describes the objects in the schema. [Table 4-1](#) lists the HR scripts in alphabetical order.

**Table 4–1 Human Resources (HR) Schema Scripts**

| Script Name  | Description                                                                                                   |
|--------------|---------------------------------------------------------------------------------------------------------------|
| hr_analz.sql | Collects statistics on the tables in the schema.                                                              |
| hr_code.sql  | Creates procedural objects in the schema.                                                                     |
| hr_comnt.sql | Creates comments for each object in the schema.                                                               |
| hr_cre.sql   | Creates the HR objects.                                                                                       |
| hr_dn_c.sql  | Adds the distinguished name column used by Oracle Internet Directory to the employees and departments tables. |
| hr_dn_d.sql  | Drops the Oracle Internet Directory distinguished name column from employees and departments.                 |
| hr_drop.sql  | Drops the HR schema and all its objects.                                                                      |
| hr_idx.sql   | Creates indexes on the HR tables.                                                                             |
| hr_main.sql  | Main script for the HR schema; calls other scripts.                                                           |
| hr_popul.sql | Populates the objects.                                                                                        |

### List of HR Objects

INDEX

COUNTRY\_C\_ID\_PK  
DEPT\_ID\_PK  
DEPT\_LOCATION\_IX  
EMP\_DEPARTMENT\_IX  
EMP\_EMAIL\_UK  
EMP\_EMP\_ID\_PK  
EMP\_JOB\_IX  
EMP\_MANAGER\_IX  
EMP\_NAME\_IX  
JHIST\_DEPARTMENT\_IX  
JHIST\_EMPLOYEE\_IX  
JHIST\_EMP\_ID\_ST\_DATE\_PK  
JHIST\_JOB\_IX  
JOB\_ID\_PK  
LOC\_CITY\_IX  
LOC\_COUNTRY\_IX  
LOC\_ID\_PK  
LOC\_STATE\_PROVINCE\_IX  
REG\_ID\_PK

PROCEDURE

```
ADD_JOB_HISTORY
SECURE_DML
```

```
SEQUENCE
DEPARTMENTS_SEQ
EMPLOYEES_SEQ
LOCATIONS_SEQ
```

```
TABLE
COUNTRIES
DEPARTMENTS
EMPLOYEES
JOBS
JOB_HISTORY
LOCATIONS
REGIONS
```

```
TRIGGER
SECURE_EMPLOYEES
UPDATE_JOB_HISTORY
```

```
VIEW
EMP_DETAILS_VIEW
```

## HR Table Descriptions

Table COUNTRIES

| Name         | Null?    | Type         |
|--------------|----------|--------------|
| COUNTRY_ID   | NOT NULL | CHAR(2)      |
| COUNTRY_NAME |          | VARCHAR2(40) |
| REGION_ID    |          | NUMBER       |

Table DEPARTMENTS

| Name            | Null?    | Type         |
|-----------------|----------|--------------|
| DEPARTMENT_ID   | NOT NULL | NUMBER(4)    |
| DEPARTMENT_NAME | NOT NULL | VARCHAR2(30) |
| MANAGER_ID      |          | NUMBER(6)    |
| LOCATION_ID     |          | NUMBER(4)    |

Table EMPLOYEES

| Name        | Null?    | Type      |
|-------------|----------|-----------|
| EMPLOYEE_ID | NOT NULL | NUMBER(6) |

|                |                       |
|----------------|-----------------------|
| FIRST_NAME     | VARCHAR2(20)          |
| LAST_NAME      | NOT NULL VARCHAR2(25) |
| EMAIL          | NOT NULL VARCHAR2(25) |
| PHONE_NUMBER   | VARCHAR2(20)          |
| HIRE_DATE      | NOT NULL DATE         |
| JOB_ID         | NOT NULL VARCHAR2(10) |
| SALARY         | NUMBER(8,2)           |
| COMMISSION_PCT | NUMBER(2,2)           |
| MANAGER_ID     | NUMBER(6)             |
| DEPARTMENT_ID  | NUMBER(4)             |

## Table JOBS

| Name       | Null?    | Type         |
|------------|----------|--------------|
| JOB_ID     | NOT NULL | VARCHAR2(10) |
| JOB_TITLE  | NOT NULL | VARCHAR2(35) |
| MIN_SALARY |          | NUMBER(6)    |
| MAX_SALARY |          | NUMBER(6)    |

## Table JOB\_HISTORY

| Name          | Null?    | Type         |
|---------------|----------|--------------|
| EMPLOYEE_ID   | NOT NULL | NUMBER(6)    |
| START_DATE    | NOT NULL | DATE         |
| END_DATE      | NOT NULL | DATE         |
| JOB_ID        | NOT NULL | VARCHAR2(10) |
| DEPARTMENT_ID |          | NUMBER(4)    |

## Table LOCATIONS

| Name           | Null?    | Type         |
|----------------|----------|--------------|
| LOCATION_ID    | NOT NULL | NUMBER(4)    |
| STREET_ADDRESS |          | VARCHAR2(40) |
| POSTAL_CODE    |          | VARCHAR2(12) |
| CITY           | NOT NULL | VARCHAR2(30) |
| STATE_PROVINCE |          | VARCHAR2(25) |
| COUNTRY_ID     |          | CHAR(2)      |

## Table REGIONS

| Name        | Null?    | Type         |
|-------------|----------|--------------|
| REGION_ID   | NOT NULL | NUMBER       |
| REGION_NAME |          | VARCHAR2(25) |

## OE Schema

This section lists the names of the scripts that create the order entry (OE) schema and describes the objects in the schema. [Table 4-2](#) lists the OE scripts in alphabetical order.

**Table 4-2 Order Entry (OE) Schema Scripts**

| Script Name               | Description                                                           |
|---------------------------|-----------------------------------------------------------------------|
| oc_comnt.sql              | Adds comments to the online catalog (OC) subschema wherever possible. |
| oc_cre.sql                | Creates the OC subschema.                                             |
| oc_drop.sql               | Drops the OC subschema.                                               |
| oc_main.sql               | Main script for the OC subschema.                                     |
| oc_popul.sql <sup>a</sup> | Populates the object tables.                                          |
| oe_analz.sql              | Gathers statistics on the OE objects.                                 |
| oe_comnt.sql              | Creates comments for the objects in the schema.                       |
| oe_cre.sql                | Creates the OE objects.                                               |
| oe_drop.sql               | Drops the OE schema and all its objects.                              |
| oe_idx.sql                | Creates indexes on the OE tables.                                     |
| oe_main.sql               | Main script for the OE schema; calls other scripts.                   |
| oe_views.sql              | Creates the OE schema views.                                          |

---

**Note:** Language-specific INSERT statements for product names and descriptions are stored in these files (each representing a different language): oe\_p\_us.sql, oe\_p\_ar.sql, oe\_p\_cs.sql, oe\_p\_d.sql, oe\_p\_dk.sql, oe\_p\_e.sql, oe\_p\_el.sql, oe\_p\_esql, oe\_p\_f.sql, oe\_p\_frc.sql, oe\_p\_hu.sql, oe\_p\_i.sql, oe\_p\_iw.sql, oe\_p\_ja.sql, oe\_p\_ko.sql, oe\_p\_n.sql, oe\_p\_nl.sql, oe\_p\_pl.sql, oe\_p\_pt.sql, oe\_p\_ptb.sql, oe\_p\_ro.sql, oe\_p\_ru.sql, oe\_p\_s.sql, oe\_p\_sf.sql, oe\_p\_sk.sql, oe\_p\_th.sql, oe\_p\_tr.sql, oe\_p\_zhs.sql, oe\_p\_zht.sql.

