

Figure 1.3 Mail-order database schemes.

EMPLOYEES (ENO, ENAME, ZIP, HDATE)
 PARTS (PNO, PNAME, QOH, PRICE, LEVEL)
 CUSTOMERS (CNO, CNAME, STREET, ZIP, PHONE)
 ORDERS (ONO, CNO, ENO, RECEIVED, SHIPPED)
 ODETAILS (ONO, PNO, QTY)
 ZIPCODES (ZIP, CITY)

Mail-Order Database

The mail-order database consists of the relations defined in the six schemes shown in Figure 1.3.

- The EMPLOYEES relation contains information about the employees of the company. The ENO attribute is the primary key. The ZIP attribute is a foreign key referring to the ZIPCODES table.
- The PARTS relation keeps a record of the inventory of the company. The record for each part includes its number and name as well as the quantity on hand, unit price, and the reorder level. PNO is the primary key for this relation.
- The CUSTOMERS relation contains information about the customers of the mail-order company. Each customer is assigned a customer number, CNO, which serves as the primary key. The ZIP attribute is a foreign key referring to the ZIPCODES relation.
- The ORDERS relation contains information about the orders placed by customers, the employee who took the order, and the dates the order was received and shipped. ONO is the primary key. The CNO attribute is a foreign key referring to the CUSTOMERS relation, and the ENO attribute is a foreign key referring to the EMPLOYEES table.
- The ODETAILS relation contains information about the various parts ordered by the customer within a particular order. The combination of the ONO and PNO attributes forms the primary key. The ONO attribute is a foreign key referring to the ORDERS relation, and the PNO attribute is a foreign key referring to the PARTS relation.
- The ZIPCODES relation maintains information about the zip codes for various cities. ZIP is the primary key.

A sample from a mail-order database is shown in Figure 1.4.

Figure 1.4 A sample from a mail-order database.*Employees*

ENO	ENAME	ZIP	HDATE
1000	Jones	67226	12-DEC-95
1001	Smith	60606	01-JAN-92
1002	Brown	50302	01-SEP-94

Parts

PNO	PNAME	QOH	PRICE	LEVEL
10506	Land Before Time I	200	19.99	20
10507	Land Before Time II	156	19.99	20
10508	Land Before Time III	190	19.99	20
10509	Land Before Time IV	60	19.99	20
10601	Sleeping Beauty	300	24.99	20
10701	When Harry Met Sally	120	19.99	30
10800	Dirty Harry	140	14.99	30
10900	Dr. Zhivago	100	24.99	30

Customers

CNO	CNAME	STREET	ZIP	PHONE
1111	Charles	123 Main St.	67226	316-636-5555
2222	Bertram	237 Ash Avenue	67226	316-689-5555
3333	Barbara	111 Inwood St.	60606	316-111-1234

Orders

ONO	CNO	ENO	RECEIVED	SHIPPED
1020	1111	1000	10-DEC-94	12-DEC-94
1021	1111	1000	12-JAN-95	15-JAN-95
1022	2222	1001	13-FEB-95	20-FEB-95
1023	3333	1000	20-JUN-97	null

Odetails

ONO	PNO	QTY
1020	10506	1
1020	10507	1
1020	10508	2
1020	10509	3
1021	10601	4
1022	10601	1
1022	10701	1
1023	10800	1
1023	10900	1

Zipcodes

ZIP	CITY
67226	Wichita
60606	Fort Dodge
50302	Kansas City
54444	Columbia
66002	Liberal
61111	Fort Hays