Erratum

Some of the examples in "SEQUEL 2: A Unified Approach to Data Definition, Manipulation, and Control" (D. D. Chamberlin et al., *IBM J. Res. Develop.*, Vol. 20, p. 560, November 1976) contained typographical punctuation errors. The correct forms of these examples appear below, followed by a corrected version of the paragraph that appears immediately after example D1 on page 565 of the original article. Reprints of the paper including these changes are available from Dr. Chamberlin, IBM Research Laboratory, 5600 Cottle Road, San Jose, CA 95193.

Q13. List the names of all employees and the locations of their departments.

```
SELECT EMP.NAME,DEPT.LOC
FROM   EMP,DEPT
WHERE  EMP.DNO = DEPT.DNO
```

Q14. For each employee whose salary exceeds his manager's salary, list the employee's name and his manager's name.

```
SELECT X.NAME,Y.NAME
FROM   EMP X, EMP Y
WHERE  X.MGR = Y.EMPNO
AND    X.SAL > Y.SAL
```

Q15. List the suppliers that supply all the parts used by Dept. 50.

```
SELECT    SUPPLIER
FROM      SUPPLY X
WHERE
          (SELECT PART
          FROM   SUPPLY
          WHERE  SUPPLIER = X.SUPPLIER)
CONTAINS
          (SELECT PART
          FROM   USAGE
          WHERE  DNO = 50)
```

M1. Insert a new employee named "Jones" with employee number 535 in Dept. 51, having other attributes null.

```
INSERT INTO EMP(EMPNO,NAME,DNO):
        ⟨535,'JONES',51⟩
```

M4. Delete all the departments having no employees from the DEPT table.

```
DELETE DEPT X
WHERE
        (SELECT COUNT(*)
        FROM   EMP
        WHERE  DNO = X.DNO) = 0
```

D3. Create an image called I3 on the SAL attribute of the EMP table.

```
CREATE IMAGE I3 ON EMP(SAL)
```

D6. Define a view called PROGS consisting of the names and salaries of all programmers and the locations of their departments.

```
DEFINE VIEW PROGS
                (NAME,SALARY,HOMEBASE) AS
    SELECT EMP.NAME,EMP.SAL,DEPT.LOC
    FROM   EMP,DEPT
    WHERE  EMP.DNO = DEPT.DNO
    AND    EMP.JOB = 'PROGRAMMER'
```

Using the above view, find the average salary of programmers in Denver.

```
SELECT AVG(SAL)
FROM   PROGS
WHERE  HOMEBASE = 'DENVER'
```

D9. (Illustrates the use of comments.)

```
COMMENT ON VIEW D50:
    'LIMITED VIEW OF EMPLOYEES IN DEPT. 50'
```

C5. Assert that the NEMPS attribute of each row of the DEPT table is equal to the number of employees in the given department.

```
ASSERT A3 ON DEPT X: NEMPS =
        (SELECT COUNT(*)
        FROM EMP
        WHERE DNO = X.DNO)
```

C9. When an employee is deleted from EMP, if there are no remaining employees in his department, delete the corresponding DEPT record.

```
DEFINE TRIGGER T2
ON DELETION OF EMP X:
    (IF (SELECT COUNT(*)
         FROM   EMP
         WHERE  DNO = X.DNO) = 0
     THEN DELETE DEPT
         WHERE      DNO = X.DNO)
```

From p. 565 of the original article:

In SEQUEL 2, the name of a table may be qualified by the name of the user who created it, if necessary. For example, if users Smith and Jones each create a table named EMP, Smith can refer to his own table by EMP, or to Jones' table (if he is so authorized) by JONES.EMP. A user may also define a synonym, or alternate name, for a table, as shown in D2. This technique permits references to a table created by another user without repeating the creator's name with every reference.

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