---

## List of OE Objects

```
FUNCTION
  GET_PHONE_NUMBER_F

INDEX
  CUSTOMERS_PK
  CUST_ACCOUNT_MANAGER_IX
  CUST_EMAIL_IX
  CUST_LNAME_IX
  CUST_UPPER_NAME_IX
  INVENTORY_IX
  INV_PRODUCT_IX
  ITEM_ORDER_IX
  ITEM_PRODUCT_IX
  ORDER_ITEMS_PK
  ORDER_ITEMS_UK
  ORDER_PK
  ORD_CUSTOMER_IX
  ORD_ORDER_DATE_IX
  ORD_SALES_REP_IX
  PRD_DESC_PK
  PRODUCT_INFORMATION_PK
  PROD_NAME_IX
  PROD_SUPPLIER_IX
  PROMO_ID_PK
  REFERENCE_IS_UNIQUE
  SYS_C003584
  SYS_C003587
  SYS_C003588
  SYS_C003589
  SYS_C003590
  WAREHOUSES_PK
  WHS_LOCATION_IX

LOB
  SYS_LOB000045843C00022$$
  SYS_LOB000045843C00023$$
  SYS_LOB000045852C00003$$
  SYS_LOB000045852C00012$$
  SYS_LOB000045852C00013$$
  SYS_LOB000046019C00004$$
  SYS_LOB000046019C00005$$
  SYS_LOB000046019C00007$$
  SYS_LOB000046019C00011$$
```

SYS\_LOB0000046019C00012\$\$  
SYS\_LOB0000046019C00015\$\$  
SYS\_LOB0000046019C00024\$\$  
SYS\_LOB0000046019C00031\$\$  
SYS\_LOB0000046019C00032\$\$  
SYS\_LOB0000046044C00003\$\$

SEQUENCE  
ORDERS\_SEQ

SYNONYM  
COUNTRIES  
DEPARTMENTS  
EMPLOYEES  
JOBS  
JOB\_HISTORY  
LOCATIONS

TABLE  
CATEGORIES\_TAB  
CUSTOMERS  
INVENTORIES  
ORDERS  
ORDER\_ITEMS  
PRODUCT\_DESCRIPTIONS  
PRODUCT\_INFORMATION  
PRODUCT\_REF\_LIST\_NESTEDTAB  
PROMOTIONS  
PURCHASEORDERS  
STYLESTHEET\_TAB  
SUBCATEGORY\_REF\_LIST\_NESTEDTAB  
WAREHOUSES

TRIGGER  
INSERT\_ORD\_LINE  
ORDERS\_ITEMS\_TRG  
ORDERS\_TRG  
PURCHASEORDERS\$xd

TYPE  
CATALOG\_TYP  
CATALOG\_TYP  
CATEGORY\_TYP  
CATEGORY\_TYP  
COMPOSITE\_CATEGORY\_TYP

COMPOSITE\_CATEGORY\_TYP  
CORPORATE\_CUSTOMER\_TYP  
CUSTOMER\_TYP  
CUST\_ADDRESS\_TYP  
INVENTORY\_LIST\_TYP  
INVENTORY\_TYP  
LEAF\_CATEGORY\_TYP  
LEAF\_CATEGORY\_TYP  
ORDER\_ITEM\_LIST\_TYP  
ORDER\_ITEM\_TYP  
ORDER\_LIST\_TYP  
ORDER\_TYP  
PHONE\_LIST\_TYP  
PRODUCT\_INFORMATION\_TYP  
PRODUCT\_REF\_LIST\_TYP  
SUBCATEGORY\_REF\_LIST\_TYP  
SYS\_YOID0000046073\$  
SYS\_YOID0000046075\$  
SYS\_YOID0000046077\$  
SYS\_YOID0000046079\$  
SYS\_YOID0000046081\$  
WAREHOUSE\_TYP  
XDBPO\_ACTIONS\_TYPE  
XDBPO\_ACTION\_COLLECTION  
XDBPO\_ACTION\_TYPE  
XDBPO\_LINEITEMS\_TYPE  
XDBPO\_LINEITEM\_COLLECTION  
XDBPO\_LINEITEM\_TYPE  
XDBPO\_PART\_TYPE  
XDBPO\_REJECTION\_TYPE  
XDBPO\_SHIPINSTRUCTIONS\_TYPE  
XDBPO\_TYPE

TYPE BODY  
CATALOG\_TYP  
COMPOSITE\_CATEGORY\_TYP  
LEAF\_CATEGORY\_TYP

VIEW  
ACCOUNT\_MANAGERS  
BOMBAY\_INVENTORY  
CUSTOMERS\_VIEW  
DEPTVIEW  
OC\_CORPORATE\_CUSTOMERS  
OC\_CUSTOMERS

OC\_INVENTORIES  
 OC\_ORDERS  
 OC\_PRODUCT\_INFORMATION  
 ORDERS\_VIEW  
 PRODUCTS  
 PRODUCT\_PRICES  
 SYDNEY\_INVENTORY  
 TORONTO\_INVENTORY

## OE Table Descriptions

Table CATEGORIES\_TAB

| Name                 | Null?    | Type           |
|----------------------|----------|----------------|
| CATEGORY_NAME        |          | VARCHAR2(50)   |
| CATEGORY_DESCRIPTION |          | VARCHAR2(1000) |
| CATEGORY_ID          | NOT NULL | NUMBER(2)      |
| PARENT_CATEGORY_ID   |          | NUMBER(2)      |

Table CUSTOMERS

| Name              | Null?    | Type               |
|-------------------|----------|--------------------|
| CUSTOMER_ID       | NOT NULL | NUMBER(6)          |
| CUST_FIRST_NAME   | NOT NULL | VARCHAR2(20)       |
| CUST_LAST_NAME    | NOT NULL | VARCHAR2(20)       |
| CUST_ADDRESS      |          | CUST_ADDRESS_TYP   |
| PHONE_NUMBERS     |          | PHONE_LIST_TYP     |
| NLS_LANGUAGE      |          | VARCHAR2(3)        |
| NLS_TERRITORY     |          | VARCHAR2(30)       |
| CREDIT_LIMIT      |          | NUMBER(9,2)        |
| CUST_EMAIL        |          | VARCHAR2(30)       |
| ACCOUNT_MGR_ID    |          | NUMBER(6)          |
| CUST_GEO_LOCATION |          | MDSYS.SDO_GEOMETRY |
| DATE_OF_BIRTH     |          | DATE               |
| MARITAL_STATUS    |          | VARCHAR2(20)       |
| GENDER            |          | VARCHAR2(1)        |
| INCOME_LEVEL      |          | VARCHAR2(20)       |

