insert into THE(select o_odetails
from o_orders o
where o_no = 1020)
values (10800, 5);

Updates and Deletes

Updates and deletes to object-relational tables are done in a similar manner to purely
relational tables, using the update and delete statements. Attributes are accessed
in a similar manner as in the queries.

The following update statement changes the street address for a particular
customer:

update o_customers c
set c.person.address.street = '111 New Street'
where c.cno = 1111;

and the following delete statement deletes a particular customer row:

delete from o_customers c
where c.person.address.street like '11%';

Exercises

2.1 To get interesting answers to queries in subsequent exercises, populate the mail-order
database, using SQL insert statements, with at least 30 customers, 10 employees,
5 zip codes, and 50 parts. Also insert around 100 orders (an average of about 3 per
customer), with each order containing an average of 2 parts.

2.2 Populate the grade book database, using SQL insert statements, with at least 50
rows in the students table, 10 rows in the catalog table, 12 rows in the courses

table, 40 rows in the components table (resulting in an average of between three
and four components per course), 120 rows in the enrollis table (resulting in an
average of about 10 students in each course), and the appropriate number of rows
in the scores table to complete the database.

2.3 Consider the following relations of the mail-order database:

EMPLOYEES(ENO, ENAME, ZIP, HDATE)
PARTS(PNO, PNAME, QOH, PRICE, LEVEL)
CUSTOMERS(CNO, CNAME, STREET, ZIP, PHONE)
ORDERS(ONO, CNO, ENO, RECEIVED, SHIPPED)
Write SQL expressions that answer the following queries:

(a) Get the names of parts that cost less than $20.00.
(b) Get the names and cities of employees who have taken orders for parts costing more than $50.00.
(c) Get the pairs of customer number values of customers having the same zip code.
(d) Get the names of customers who have ordered parts from employees living in Wichita.
(e) Get the names of customers who have ordered parts only from employees living in Wichita.
(f) Get the names of customers who have ordered all parts costing less than $20.00.
(g) Get the names of employees along with their total sales for the year 1995.
(h) Get the numbers and names of employees who have never made a sale to a customer living in the same zip code as the employee.
(i) Get the names of customers who have placed the highest number of orders.
(j) Get the names of customers who have placed the most expensive orders.
(k) Get the names of parts that have been ordered the most (in terms of quantity ordered, not number of orders).
(l) Get the names of parts along with the number of orders they appear in, sorted in decreasing order of the number of orders.
(m) Get the average waiting time for all orders in number of days. The waiting time for an order is defined as the difference between the shipped date and the received date. Note: The dates should be truncated to 12:00 AM so that the difference is always a whole number of days.
(n) Get the names of customers who had to wait the longest for their orders to be shipped.
(o) For all orders greater than $100.00, get the order number and the waiting time for the order.

2.4 Consider the following relations of the grade book database:

CATALOG(CNO,CTITLE)
STUDENTS(SID,FNAME,LNAME,MNIT)
COURSES(TERM,LINENO,CNO,A,B,C,D)
COMPONENTS(TERM,LINENO,COMPNAME,MAXPOINTS,WEIGHT)