# Practices for Lesson 20: Managing Data in Different Time Zones

Practices for Lesson 20: Overview

Practice Overview

This practice covers using the datetime functions.

**Note:** Before starting this practice, execute the

/home/oracle/labs/sql2/code\_ex/cleanup\_scripts/cleanup\_20.sql script.

Practice 20-1: Managing Data in Different Time Zones

Overview

In this practice, you display time zone offsets, CURRENT\_DATE, CURRENT\_TIMESTAMP, and

LOCALTIMESTAMP. You also set time zones and use the EXTRACT function.

**Note:** Execute the cleanup\_20.sql script from

/home/oracle/labs/sql2/code\_ex/cleanup\_scripts/cleanup\_20.sql before performing the following tasks.

Tasks

Alter the session to set NLS\_DATE\_FORMAT to DD-MON-YYYY HH24:MI:SS. 2.

Write queries to display the time zone offsets (TZ\_OFFSET) for the following time zones:

US/Pacific-New

Singapore

Egypt

Alter the session to set the TIME\_ZONE parameter value to the time zone offset of US/Pacific-New.

Display CURRENT\_DATE, CURRENT\_TIMESTAMP, and LOCALTIMESTAMP for this

session.

Alter the session to set the TIME\_ZONE parameter value to the time zone offset of Singapore.

Display CURRENT\_DATE, CURRENT\_TIMESTAMP, and LOCALTIMESTAMP for this

session.

**Note:** The output might be different based on the date when the command is executed.

**Note:** Observe in the practice that CURRENT\_DATE, CURRENT\_TIMESTAMP, and

LOCALTIMESTAMP are sensitive to the session time zone.

Write a query to display DBTIMEZONE and SESSIONTIMEZONE.

Write a query to extract the YEAR from the HIRE\_DATE column of the EMPLOYEES table for those employees who work in department 80.

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Alter the session to set NLS\_DATE\_FORMAT to DD-MON-YYYY.

Examine and run the lab\_20\_06.sql script to create the SAMPLE\_DATES table and populate it.

**Note:** The screenshot dates will change according to the sysdate.

Select from the table and view the data.

Modify the data type of the DATE\_COL column and change it to TIMESTAMP. Select from the table to view the data.

Try to modify the data type of the DATE\_COL column and change it to TIMESTAMP WITH TIME ZONE. What happens?

Create a query to retrieve last names from the EMPLOYEES table and calculate the review status. If the year hired was 2010, display Needs Review for the review status; otherwise, display not this year! Name the review status column Review. Sort the results by the HIRE\_DATE column.

**Hint:** Use a CASE expression with the EXTRACT function to calculate the review status.

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Create a query to print the last names and the number of years of service for each employee. If the employee has been employed for five or more years, print 5 years of service. If the employee has been employed for 10 or more years, print 10 years of service. If the employee has been employed for 15 or more years, print 15 years of service. If none of these conditions matches, print maybe next year! Sort the results by the HIRE\_DATE column. Use the EMPLOYEES table.

**Hint:** Use CASE expressions and TO\_YMINTERVAL.

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Solution 20-1: Managing Data in Different Time Zones

Solution

Alter the session to set NLS\_DATE\_FORMAT to DD-MON-YYYY HH24:MI:SS.

Write queries to display the time zone offsets (TZ\_OFFSET) for the following time zones: US/Pacific-New, Singapore, and Egypt.

US/Pacific-New:

Singapore:

Egypt:

Alter the session to set the TIME\_ZONE parameter value to the time zone offset of US/Pacific-New.

Display CURRENT\_DATE, CURRENT\_TIMESTAMP, and LOCALTIMESTAMP for this

session.

**Note:** The output may be different based on the date when the command is executed.

Alter the session to set the TIME\_ZONE parameter value to the time zone offset of Singapore.

Display CURRENT\_DATE, CURRENT\_TIMESTAMP, and LOCALTIMESTAMP for this

session.

**Note:** The output may be different, based on the date when the command is executed.

**Note:** Observe in the practice that CURRENT\_DATE, CURRENT\_TIMESTAMP, and

LOCALTIMESTAMP are all sensitive to the session time zone.

Write a query to display DBTIMEZONE and SESSIONTIMEZONE.

Write a query to extract YEAR from the HIRE\_DATE column of the EMPLOYEES table for those employees who work in department 80.

Alter the session to set NLS\_DATE\_FORMAT to DD-MON-YYYY.

Examine and run the lab\_20\_06.sql script to create the SAMPLE\_DATES table and populate it.

Select from the table and view the data.

Modify the data type of the DATE\_COL column and change it to TIMESTAMP. Select from the table to view the data.

Try to modify the data type of the DATE\_COL column and change it to TIMESTAMP WITH TIME ZONE. What happens?

You are unable to change the data type of the DATE\_COL column because the Oracle server does not permit you to convert from TIMESTAMP to TIMESTAMP WITH TIMEZONE by using the ALTER statement.

Create a query to retrieve last names from the EMPLOYEES table and calculate the review status. If the year hired was 2010, display Needs Review for the review status; otherwise, display not this year! Name the review status column Review. Sort the results by the HIRE\_DATE column.

**Hint:** Use a CASE expression with the EXTRACT function to calculate the review status.

Create a query to print the last names and the number of years of service for each employee. If the employee has been employed five or more years, print 5 years of service. If the employee has been employed 10 or more years, print 10 years of service. If the employee has been employed 15 or more years, print 15 years of service. If none of these conditions matches, print maybe next year! Sort the results by the HIRE\_DATE column. Use the EMPLOYEES table.

**Hint:** Use CASE expressions and TO\_YMINTERVAL.