Table INVENTORIES

| Name             | Null?    | Type      |
|------------------|----------|-----------|
| PRODUCT_ID       | NOT NULL | NUMBER(6) |
| WAREHOUSE_ID     | NOT NULL | NUMBER(3) |
| QUANTITY_ON_HAND | NOT NULL | NUMBER(8) |

## Table ORDERS

| Name         | Null?    | Type                              |
|--------------|----------|-----------------------------------|
| ORDER_ID     | NOT NULL | NUMBER(12)                        |
| ORDER_DATE   | NOT NULL | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| ORDER_MODE   |          | VARCHAR2(8)                       |
| CUSTOMER_ID  | NOT NULL | NUMBER(6)                         |
| ORDER_STATUS |          | NUMBER(2)                         |
| ORDER_TOTAL  |          | NUMBER(8,2)                       |
| SALES_REP_ID |          | NUMBER(6)                         |
| PROMOTION_ID |          | NUMBER(6)                         |

## Table ORDER\_ITEMS

| Name         | Null?    | Type        |
|--------------|----------|-------------|
| ORDER_ID     | NOT NULL | NUMBER(12)  |
| LINE_ITEM_ID | NOT NULL | NUMBER(3)   |
| PRODUCT_ID   | NOT NULL | NUMBER(6)   |
| UNIT_PRICE   |          | NUMBER(8,2) |
| QUANTITY     |          | NUMBER(8)   |

## Table PRODUCT\_DESCRIPTIONS

| Name                   | Null?    | Type            |
|------------------------|----------|-----------------|
| PRODUCT_ID             | NOT NULL | NUMBER(6)       |
| LANGUAGE_ID            | NOT NULL | VARCHAR2(3)     |
| TRANSLATED_NAME        | NOT NULL | NVARCHAR2(50)   |
| TRANSLATED_DESCRIPTION | NOT NULL | NVARCHAR2(2000) |

## Table PRODUCT\_INFORMATION

| Name                | Null?    | Type                      |
|---------------------|----------|---------------------------|
| PRODUCT_ID          | NOT NULL | NUMBER(6)                 |
| PRODUCT_NAME        |          | VARCHAR2(50)              |
| PRODUCT_DESCRIPTION |          | VARCHAR2(2000)            |
| CATEGORY_ID         |          | NUMBER(2)                 |
| WEIGHT_CLASS        |          | NUMBER(1)                 |
| WARRANTY_PERIOD     |          | INTERVAL YEAR(2) TO MONTH |
| SUPPLIER_ID         |          | NUMBER(6)                 |
| PRODUCT_STATUS      |          | VARCHAR2(20)              |
| LIST_PRICE          |          | NUMBER(8,2)               |
| MIN_PRICE           |          | NUMBER(8,2)               |
| CATALOG_URL         |          | VARCHAR2(50)              |

---

| PRODUCT_REF_LIST_NESTEDTAB                                                                                                                         |          |                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------|
| Name                                                                                                                                               | Null?    | Type                |
| COLUMN_VALUE                                                                                                                                       |          | NUMBER(6)           |
| Table PROMOTIONS                                                                                                                                   |          |                     |
| Name                                                                                                                                               | Null?    | Type                |
| PROMO_ID                                                                                                                                           | NOT NULL | NUMBER(6)           |
| PROMO_NAME                                                                                                                                         |          | VARCHAR2(20)        |
| Table PURCHASEORDERS                                                                                                                               |          |                     |
| Name                                                                                                                                               | Null?    | Type                |
| TABLE of SYS.XMLTYPE(XMLSchem<br>"http://www.oracle.com/xdb/ord.xsd"<br>Element "PurchaseOrder")<br>STORAGE Object-relational<br>TYPE "XDBPO_TYPE" |          |                     |
| Table STYLESHEET_TAB                                                                                                                               |          |                     |
| Name                                                                                                                                               | Null?    | Type                |
| ID                                                                                                                                                 |          | NUMBER              |
| STYLESSHEET                                                                                                                                        |          | XMLTYPE             |
| Table SUBCATEGORY_REF_LIST_NESTEDTAB                                                                                                               |          |                     |
| Name                                                                                                                                               | Null?    | Type                |
| COLUMN_VALUE                                                                                                                                       |          | REF OF CATEGORY_TYP |
| Table WAREHOUSES                                                                                                                                   |          |                     |
| Name                                                                                                                                               | Null?    | Type                |
| WAREHOUSE_ID                                                                                                                                       | NOT NULL | NUMBER(3)           |
| WAREHOUSE_SPEC                                                                                                                                     |          | SYS.XMLTYPE         |
| WAREHOUSE_NAME                                                                                                                                     |          | VARCHAR2(35)        |
| LOCATION_ID                                                                                                                                        |          | NUMBER(4)           |
| WH_GEO_LOCATION                                                                                                                                    |          | MDSYS.SDO_Geometry  |

## PM Schema

This section lists the names of the scripts that create the product media (PM) schema and describes the objects in the schema. [Table 4–3](#) lists the OE scripts in alphabetical order.

**Table 4–3 Product Media (PM) Schema Scripts**

| Script Name                                            | Description                                         |
|--------------------------------------------------------|-----------------------------------------------------|
| pm_analz.sql                                           | Gathers statistics on the PM objects.               |
| pm_cre.sql                                             | Creates the PM objects.                             |
| pm_drop.sql                                            | Drops the PM schema and all its objects             |
| pm_p_ord.sql, pm_p_lob.sql, pm_p_lob.ctl, pm_p_lob.dat | Populates the objects in the schema.                |
| pm_main.sql                                            | Main script for the PM schema; calls other scripts. |

---

**Note:** The SQL\*Loader data file pm\_p\_lob.dat contains hard-coded absolute path names that have been set during installation. Before attempting to load the data in a different environment, you should first edit the path names in this file.

