Order Entry Database Background

Module 6 uses the Order Entry database for problems involving a data lake. Course 1 used the Order Entry database for extra problems in modules 4 and 5 so learners who took Course 1 in the specialization have familiarity. This document describes the tables and relationships.

Table Description and Usage

Table 1 lists the meaning of each table and Figure 1 shows the Oracle database diagram. After the relationship diagram, sample rows and CREATE TABLE statements are shown for each table. In addition to the other documentation, here are some notes about the Order Entry Database:

- The primary key of the *OrdLine* table is a combination of *OrdNo* and *ProdNo*.
- The *Employee* table has a self-referencing (unary) relationship to itself through the foreign key, *SupEmpNo*, the employee number of the supervising employee. In the relationship diagram, the table *Employee_1* is a representation of the self-referencing relationship, not a real table.

Table 1: Tables of the Order Entry Database

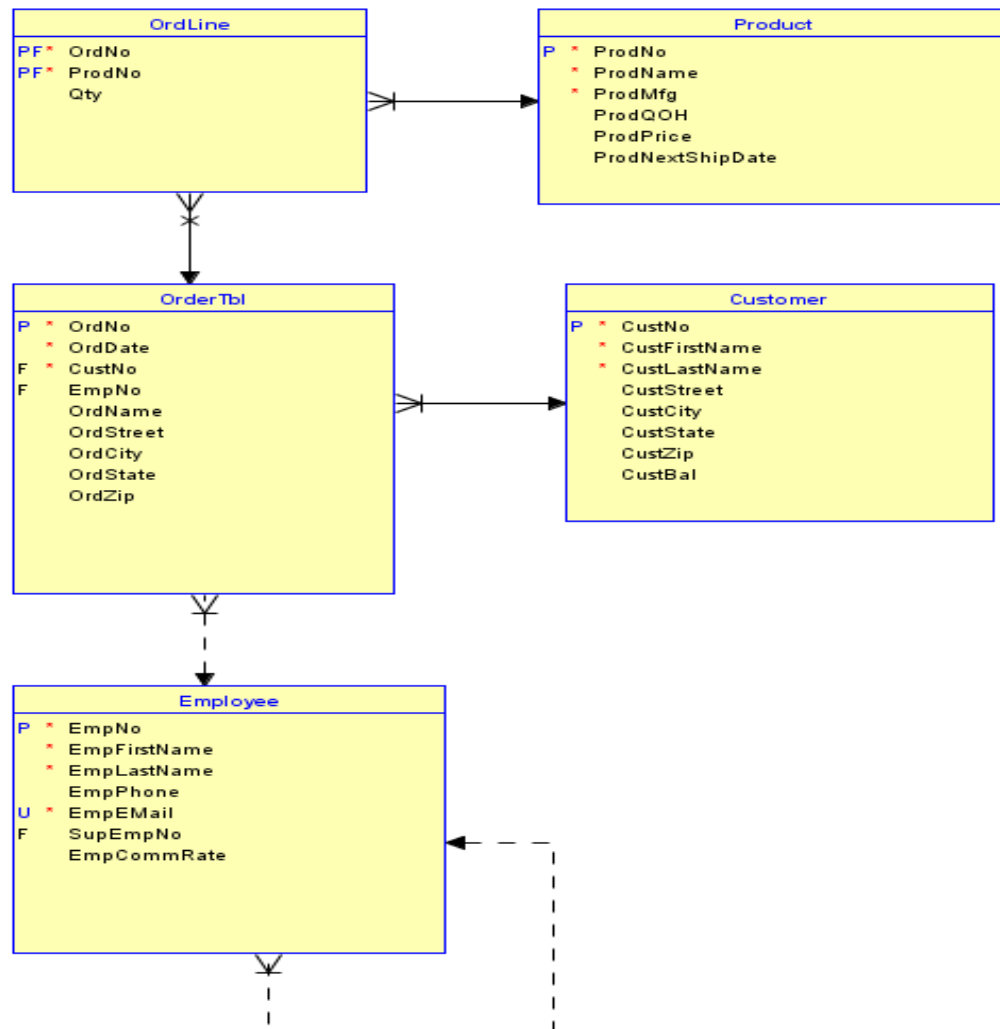| Table Name	Description
Customer	List of customers who have placed orders
OrderTbl	Contains the heading part of an order; Internet orders do not have an employee
Employee	List of employees who can take orders
OrdLine	Contains the product detail parts of orders
Product	List of products that may be ordered

