Database Programming with SQL
13-2: Using Data Types
Practice Activities

Objectives

- Create a table using TIMESTAMP and TIMESTAMP WITH TIME ZONE column data types
- Create a table using INTERVAL YEAR TO MONTH and INTERVAL DAY TO SECOND column data types
- Give examples of organizations and personal situations where it is important to know to which time zone a date-time value refers
- List and provide an example of each of the number, date, and character data types

Vocabulary

Identify the vocabulary word for each definition below.

INTERVAL YEAR TO MONTH	Allows time to be stored as an interval of years and months
TIMESTAMP [(_)] WITH LOCAL TIME ZONE	When a column is selected in a SQL statement the time is automatically converted to the user's timezone
BLOB	Binary large object data up to 4 gigabytes
TIMESTAMP [(_)] WITH TIME ZONE	Stores a time zone value as a displacement from Universal Coordinated Time or UCT
INTERVAL DAY[(_)] TO SECOND	Allows time to be stored as an interval of days to hours, minutes, and seconds
CLOB	Character data up to 4 gigabytes
TIMESTAMP	Allows the time to be stored as a date with fractional seconds

1.

a)
```
CREATE TABLE time_ex3
( first_column TIMESTAMP WITH TIME ZONE,
second_column TIMESTAMP WITH LOCAL TIME ZONE);

INSERT INTO time_ex3
(first_column, second_column)
VALUES
('15-Jul-2017 08:00:00 AM -07:00', '15-Nov-2007 08:00:00');

SELECT *
FROM time_ex3; AND ALL
```

b)
```
CREATE TABLE time_ex4
(loan_duration1 INTERVAL YEAR(3) TO MONTH,
loan_duration2  INTERVAL YEAR(2) TO MONTH);

INSERT INTO time_ex4 (loan_duration1,
loan_duration2 )
VALUES( INTERVAL '120' MONTH(3),
INTERVAL '3-6' YEAR TO MONTH);
```

c)
```
CREATE TABLE time_ex5
(day_duration1 INTERVAL DAY(3) TO SECOND,
day_duration2  INTERVAL DAY(3) TO SECOND);

INSERT INTO time_ex5 (day_duration1, day_duration2 )
VALUES( INTERVAL '25' DAY(2), INTERVAL '4 10:30:10' DAY TO SECOND);
```

Try It / Solve It

1. Create tables using each of the listed time-zone data types, use your time-zone and one other in your examples. Answers will vary.

   a. TIMESTAMP WITH LOCAL TIME ZONE
   b. INTERVAL YEAR TO MONTH
   c. INTERVAL DAY TO SECOND

2. Execute a SELECT * from each table to verify your input.

3. Give 3 examples of organizations and personal situations where it is important to know to which time zone a date-time value refers.

   International organizations which schedule meetings at an exact hour&date, or travel organizations/companies to know when and where to be, and also in organizations which collect data to know the right date/time someone gave them that data