---

### List of PM Objects

INDEX  
ONLINEMEDIA\_PK  
PRINTMEDIA\_PK  
SYS\_C003538

LOB  
SYS\_LOB0000045882C00003\$\$  
SYS\_LOB0000045882C00017\$\$  
SYS\_LOB0000045882C00019\$\$  
SYS\_LOB0000045882C00034\$\$  
SYS\_LOB0000045882C00042\$\$  
SYS\_LOB0000045882C00054\$\$  
SYS\_LOB0000045882C00062\$\$  
SYS\_LOB0000045882C00069\$\$  
SYS\_LOB0000045882C00071\$\$  
SYS\_LOB0000045882C00080\$\$  
SYS\_LOB0000045907C00003\$\$

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SYS\_LOB0000045907C00004\$\$  
 SYS\_LOB0000045907C00005\$\$  
 SYS\_LOB0000045907C00006\$\$  
 SYS\_LOB0000045907C00009\$\$  
 SYS\_LOB0000045907C00015\$\$  
 SYS\_LOB0000045908C00004\$\$

TABLE  
 ONLINE\_MEDIA  
 PRINT\_MEDIA  
 TEXTDOCS\_NESTEDTAB

TYPE  
 ADHEADER\_TYP  
 TEXTDOC\_TAB  
 TEXTDOC\_TYP

## PM Table Descriptions

Table ONLINE\_MEDIA

| Name                    | Null?    | Type                     |
|-------------------------|----------|--------------------------|
| PRODUCT_ID              | NOT NULL | NUMBER(6)                |
| PRODUCT_PHOTO           |          | ORDSYS.ORDIMAGE          |
| PRODUCT_PHOTO_SIGNATURE |          | ORDSYS.ORDIMAGESIGNATURE |
| PRODUCT_THUMBNAIL       |          | ORDSYS.ORDIMAGE          |
| PRODUCT_VIDEO           |          | ORDSYS.ORDVIDEO          |
| PRODUCT_AUDIO           |          | ORDSYS.ORDAUDIO          |
| PRODUCT_TEXT            |          | CLOB                     |
| PRODUCT_TESTIMONIALS    |          | ORDSYS.ORDDOC            |

Table PRINT\_MEDIA

| Name             | Null?    | Type            |
|------------------|----------|-----------------|
| PRODUCT_ID       | NOT NULL | NUMBER(6)       |
| AD_ID            | NOT NULL | NUMBER(6)       |
| AD_COMPOSITE     |          | BLOB            |
| AD_SOURCETEXT    |          | CLOB            |
| AD_FINALTEXT     |          | CLOB            |
| AD_FLTEXTN       |          | NCLOB           |
| AD_TEXTDOCS_NTAB |          | TEXTDOC_TAB     |
| AD_PHOTO         |          | BLOB            |
| AD_GRAPHIC       |          | BINARY FILE LOB |
| AD_HEADER        |          | ADHEADER_TYP    |

| Table TEXTDOCS_NESTEDTAB |       |              |
|--------------------------|-------|--------------|
| Name                     | Null? | Type         |
| DOCUMENT_TYP             |       | VARCHAR2(32) |
| FORMATTED_DOC            |       | BLOB         |

## IX Schema

This section lists the names of the scripts that create the information exchange (IX) schema group and describes the objects in the schemas. [Table 4–4](#) lists the IX scripts in alphabetical order.

**Table 4–4 Information Exchange (IX) Schema Scripts**

| Script Name | Description                                         |
|-------------|-----------------------------------------------------|
| cix_v3.sql  | Creates the IX schema objects.                      |
| dix_v3.sql  | Drops the IX schema objects.                        |
| ix_main.sql | Main script for the IX schema; calls other scripts. |
| vix_v3.sql  | Enqueues, dequeues, and verifies IX objects.        |

### List of IX Objects

EVALUATION CONTEXT  
AQ\$\_ORDERS\_QUEUETABLE\_V  
AQ\$\_STREAMS\_QUEUE\_TABLE\_V

INDEX  
SYS\_C003540  
SYS\_C003543  
SYS\_C003548  
SYS\_C003551  
SYS\_IOT\_TOP\_45932  
SYS\_IOT\_TOP\_45934  
SYS\_IOT\_TOP\_45936  
SYS\_IOT\_TOP\_45939  
SYS\_IOT\_TOP\_45949  
SYS\_IOT\_TOP\_45951  
SYS\_IOT\_TOP\_45953  
SYS\_IOT\_TOP\_45956

```
LOB
SYS_LOB0000045926C00036$$
SYS_LOB0000045941C00028$$
SYS_LOB0000045941C00029$$
```

```
QUEUE
AQ$_ORDERS_QUEUETABLE_E
AQ$_STREAMS_QUEUE_TABLE_E
ORDERS_QUEUE
STREAMS_QUEUE
```

```
RULE SET
ORDERS_QUEUE_N
ORDERS_QUEUE_R
STREAMS_QUEUE_N
STREAMS_QUEUE_R
```

```
SEQUENCE
AQ$_ORDERS_QUEUETABLE_N
AQ$_STREAMS_QUEUE_TABLE_N
```

```
TABLE
AQ$_ORDERS_QUEUETABLE_G
AQ$_ORDERS_QUEUETABLE_H
AQ$_ORDERS_QUEUETABLE_I
AQ$_ORDERS_QUEUETABLE_S
AQ$_ORDERS_QUEUETABLE_T
AQ$_STREAMS_QUEUE_TABLE_G
AQ$_STREAMS_QUEUE_TABLE_H
AQ$_STREAMS_QUEUE_TABLE_I
AQ$_STREAMS_QUEUE_TABLE_S
AQ$_STREAMS_QUEUE_TABLE_T
ORDERS_QUEUETABLE
STREAMS_QUEUE_TABLE
SYS_IOT_OVER_45936
SYS_IOT_OVER_45953
```

```
TYPE
ORDER_EVENT_TYP
```

```
VIEW
AQ$ORDERS_QUEUETABLE
AQ$ORDERS_QUEUETABLE_R
AQ$ORDERS_QUEUETABLE_S
AQ$STREAMS_QUEUE_TABLE
```

AQ\$STREAMS\_QUEUE\_TABLE\_R  
AQ\$STREAMS\_QUEUE\_TABLE\_S

## IX Table Descriptions

Table AQ\$\_ORDERS\_QUEUETABLE\_G

| Name        | Null?    | Type              |
|-------------|----------|-------------------|
| MSGID       | NOT NULL | RAW(16)           |
| SUBSCRIBER# | NOT NULL | NUMBER            |
| NAME        | NOT NULL | VARCHAR2(30)      |
| ADDRESS#    | NOT NULL | NUMBER            |
| SIGN        |          | SYS.AQ\$_SIG_PROP |
| DBS_SIGN    |          | SYS.AQ\$_SIG_PROP |

Table AQ\$\_ORDERS\_QUEUETABLE\_H

| Name             | Null?    | Type                              |
|------------------|----------|-----------------------------------|
| MSGID            | NOT NULL | RAW(16)                           |
| SUBSCRIBER#      | NOT NULL | NUMBER                            |
| NAME             | NOT NULL | VARCHAR2(30)                      |
| ADDRESS#         | NOT NULL | NUMBER                            |
| DEQUEUE_TIME     |          | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| TRANSACTION_ID   |          | VARCHAR2(30)                      |
| DEQUEUE_USER     |          | VARCHAR2(30)                      |
| PROPAGATED_MSGID |          | RAW(16)                           |
| RETRY_COUNT      |          | NUMBER                            |
| HINT             |          | ROWID                             |
| SPARE            |          | RAW(16)                           |