Figure 1: Oracle Database Diagram for the Order Entry Database

Table Listings

Customer

CustNo	CustFirstName	CustLastName	CustStreet	CustCity	CustState	CustZip	CustBal
C0954327	Sheri	Gordon	336 Hill St.	Littleton	CO	80129-5543	$230.00
C1010398	Jim	Glussman	1432 E. Ravenna	Denver	CO	80111-0033	$200.00
C2388597	Beth	Taylor	2396 Rafter Rd	Seattle	WA	98103-1121	$500.00
C3340959	Betty	Wise	4334 153rd NW	Seattle	WA	98178-3311	$200.00
C3499503	Bob	Mann	1190 Lorraine Cir.	Monroe	WA	98013-1095	$0.00
C8543321	Ron	Thompson	789 122nd St.	Renton	WA	98666-1289	$85.00
C8574932	Wally	Jones	411 Webber Ave.	Seattle	WA	98105-1093	$1,500.00
C8654390	Candy	Kendall	456 Pine St.	Seattle	WA	98105-3345	$50.00
C9128574	Jerry	Wyatt	16212 123rd Ct.	Denver	CO	80222-0022	$100.00
C9403348	Mike	Boren	642 Crest Ave.	Englewoo	CO	80113-5431	$0.00
C9432910	Larry	Styles	9825 S. Crest Lane	Bellevue	WA	98104-2211	$250.00
C9543029	Sharon	Johnson	1223 Meyer Way	Fife	WA	98222-1123	$856.00
C9549302	Todd	Hayes	1400 NW 88th	Lynnwood	WA	98036-2244	$0.00
C9857432	Homer	Wells	123 Main St.	Seattle	WA	98105-4322	$500.00
C9865874	Mary	Hill	206 McCaffrey	Littleton	CO	80129-5543	$150.00
C9943201	Harry	Sanders	1280 S. Hill Rd.	Fife	WA	98222-2258	$1,000.00

OrderTbl

OrdNo	OrdDate	CustNo	EmpNo	OrdName	OrdStreet	OrdCity	OrdState	OrdZip
O1116324	01/23/2021	C0954327	E8544399	Sheri Gordon	336 Hill St.	Littleton	CO	80129-5543
O1231231	01/23/2021	C9432910	E9954302	Larry Styles	9825 S. Crest Lane	Bellevue	WA	98104-2211
O1241518	02/10/2021	C9549302	[null]	Todd Hayes	1400 NW 88th	Lynnwood	WA	98036-2244
O1455122	01/09/2021	C8574932	E9345771	Wally Jones	411 Webber Ave.	Seattle	WA	98105-1093
O1579999	01/05/2021	C9543029	E8544399	Tom Johnson	1632 Ocean Dr.	Des Moines	WA	98222-1123
O1615141	01/23/2021	C8654390	E8544399	Candy Kendall	456 Pine St.	Seattle	WA	98105-3345
O1656777	02/11/2021	C8543321	[null]	Ron Thompson	789 122nd St.	Renton	WA	98666-1289
O2233457	01/12/2021	C2388597	E9884325	Beth Taylor	2396 Rafter Rd	Seattle	WA	98103-1121
O2334661	01/14/2021	C0954327	E1329594	Mrs. Ruth Gordon	233 S. 166th	Seattle	WA	98011-8822
O3252629	01/23/2021	C9403348	E9954302	Mike Boren	642 Crest Ave.	Englewood	CO	80113-5431
O3331222	01/13/2021	C1010398	[null]	Jim Glussman	1432 E. Ravenna	Denver	CO	80111-0033
O3377543	01/15/2021	C9128574	E8843211	Jerry Wyatt	16212 123rd Ct.	Denver	CO	80222-0022
O4714645	01/11/2021	C2388597	E1329594	Beth Taylor	2396 Rafter Rd	Seattle	WA	98103-1121
O5511365	01/22/2021	C3340959	E9884325	Betty White	4334 153rd NW	Seattle	WA	98178-3311
O6565656	01/20/2021	C9865874	E8843211	Mr. Jack Sibley	166 E. 344th	Renton	WA	98006-5543
O7847172	01/23/2021	C9943201	[null]	Harry Sanders	1280 S. Hill Rd.	Fife	WA	98222-2258
O7959898	02/19/2021	C8543321	E8544399	Ron Thompson	789 122nd St.	Renton	WA	98666-1289
O7989497	01/16/2021	C3499503	E9345771	Bob Mann	1190 Lorraine Cir.	Monroe	WA	98013-1095
O8979495	01/23/2021	C9865874	[null]	HelenSibley	206 McCaffrey	Renton	WA	98006-5543
O9919699	02/11/2021	C9857432	E9954302	Homer Wells	123 Main St.	Seattle	WA	98105-4322

