FIGURE 3-3
(a)  EMPLOYEE (0,1) 1:1 (0,1) AUTO
AUTO-ASSIGNMENT

(b)  DORMITORY (0,N) 1:N (0,1) STUDENT
DORM-OCCUPANT

(c)  STUDENT (O,N) N:M (O,N) CLUB
STUDENT-CLUB

(d)  DORMITORY (0,N) DORM-OCCUPANT (0,1) STUDENT

FIGURE 3-4

FIGURE 3-5
DORM-OCCUPANT

STUDENT 1:N ROOMS-WITH

DORMITORY

STUDENT

CLUB

STUDENT-CLUB
P.54
Figure 3-6
(a)

DORMITORY
StudentName
StudentNumber

Location
DormName

1:N

(1,N)

(0,1)

DORM-OCCUPANT

Rental

Number of Rooms

DORMITORY Contains
DormName
Location
Number of Rooms
DORM-OCCUPANT contains
Rent

(b)

DORMITORY
StudentName
StudentNumber

DORMITORY contains
DormName
Location
Number of Rooms

DORM-OCCUPANT contains
Rent

P.55
Figure 3-7
(a)

EMPLOYEE

1:N

(0,N)

(1,1)

DEPENDENT

(b)

BUILDING

1:N

(0,N)

(1,1)

APARTMENT

P.56
Figure 3-8
(a)

ORDER

N:1

(1,1)

(0,N)

SALESPERSON
Figure 3-9

(a)

CUSTOMER

CUSTOMER Contains:
CustomerNumber
CustomerName
Other attributes…

CONTACTNAME

CONTACTNAME Contains:
ContactName

(b)

CUSTOMER

CUSTOMER Contains:
CustomerNumber
CustomerName
Other attributes…

ADDRESS

ADDRESS Contains:
Street
City
State/Province
Zip/Postal/Code

(b)

PATIENT

(PATIENT, (0,N) 1:N (1,1) PRESCRIPTION

ASSIGNMENT

ASSIGNMENT Contains:
Identifier:
{TaskName, ProjectName}

PROJECT

PROJECT Contains:
Identifier:
Project Name

(p.57)
FIGURE 3-11

ER Diagram:
- **Employee**
  - **Truck-assn** (1,1) (0,1)
  - **Engineer**
    - **Service** (0,N)
    - **Eng-skill** (1,N) (1,1)
    - **Certification** (0,N)
  - **Client-service** (1,N)
  - **Client** (1,N)
  - **Referred-by** (1,1)
  - **Fee** (O,M) N:M
  - **Service-provider** 1:N
  - **Qual-engineer** (1,M) N:M

Relationships:
- **Truck-assn**
- **Engineer**
- **Service**
- **Eng-skill**
- **Certification**
- **Client-service**
- **Client**
- **Referred-by**
- **Fee**
Figure 3-12

Figure 3-13
P.63
Figure 3-14

CUSTOMER

PRIVATE-LESSON

GROUP-LESSON

TEACHER

DANCE

FULL-TIME TEACHER

PART-TIME TEACHER
Figure 3-16

- OWNER
- EQUIPMENT
- BOAT
- LEASE
- PART-TIME CREW
- SCHEDULED-MAINTENANCE
- REPAIR
- CUSTOMER
- WERTHER-ITINERARY

Relationships:
- OWNER to EQUIPMENT: N:M
- EQUIPMENT to BOAT: N:M
- BOAT to LEASE: 1:N
- LEASE to CUSTOMER: 1:1
- LEASE to REPAIR: 1:N
- REPAIR to PART-TIME CREW: 1:1
- OWNER to SCHEDULED-MAINTENANCE: 0:M
- SCHEDULED-MAINTENANCE to LEASE: 0:N
- CUSTOMER to WERTHER-ITINERARY: 1:N

Cardinalities:
- 0:M, 0,N, 1:M, 1:N, 1:1