Table AQ\$\_ORDERS\_QUEUETABLE\_I

| Name               | Null?    | Type                              |
|--------------------|----------|-----------------------------------|
| SUBSCRIBER#        | NOT NULL | NUMBER                            |
| NAME               | NOT NULL | VARCHAR2(30)                      |
| QUEUE#             | NOT NULL | NUMBER                            |
| MSG_ENQ_TIME       | NOT NULL | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| MSG_STEP_NO        | NOT NULL | NUMBER                            |
| MSG_CHAIN_NO       | NOT NULL | NUMBER                            |
| MSG_LOCAL_ORDER_NO | NOT NULL | NUMBER                            |
| MSGID NOT NULL     |          | RAW(16)                           |
| HINT               |          | ROWID                             |
| SPARE              |          | RAW(16)                           |

Table AQ\$\_ORDERS\_QUEUETABLE\_S

| Name                  | Null?    | Type           |
|-----------------------|----------|----------------|
| SUBSCRIBER_ID         | NOT NULL | NUMBER         |
| QUEUE_NAME            | NOT NULL | VARCHAR2(30)   |
| NAME                  |          | VARCHAR2(30)   |
| ADDRESS               |          | VARCHAR2(1024) |
| PROTOCOL              |          | NUMBER         |
| SUBSCRIBER_TYPE       |          | NUMBER         |
| RULE_NAME             |          | VARCHAR2(30)   |
| TRANS_NAME            |          | VARCHAR2(61)   |
| RULESET_NAME          |          | VARCHAR2(65)   |
| NEGATIVE_RULESET_NAME |          | VARCHAR2(65)   |

Table AQ\$\_ORDERS\_QUEUETABLE\_T

| Name      | Null?    | Type                              |
|-----------|----------|-----------------------------------|
| NEXT_DATE | NOT NULL | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| TXN_ID    | NOT NULL | VARCHAR2(30)                      |
| MSGID     | NOT NULL | RAW(16)                           |
| ACTION    |          | NUMBER                            |

Table AQ\$\_STREAMS\_QUEUE\_TABLE\_G

| Name        | Null?    | Type              |
|-------------|----------|-------------------|
| MSGID       | NOT NULL | RAW(16)           |
| SUBSCRIBER# | NOT NULL | NUMBER            |
| NAME        | NOT NULL | VARCHAR2(30)      |
| ADDRESS#    | NOT NULL | NUMBER            |
| SIGN        |          | SYS.AQ\$_SIG_PROP |
| DBS_SIGN    |          | SYS.AQ\$_SIG_PROP |

Table AQ\$\_STREAMS\_QUEUE\_TABLE\_H

| Name             | Null?    | Type                              |
|------------------|----------|-----------------------------------|
| MSGID            | NOT NULL | RAW(16)                           |
| SUBSCRIBER#      | NOT NULL | NUMBER                            |
| NAME             | NOT NULL | VARCHAR2(30)                      |
| ADDRESS#         | NOT NULL | NUMBER                            |
| DEQUEUE_TIME     |          | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| TRANSACTION_ID   |          | VARCHAR2(30)                      |
| DEQUEUE_USER     |          | VARCHAR2(30)                      |
| PROPAGATED_MSGID |          | RAW(16)                           |
| RETRY_COUNT      |          | NUMBER                            |
| HINT             |          | ROWID                             |

|                                         |          |                                   |
|-----------------------------------------|----------|-----------------------------------|
| SPARE                                   |          | RAW(16)                           |
| <b>Table AQ\$_STREAMS_QUEUE_TABLE_I</b> |          |                                   |
| Name                                    | Null?    | Type                              |
| -----                                   | -----    | -----                             |
| SUBSCRIBER#                             | NOT NULL | NUMBER                            |
| NAME                                    | NOT NULL | VARCHAR2(30)                      |
| QUEUE#                                  | NOT NULL | NUMBER                            |
| MSG_ENQ_TID                             | NOT NULL | VARCHAR2(30)                      |
| SENDER#                                 | NOT NULL | NUMBER                            |
| TXN_STEP#                               | NOT NULL | NUMBER                            |
| MSG_ENQ_TIME                            | NOT NULL | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| MSG_STEP_NO                             | NOT NULL | NUMBER                            |
| MSG_CHAIN_NO                            | NOT NULL | NUMBER                            |
| MSG_LOCAL_ORDER_NO                      | NOT NULL | NUMBER                            |
| MSGID                                   | NOT NULL | RAW(16)                           |
| HINT                                    |          | ROWID                             |
| SPARE                                   |          | RAW(16)                           |
| <b>Table AQ\$_STREAMS_QUEUE_TABLE_S</b> |          |                                   |
| Name                                    | Null?    | Type                              |
| -----                                   | -----    | -----                             |
| SUBSCRIBER_ID                           | NOT NULL | NUMBER                            |
| QUEUE_NAME                              | NOT NULL | VARCHAR2(30)                      |
| NAME                                    |          | VARCHAR2(30)                      |
| ADDRESS                                 |          | VARCHAR2(1024)                    |
| PROTOCOL                                |          | NUMBER                            |
| SUBSCRIBER_TYPE                         |          | NUMBER                            |
| RULE_NAME                               |          | VARCHAR2(30)                      |
| TRANS_NAME                              |          | VARCHAR2(61)                      |
| RULESET_NAME                            |          | VARCHAR2(65)                      |
| NEGATIVE_RULESET_NAME                   |          | VARCHAR2(65)                      |
| <b>Table AQ\$_STREAMS_QUEUE_TABLE_T</b> |          |                                   |
| Name                                    | Null?    | Type                              |
| -----                                   | -----    | -----                             |
| NEXT_DATE                               | NOT NULL | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| TXN_ID                                  | NOT NULL | VARCHAR2(30)                      |
| MSGID                                   | NOT NULL | RAW(16)                           |
| ACTION                                  |          | NUMBER                            |
| <b>Table ORDERS_QUEUETABLE</b>          |          |                                   |
| Name                                    | Null?    | Type                              |
| -----                                   | -----    | -----                             |
| Q_NAME                                  |          | VARCHAR2(30)                      |

|                   |                                   |
|-------------------|-----------------------------------|
| MSGID             | NOT NULL RAW(16)                  |
| CORRID            | VARCHAR2(128)                     |
| PRIORITY          | NUMBER                            |
| STATE             | NUMBER                            |
| DELAY             | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| EXPIRATION        | NUMBER                            |
| TIME_MANAGER_INFO | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| LOCAL_ORDER_NO    | NUMBER                            |
| CHAIN_NO          | NUMBER                            |
| CSCN              | NUMBER                            |
| DSCN              | NUMBER                            |
| ENQ_TIME          | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| ENQ_UID           | VARCHAR2(30)                      |
| ENQ_TID           | VARCHAR2(30)                      |
| DEQ_TIME          | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| DEQ_UID           | VARCHAR2(30)                      |
| DEQ_TID           | VARCHAR2(30)                      |
| RETRY_COUNT       | NUMBER                            |
| EXCEPTION_QSCHEMA | VARCHAR2(30)                      |
| EXCEPTION_QUEUE   | VARCHAR2(30)                      |
| STEP_NO           | NUMBER                            |
| RECIPIENT_KEY     | NUMBER                            |
| DEQUEUE_MSGID     | RAW(16)                           |
| SENDER_NAME       | VARCHAR2(30)                      |
| SENDER_ADDRESS    | VARCHAR2(1024)                    |
| SENDER_PROTOCOL   | NUMBER                            |
| USER_DATA         | ORDER_EVENT_TYP                   |
| USER_PROP         | SYS.ANYDATA                       |