Employee

EmpNo	EmpFirstName	EmpLastName	EmpPhone	EmpEMail	SupEmpNo	EmpCommRate
E1329594	Landi	Santos	(303) 789-1234	LSantos@bigco.com	E8843211	0.02
E8544399	Joe	Jenkins	(303) 221-9875	JJenkins@bigco.com	E8843211	0.02
E8843211	Amy	Tang	(303) 556-4321	ATang@bigco.com	E9884325	0.04
E9345771	Colin	White	(303) 221-4453	CWhite@bigco.com	E9884325	0.04
E9884325	Thomas	Johnson	(303) 556-9987	TJohnson@bigco.com	[null]	0.05
E9954302	Mary	Hill	(303) 556-9871	MHill@bigco.com	E8843211	0.02
E9973110	Theresa	Beck	(720) 320-2234	TBeck@bigco.com	E9884325	[null]

Product

ProdNo	ProdName	ProdMfg	ProdQOH	ProdPrice	ProdNextShipDate
P0036566	17 inch Color Monitor	ColorMeg, Inc.	12	$169.00	2/20/2021
P0036577	19 inch Color Monitor	ColorMeg, Inc.	10	$319.00	2/20/2021
P1114590	R3000 Color Laser Printer	Connex	5	$699.00	1/22/2021
P1412138	10 Foot Printer Cable	Ethlite	100	$12.00	[null]
P1445671	8-Outlet Surge Protector	Intersafe	33	$14.99	[null]
P1556678	CVP Ink Jet Color Printer	Connex	8	$99.00	1/22/2021
P3455443	Color Ink Jet Cartridge	Connex	24	$38.00	1/22/2021
P4200344	36-Bit Color Scanner	UV Components	16	$199.99	1/29/2021
P6677900	Black Ink Jet Cartridge	Connex	44	$25.69	[null]
P9995676	Battery Back-up System	Cybercx	12	$89.00	2/1/2021

OrdLine

OrdNo	ProdNo	Qty
O1116324	P1445671	1
O1231231	P0036566	1
O1231231	P1445671	1
O1241518	P0036577	1
O1455122	P4200344	1
O1579999	P1556678	1
O1579999	P6677900	1
O1579999	P9995676	1
O1615141	P0036566	1
O1615141	P1445671	1
O1615141	P4200344	1
O1656777	P1445671	1
O1656777	P1556678	1
O2233457	P0036577	1
O2233457	P1445671	1
O2334661	P0036566	1
O2334661	P1412138	1
O2334661	P1556678	1
O3252629	P4200344	1
O3252629	P9995676	1
O3331222	P1412138	1
O3331222	P1556678	1
O3331222	P3455443	1
O3377543	P1445671	1
O3377543	P9995676	1
O4714645	P0036566	1
O4714645	P9995676	1
O5511365	P1412138	1
O5511365	P1445671	1
O5511365	P1556678	1
O5511365	P3455443	1
O5511365	P6677900	1
O6565656	P0036566	10
O7847172	P1556678	1
O7847172	P6677900	1
O7959898	P1412138	5
O7959898	P1556678	5
O7959898	P3455443	5
O7959898	P6677900	5
O7989497	P1114590	2
O7989497	P1412138	2
O7989497	P1445671	3
O8979495	P1114590	1
O8979495	P1412138	1
O8979495	P1445671	1

