Homework 4\_3: Date Functions

# Vocabulary

Functia SYSDATE = A function that returns the current date and time of the database server.

ADD\_MONTHS = Add calendar months to date

LAST\_DAY = Last day of the month

NEXT\_DAY = Next day of the date specified

MONTHS\_BETWEEN = Number of months between due date

# Try It / Solve It

1. For DJs on Demand, display the number of months between the event\_date of the Vigil wedding and today’s date. Round to the nearest month.

SELECT ROUND(MONTHS\_BETWEEN(SYSDATE, event\_date))

FROM d\_events

WHERE name = 'Vigil wedding';

1. Display the days between the start of last summer’s school vacation break and the day school started this year. Assume 30.5 days per month. Name the output “Days.”

SELECT ROUND(MONTHS\_BETWEEN('28-Sep-2020','01-Jul-2020') \* 30.5) AS "Days"

FROM DUAL;

1. Display the days between January 1 and December 31.

SELECT ROUND(MONTHS\_BETWEEN('31-Dec-2020','01-Jan-2020') \* 30.5) AS "Days"

FROM DUAL;

1. Using one statement, round today's date to the nearest month and nearest year, and truncate it to the nearest month and nearest year. Use an alias for each column.

SELECT ROUND(SYSDATE, 'Month') AS "ROTUNJIRE LUNA", ROUND(SYSDATE, 'Year') AS "ROTUNJIRE AN", TRUNC(SYSDATE, 'Month') AS "Trunchiere luna", TRUNC(SYSDATE, 'Year') AS "Trunchiere an"

FROM DUAL;

1. What is the last day of the month for June 2005? Use an alias for the output.

SELECT LAST\_DAY('01-Jun-2005') AS "Ultima zi a lunii"

FROM DUAL;

1. Display the number of years between the Global Fast Foods employee Bob Miller’s birthday and today. Round to the nearest year.

SELECT ROUND(MONTHS\_BETWEEN(SYSDATE,birthdate)/12) AS "Years of Bob Miller"

FROM f\_staffs

WHERE first\_name = 'Bob' and last\_name = 'Miller';

1. Your next appointment with the dentist is six months from today. On what day will you go to the dentist? Name the output, “Appointment.”

SELECT ADD\_MONTHS(SYSDATE, 6) AS "Appointment"

FROM DUAL;

1. The teacher said you have until the last day of this month to turn in your research paper. What day will this be? Name the output, “Deadline.”

SELECT LAST\_DAY(SYSDATE)

FROM DUAL;

1. How many months between your birthday this year and January 1 next year?

SELECT ROUND(MONTHS\_BETWEEN(ADD\_MONTHS(TRUNC(SYSDATE, 'Year'),12), '19-Apr-2020'))

FROM DUAL;

1. What’s the date of the next Friday after your birthday this year? Name the output, “First Friday.”

SELECT NEXT\_DAY('19-Apr-2020', 'Friday') AS "FirstFraday"

FROM DUAL;

1. Name a date function that will return a number.

ROUND()

1. Name a date function that will return a date.

SYSDATE;

1. Give one example of why it is important for businesses to be able to manipulate date data?

Pentru ca date importante legate de partea financiar-contabila sunt stocate in baze de date, iar o manipulare defectoasa poate duce la pierderi in cadrul business-ului.

Extension Exercises

1. Using DUAL, write a statement that will convert 86.678 to 86.68.

SELECT ROUND(88.678,2)

FROM DUAL;

1. Write a statement that will display the DJs on Demand CD titles for cd\_numbers 90 and 91 in up- percase in a column headed “DJs on Demand Collections.”

SELECT UPPER(title) AS "DJs on Demand Collections"

FROM d\_cds

WHERE cd\_number between 90 and 91;

1. Write a statement that will create computer usernames for the DJs on Demand partners. The usernames will be the lowercase letters of the last name + the uppercase first letter in the first name. Title the column “User Passwords.” For example, Mary Smythers would be smythersM.

SELECT CONCAT(LOWER(last\_name),UPPER(SUBSTR(first\_name,1,1))) AS "User Passwords"

FROM d\_partners;

1. Write a statement that will convert “It’s a small world” to “HELLO WORLD.”

SELECT CONCAT('HELLO',UPPER(SUBSTR('It''s a small world',14,5)))

FROM DUAL;

1. Write a statement that will remove the “fiddle” from “fiddledeedee” and the “dum” from “fiddledee- dum.” Display the result “fiddledeedeedee” in a column with the heading “Nonsense.”

SELECT CONCAT( REPLACE('fiddledeedum','dum'),REPLACE('fiddledeedee' , 'fiddle')) AS "Nonsense"

FROM DUAL;

1. Replace every “i” in Mississippi with “$.”

SELECT REPLACE('Mississippi','i' ,'$')

FROM DUAL;

1. Using DUAL, convert 5332.342 to 5300.

SELECT ROUND(5332.342,-2)

FROM DUAL;

1. Using DUAL, convert 3.14159 to 3.14.

SELECT ROUND(3.14159,2)

FROM DUAL;

1. Using DUAL, convert 73.892 to 73.8.

SELECT TRUNC(73.892,1)

FROM DUAL;

1. What is the next Friday six months from now? Label the column “Future.”

SELECT NEXT\_DAY(ADD\_MONTHS(SYSDATE,6),'Friday') AS "Future"

FROM DUAL;

1. What is the date 10 years from now? Label the column “Future.”

SELECT ADD\_MONTHS(SYSDATE,12 \* 10) AS "Future"

FROM DUAL;

1. Leap years occur every four years. Remember, 2004 was a leap year. Now create a function that will show the date of the next leap year as 29-Feb-2008. Label the column “Future.”

SELECT ADD\_MONTHS(LAST\_DAY('01-Feb-2004'),12 \*4)

FROM DUAL;

1. Write a statement that will find any of the DJs on Demand CD themes that have an “ie” in their names.

SELECT description

FROM d\_themes

WHERE description LIKE '%ie%';

1. Write a statement that will return only the DJs on Demand CDs with years greater than 2000 but less than 2003. Display both the title and year.

SELECT producer

FROM d\_cds

WHERE year > 2000 and year < 2003;

1. Write a statement that will return the Oracle database employee’s employee ID and his starting hire dates between January 1, 1997 and today. Display the result ordered from most recently hired to the oldest.

SELECT employee\_id, hire\_date

FROM employees

WHERE hire\_date BETWEEN '1-Jan-1997' and SYSDATE

ORDER BY hire\_date DESC;