Table STREAMS\_QUEUE\_TABLE

| Name              | Null?    | Type                              |
|-------------------|----------|-----------------------------------|
| Q_NAME            |          | VARCHAR2(30)                      |
| MSGID             | NOT NULL | RAW(16)                           |
| CORRID            |          | VARCHAR2(128)                     |
| PRIORITY          |          | NUMBER                            |
| STATE             |          | NUMBER                            |
| DELAY             |          | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| EXPIRATION        |          | NUMBER                            |
| TIME_MANAGER_INFO |          | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| LOCAL_ORDER_NO    |          | NUMBER                            |
| CHAIN_NO          |          | NUMBER                            |
| CSCN              |          | NUMBER                            |
| DSCN              |          | NUMBER                            |
| ENQ_TIME          |          | TIMESTAMP(6) WITH LOCAL TIME ZONE |

|                   |                                   |
|-------------------|-----------------------------------|
| ENQ_UID           | VARCHAR2(30)                      |
| ENQ_TID           | VARCHAR2(30)                      |
| DEQ_TIME          | TIMESTAMP(6) WITH LOCAL TIME ZONE |
| DEQ_UID           | VARCHAR2(30)                      |
| DEQ_TID           | VARCHAR2(30)                      |
| RETRY_COUNT       | NUMBER                            |
| EXCEPTION_QSCHEMA | VARCHAR2(30)                      |
| EXCEPTION_QUEUE   | VARCHAR2(30)                      |
| STEP_NO           | NUMBER                            |
| RECIPIENT_KEY     | NUMBER                            |
| DEQUEUE_MSGID     | RAW(16)                           |
| SENDER_NAME       | VARCHAR2(30)                      |
| SENDER_ADDRESS    | VARCHAR2(1024)                    |
| SENDER_PROTOCOL   | NUMBER                            |
| USER_PROP         | SYS.ANYDATA                       |
| USER_DATA         | SYS.ANYDATA                       |

## SH Schema

This section lists the names of the scripts that create the sales history (SH) schema and describes the objects in the schema. [Table 4–5](#) lists the SH scripts in alphabetical order.

**Table 4–5 Sales History (SH) Schema Scripts**

| Script Name  | Description                                                 |
|--------------|-------------------------------------------------------------|
| sh_analz.sql | Gathers statistics on the schema objects.                   |
| sh_comnt.sql | Creates comments for the objects in the schema.             |
| sh_cons.sql  | Modifies constraints on objects in the schema.              |
| sh_cre.sql   | Creates the objects in the schema.                          |
| sh_cremv.sql | Create materialized views and bitmapped indexes.            |
| sh_drop.sql  | Drops the SH schema and all its objects.                    |
| sh_idx.sql   | Creates indexes on tables in the schema.                    |
| sh_main.sql  | Main script for the SH schema; calls other scripts          |
| olp_v3.sql   | Creates dimensions and hierarchies used by the OLAP server. |
| sh_olp_d.sql | Drops the objects used by the OLAP server.                  |

## List of SH Objects

```
DIMENSION
  CHANNELS_DIM
  CUSTOMERS_DIM
  PRODUCTS_DIM
  PROMOTIONS_DIM
  TIMES_DIM

INDEX
  CHANNELS_PK
  COSTS_PROD_BIX
  COSTS_TIME_BIX
  COUNTRIES_PK
  CUSTOMERS_GENDER_BIX
  CUSTOMERS_MARITAL_BIX
  CUSTOMERS_PK
  CUSTOMERS_YOB_BIX
  DR$SUP_TEXT_IDX$X
  FW_PSC_S_MV_CHAN_BIX
  FW_PSC_S_MV_PROMO_BIX
  FW_PSC_S_MV_SUBCAT_BIX
  FW_PSC_S_MV_WD_BIX
  PRODUCTS_PK
  PRODUCTS_PROD_CAT_IX
  PRODUCTS_PROD_STATUS_BIX
  PRODUCTS_PROD_SUBCAT_IX
  PROMO_PK
  SALES_CHANNEL_BIX
  SALES_CUST_BIX
  SALES_PROD_BIX
  SALES_PROMO_BIX
  SALES_TIME_BIX
  SUP_TEXT_IDX
  SYS_IOT_TOP_45927
  SYS_IOT_TOP_45932
  TIMES_PK

INDEX PARTITION
  COSTS_PROD_BIX
  COSTS_TIME_BIX
  SALES_CHANNEL_BIX
  SALES_CUST_BIX
  SALES_PROD_BIX
  SALES_PROMO_BIX
  SALES_TIME_BIX
```

LOB  
SYS\_LOB000045924C00006\$\$  
SYS\_LOB000045929C00002\$\$

MATERIALIZED VIEW  
CAL\_MONTH\_SALES\_MV  
FWEEK\_PSCAT\_SALES\_MV

TABLE  
CAL\_MONTH\_SALES\_MV  
CHANNELS  
COSTS  
COUNTRIES  
CUSTOMERS  
DR\$SUP\_TEXT\_IDX\$I  
DR\$SUP\_TEXT\_IDX\$K  
DR\$SUP\_TEXT\_IDX\$N  
DR\$SUP\_TEXT\_IDX\$R  
FWEEK\_PSCAT\_SALES\_MV  
MVIEW\$\_EXCEPTIONS  
PRODUCTS  
PROMOTIONS  
SALES  
SALES\_TRANSACTIONS\_EXT  
SUPPLEMENTARY\_DEMOGRAPHICS  
TIMES

TABLE PARTITION  
COSTS  
SALES

VIEW  
PROFITS

### SH Table Descriptions

Table CAL\_MONTH\_SALES\_MV

| Name                | Null?    | Type        |
|---------------------|----------|-------------|
| CALENDAR_MONTH_DESC | NOT NULL | VARCHAR2(8) |
| DOLLARS             |          | NUMBER      |