O9919699	P0036577	1
O9919699	P1114590	1
O9919699	P4200344	1

CREATE TABLE Statements

```
CREATE TABLE Customer
( CustNo            CHAR(8),
  CustFirstName     VARCHAR(20) CONSTRAINT CustFirstNameRequired NOT NULL,
  CustLastName      VARCHAR(30) CONSTRAINT CustLastNameRequired NOT NULL,
  CustStreet        VARCHAR(50),
  CustCity          VARCHAR(30),
  CustState         CHAR(2),
  CustZip           CHAR(10),
  CustBal           DECIMAL(12,2) DEFAULT 0,
 CONSTRAINT PKCustomer PRIMARY KEY (CustNo)  )
```

```
CREATE TABLE OrderTbl
(     OrdNo             CHAR(8),
      OrdDate           DATE    CONSTRAINT OrdDateRequired NOT NULL,
      CustNo            CHAR(8) CONSTRAINT CustNoRequired NOT NULL,
      EmpNo             CHAR(8),
      OrdName           VARCHAR(50),
      OrdStreet         VARCHAR(50),
      OrdCity           VARCHAR(30),
      OrdState          CHAR(2),
      OrdZip            CHAR(10),
CONSTRAINT PKOrderTbl PRIMARY KEY (OrdNo) ,
CONSTRAINT FKCustNo FOREIGN KEY (CustNo) REFERENCES Customer,
CONSTRAINT FKEmpNo FOREIGN KEY (EmpNo) REFERENCES Employee  )
```

```
CREATE TABLE OrdLine
(     OrdNo             CHAR(8),
      ProdNo            CHAR(8),
      Qty               INTEGER DEFAULT 1,
CONSTRAINT PKOrdLine PRIMARY KEY (OrdNo, ProdNo),
CONSTRAINT FKOrdNo FOREIGN KEY (OrdNo) REFERENCES OrderTbl
    ON DELETE CASCADE,
CONSTRAINT FKProdNo FOREIGN KEY (ProdNo) REFERENCES Product )
```

```
CREATE TABLE Employee
(     EmpNo         CHAR(8),
      EmpFirstName  VARCHAR(20) CONSTRAINT EmpFirstNameRequired NOT NULL,
      EmpLastName   VARCHAR(30) CONSTRAINT EmpLastNameRequired NOT NULL,
      EmpPhone      CHAR(15),
      EmpEMail      VARCHAR(50) CONSTRAINT EmpEMailRequired NOT NULL,
      SupEmpNo      CHAR(8),
      EmpCommRate   DECIMAL(3,3),
 CONSTRAINT PKEmployee PRIMARY KEY (EmpNo),
```

```
CONSTRAINT UNIQUEEMail UNIQUE(EmpEMail),
CONSTRAINT FKSupEmpNo FOREIGN KEY (SupEmpNo) REFERENCES Employee )
```

```
CREATE TABLE Product
(     ProdNo            CHAR(8),
      ProdName          VARCHAR(50) CONSTRAINT ProdNameRequired NOT NULL,
      ProdMfg           VARCHAR(20) CONSTRAINT ProdMfgRequired NOT NULL,
      ProdQOH           INTEGER DEFAULT 0,
      ProdPrice         DECIMAL(12,2) DEFAULT 0,
      ProdNextShipDate  DATE,
  CONSTRAINT PKProduct PRIMARY KEY (ProdNo)  )
```