Table CHANNELS

| Name             | Null?    | Type           |
|------------------|----------|----------------|
| CHANNEL_ID       | NOT NULL | NUMBER         |
| CHANNEL_DESC     | NOT NULL | VARCHAR2( 20 ) |
| CHANNEL_CLASS    | NOT NULL | VARCHAR2( 20 ) |
| CHANNEL_CLASS_ID | NOT NULL | NUMBER         |
| CHANNEL_TOTAL    | NOT NULL | VARCHAR2( 13 ) |
| CHANNEL_TOTAL_ID | NOT NULL | NUMBER         |

| Table COSTS |          |               |
|-------------|----------|---------------|
| Name        | Null?    | Type          |
| PROD_ID     | NOT NULL | NUMBER        |
| TIME_ID     | NOT NULL | DATE          |
| PROMO_ID    | NOT NULL | NUMBER        |
| CHANNEL_ID  | NOT NULL | NUMBER        |
| UNIT_COST   | NOT NULL | NUMBER(10, 2) |
| UNIT_PRICE  | NOT NULL | NUMBER(10, 2) |

| Table COUNTRIES      |          |                |
|----------------------|----------|----------------|
| Name                 | Null?    | Type           |
| COUNTRY_ID           | NOT NULL | NUMBER         |
| COUNTRY_ISO_CODE     | NOT NULL | CHAR( 2 )      |
| COUNTRY_NAME         | NOT NULL | VARCHAR2( 40 ) |
| COUNTRY_SUBREGION    | NOT NULL | VARCHAR2( 30 ) |
| COUNTRY_SUBREGION_ID | NOT NULL | NUMBER         |
| COUNTRY_REGION       | NOT NULL | VARCHAR2( 20 ) |
| COUNTRY_REGION_ID    | NOT NULL | NUMBER         |
| COUNTRY_TOTAL        | NOT NULL | VARCHAR2( 11 ) |
| COUNTRY_TOTAL_ID     | NOT NULL | NUMBER         |
| COUNTRY_NAME_HIST    |          | VARCHAR2( 40 ) |

| Table CUSTOMERS     |          |                |
|---------------------|----------|----------------|
| Name                | Null?    | Type           |
| CUST_ID             | NOT NULL | NUMBER         |
| CUST_FIRST_NAME     | NOT NULL | VARCHAR2( 20 ) |
| CUST_LAST_NAME      | NOT NULL | VARCHAR2( 40 ) |
| CUST_GENDER         | NOT NULL | CHAR( 1 )      |
| CUST_YEAR_OF_BIRTH  | NOT NULL | NUMBER( 4 )    |
| CUST_MARITAL_STATUS |          | VARCHAR2( 20 ) |
| CUST_STREET_ADDRESS | NOT NULL | VARCHAR2( 40 ) |
| CUST_POSTAL_CODE    | NOT NULL | VARCHAR2( 10 ) |
| CUST_CITY           | NOT NULL | VARCHAR2( 30 ) |

|                        |                       |
|------------------------|-----------------------|
| CUST_CITY_ID           | NOT NULL NUMBER       |
| CUST_STATE_PROVINCE    | NOT NULL VARCHAR2(40) |
| CUST_STATE_PROVINCE_ID | NOT NULL NUMBER       |
| COUNTRY_ID             | NOT NULL NUMBER       |
| CUST_MAIN_PHONE_NUMBER | NOT NULL VARCHAR2(25) |
| CUST_INCOME_LEVEL      | VARCHAR2(30)          |
| CUST_CREDIT_LIMIT      | NUMBER                |
| CUST_EMAIL             | VARCHAR2(30)          |
| CUST_TOTAL             | NOT NULL VARCHAR2(14) |
| CUST_TOTAL_ID          | NOT NULL NUMBER       |
| CUST_SRC_ID            | NUMBER                |
| CUST_EFF_FROM          | DATE                  |
| CUST_EFF_TO            | DATE                  |
| CUST_VALID             | VARCHAR2(1)           |

## Table DR\$\_SUP\_TEXT\_IDX\$I

| Name        | Null?                 | Type |
|-------------|-----------------------|------|
| TOKEN_TEXT  | NOT NULL VARCHAR2(64) |      |
| TOKEN_TYPE  | NOT NULL NUMBER(3)    |      |
| TOKEN_FIRST | NOT NULL NUMBER(10)   |      |
| TOKEN_LAST  | NOT NULL NUMBER(10)   |      |
| TOKEN_COUNT | NOT NULL NUMBER(10)   |      |
| TOKEN_INFO  | BLOB                  |      |

## Table DR\$SUP\_TEXT\_IDX\$K

| Name    | Null?          | Type       |
|---------|----------------|------------|
| DOCID   |                | NUMBER(38) |
| TEXTKEY | NOT NULL ROWID |            |

## Table DR\$SUP\_TEXT\_IDX\$N

| Name      | Null?               | Type |
|-----------|---------------------|------|
| NLT_DOCID | NOT NULL NUMBER(38) |      |
| NLT_MARK  | NOT NULL CHAR(1)    |      |

## Table DR\$SUP\_TEXT\_IDX\$R

| Name   | Null? | Type      |
|--------|-------|-----------|
| ROW_NO |       | NUMBER(3) |
| DATA   |       | BLOB      |

## Table FWEEK\_PSCAT\_SALES\_MV

| Name | Null? | Type |
|------|-------|------|
|------|-------|------|

|                  |                       |
|------------------|-----------------------|
| WEEK_ENDING_DAY  | NOT NULL DATE         |
| PROD_SUBCATEGORY | NOT NULL VARCHAR2(50) |
| DOLLARS          | NUMBER                |
| CHANNEL_ID       | NOT NULL NUMBER       |
| PROMO_ID         | NOT NULL NUMBER       |

## Table MVIEWS\_EXCEPTIONS

| Name           | Null?                 | Type |
|----------------|-----------------------|------|
| OWNER          | NOT NULL VARCHAR2(30) |      |
| TABLE_NAME     | NOT NULL VARCHAR2(30) |      |
| DIMENSION_NAME | NOT NULL VARCHAR2(30) |      |
| RELATIONSHIP   | NOT NULL VARCHAR2(11) |      |
| BAD_ROWID      | NOT NULL ROWID        |      |

## Table PRODUCTS

| Name                  | Null?                   | Type |
|-----------------------|-------------------------|------|
| PROD_ID               | NOT NULL NUMBER(6)      |      |
| PROD_NAME             | NOT NULL VARCHAR2(50)   |      |
| PROD_DESC             | NOT NULL VARCHAR2(4000) |      |
| PROD_SUBCATEGORY      | NOT NULL VARCHAR2(50)   |      |
| PROD_SUBCATEGORY_ID   | NOT NULL NUMBER         |      |
| PROD_SUBCATEGORY_DESC | NOT NULL VARCHAR2(2000) |      |
| PROD_CATEGORY         | NOT NULL VARCHAR2(50)   |      |
| PROD_CATEGORY_ID      | NOT NULL NUMBER         |      |
| PROD_CATEGORY_DESC    | NOT NULL VARCHAR2(2000) |      |
| PROD_WEIGHT_CLASS     | NOT NULL NUMBER(3)      |      |
| PROD_UNIT_OF_MEASURE  | VARCHAR2(20)            |      |
| PROD_PACK_SIZE        | NOT NULL VARCHAR2(30)   |      |
| SUPPLIER_ID           | NOT NULL NUMBER(6)      |      |
| PROD_STATUS           | NOT NULL VARCHAR2(20)   |      |
| PROD_LIST_PRICE       | NOT NULL NUMBER(8,2)    |      |
| PROD_MIN_PRICE        | NOT NULL NUMBER(8,2)    |      |
| PROD_TOTAL            | NOT NULL VARCHAR2(13)   |      |
| PROD_TOTAL_ID         | NOT NULL NUMBER         |      |
| PROD_SRC_ID           | NUMBER                  |      |
| PROD_EFF_FROM         | DATE                    |      |
| PROD_EFF_TO           | DATE                    |      |
| PROD_VALID            | VARCHAR2(1)             |      |

## Table PROMOTIONS

| Name | Null? | Type |
|------|-------|------|
|      |       |      |

|                      |                       |
|----------------------|-----------------------|
| PROMO_ID             | NOT NULL NUMBER(6)    |
| PROMO_NAME           | NOT NULL VARCHAR2(30) |
| PROMO_SUBCATEGORY    | NOT NULL VARCHAR2(30) |
| PROMO_SUBCATEGORY_ID | NOT NULL NUMBER       |
| PROMO_CATEGORY       | NOT NULL VARCHAR2(30) |
| PROMO_CATEGORY_ID    | NOT NULL NUMBER       |
| PROMO_COST           | NOT NULL NUMBER(10,2) |
| PROMO_BEGIN_DATE     | NOT NULL DATE         |
| PROMO_END_DATE       | NOT NULL DATE         |
| PROMO_TOTAL          | NOT NULL VARCHAR2(15) |
| PROMO_TOTAL_ID       | NOT NULL NUMBER       |

## Table SALES

| Name          | Null?                 | Type |
|---------------|-----------------------|------|
| PROD_ID       | NOT NULL NUMBER       |      |
| CUST_ID       | NOT NULL NUMBER       |      |
| TIME_ID       | NOT NULL DATE         |      |
| CHANNEL_ID    | NOT NULL NUMBER       |      |
| PROMO_ID      | NOT NULL NUMBER       |      |
| QUANTITY SOLD | NOT NULL NUMBER(10,2) |      |
| AMOUNT SOLD   | NOT NULL NUMBER(10,2) |      |

## Table SALES\_TRANSACTIONS\_EXT

| Name          | Null? | Type         |
|---------------|-------|--------------|
| PROD_ID       |       | NUMBER       |
| CUST_ID       |       | NUMBER       |
| TIME_ID       |       | DATE         |
| CHANNEL_ID    |       | NUMBER       |
| PROMO_ID      |       | NUMBER       |
| QUANTITY SOLD |       | NUMBER       |
| AMOUNT SOLD   |       | NUMBER(10,2) |
| UNIT_COST     |       | NUMBER(10,2) |
| UNIT_PRICE    |       | NUMBER(10,2) |

## Table SUPPLEMENTARY\_DEMOGRAPHICS

| Name           | Null?           | Type         |
|----------------|-----------------|--------------|
| CUST_ID        | NOT NULL NUMBER |              |
| EDUCATION      |                 | VARCHAR2(21) |
| OCCUPATION     |                 | VARCHAR2(21) |
| HOUSEHOLD_SIZE |                 | VARCHAR2(21) |
| YRS_RESIDENCE  |                 | NUMBER       |
| AFFINITY_CARD  |                 | NUMBER(10)   |

|                         |                |
|-------------------------|----------------|
| BULK_PACK_DISKETTES     | NUMBER(10)     |
| FLAT_PANEL_MONITOR      | NUMBER(10)     |
| HOME_THEATER_PACKAGE    | NUMBER(10)     |
| BOOKKEEPING_APPLICATION | NUMBER(10)     |
| PRINTER_SUPPLIES        | NUMBER(10)     |
| Y_BOX_GAMES             | NUMBER(10)     |
| OS_DOC_SET_KANJI        | NUMBER(10)     |
| COMMENTS                | VARCHAR2(4000) |

Table TIMES

| Name                    | Null?    | Type        |
|-------------------------|----------|-------------|
| TIME_ID                 | NOT NULL | DATE        |
| DAY_NAME                | NOT NULL | VARCHAR2(9) |
| DAY_NUMBER_IN_WEEK      | NOT NULL | NUMBER(1)   |
| DAY_NUMBER_IN_MONTH     | NOT NULL | NUMBER(2)   |
| CALENDAR_WEEK_NUMBER    | NOT NULL | NUMBER(2)   |
| FISCAL_WEEK_NUMBER      | NOT NULL | NUMBER(2)   |
| WEEK_ENDING_DAY         | NOT NULL | DATE        |
| WEEK_ENDING_DAY_ID      | NOT NULL | NUMBER      |
| CALENDAR_MONTH_NUMBER   | NOT NULL | NUMBER(2)   |
| FISCAL_MONTH_NUMBER     | NOT NULL | NUMBER(2)   |
| CALENDAR_MONTH_DESC     | NOT NULL | VARCHAR2(8) |
| CALENDAR_MONTH_ID       | NOT NULL | NUMBER      |
| FISCAL_MONTH_DESC       | NOT NULL | VARCHAR2(8) |
| FISCAL_MONTH_ID         | NOT NULL | NUMBER      |
| DAYS_IN_CAL_MONTH       | NOT NULL | NUMBER      |
| DAYS_IN_FIS_MONTH       | NOT NULL | NUMBER      |
| END_OF_CAL_MONTH        | NOT NULL | DATE        |
| END_OF_FIS_MONTH        | NOT NULL | DATE        |
| CALENDAR_MONTH_NAME     | NOT NULL | VARCHAR2(9) |
| FISCAL_MONTH_NAME       | NOT NULL | VARCHAR2(9) |
| CALENDAR_QUARTER_DESC   | NOT NULL | CHAR(7)     |
| CALENDAR_QUARTER_ID     | NOT NULL | NUMBER      |
| FISCAL_QUARTER_DESC     | NOT NULL | CHAR(7)     |
| FISCAL_QUARTER_ID       | NOT NULL | NUMBER      |
| DAYS_IN_CAL_QUARTER     | NOT NULL | NUMBER      |
| DAYS_IN_FIS_QUARTER     | NOT NULL | NUMBER      |
| END_OF_CAL_QUARTER      | NOT NULL | DATE        |
| END_OF_FIS_QUARTER      | NOT NULL | DATE        |
| CALENDAR_QUARTER_NUMBER | NOT NULL | NUMBER(1)   |
| FISCAL_QUARTER_NUMBER   | NOT NULL | NUMBER(1)   |
| CALENDAR_YEAR           | NOT NULL | NUMBER(4)   |
| CALENDAR_YEAR_ID        | NOT NULL | NUMBER      |
| FISCAL_YEAR             | NOT NULL | NUMBER(4)   |

|                   |                 |
|-------------------|-----------------|
| FISCAL_YEAR_ID    | NOT NULL NUMBER |
| DAY_S_IN_CAL_YEAR | NOT NULL NUMBER |
| DAY_S_IN_FIS_YEAR | NOT NULL NUMBER |
| END_OF_CAL_YEAR   | NOT NULL DATE   |
| END_OF_FIS_YEAR   | NOT NULL DATE   |

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