Department of Information Systems and Technologies 2025-2026 Fall Semester

CTIS259 Database Management Systems and Applications

Lab Guide 08

Instructor: Nimet Ceren SERİM Week: 6

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Aim of this lab session: 1. Practice 5-1: Using Conversion Functions and Conditional Expressions (NVL/NVL2/CASE)

2. Company Database Queries.

ORACLE Server Configurations:

IP Address: 139.179.33.231

Port number: 1522

SID: orclctis

Please USE oraxx accounts!

Practices for Lesson 5

Lesson Overview

This practice provides a variety of exercises using <code>TO_CHAR</code> and <code>TO_DATE</code> functions, and conditional expressions such as <code>DECODE</code> and <code>CASE</code>. Remember that for nested functions, the results are evaluated from the innermost function to the outermost function.

Practice 5-1: Using Conversion Functions and Conditional Expressions

1. Create a report that produces the following for each employee:

<employee last name> earns <salary> monthly but wants <3 times salary.>.
Label the column Dream Salaries.

	2 Dream Salaries
1	Whalen earns \$4,400.00 monthly but wants \$13,200.00.
2	Hartstein earns \$13,000.00 monthly but wants \$39,000.00.
3	Fay earns \$6,000.00 monthly but wants \$18,000.00.
4	Higgins earns \$12,000.00 monthly but wants \$36,000.00.
5	Gietz earns \$8,300.00 monthly but wants \$24,900.00.
19	Taylor earns \$8,600.00 monthly but wants \$25,800.00.
20	Grant earns \$7,000.00 monthly but wants \$21,000.00.

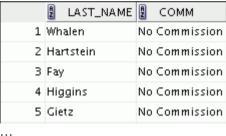
2. Display each employee's last name, hire date, and salary review date, which is the first Monday after six months of service. Label the column REVIEW. Format the dates to appear in the format similar to "Monday, the Thirty-First of July, 2000."

	LAST_NAME	HIRE_DATE	REVIEW
1	Whalen	17-SEP-87	Monday, the Twenty-First of March, 1988
2	Hartstein	17-FEB-96	Monday, the Nineteenth of August, 1996
3	Fay	17-AUG-97	Monday, the Twenty-Third of February, 1998
4	Higgins	07-JUN-94	Monday, the Twelfth of December, 1994
5	Gietz	07-JUN-94	Monday, the Twelfth of December, 1994
19	Taylor	24-MAR-98	Monday, the Twenty-Eighth of September, 1998
20	Grant	24-MAY-99	Monday, the Twenty-Ninth of November, 1999

3. Display the last name, hire date, and day of the week on which the employee started. Label the column DAY. Order the results by the day of the week, starting with Monday.

	LAST_NAME	HIRE_DATE	2 DAY
1	Grant	24-MAY-99	MONDAY
2	Ernst	21-MAY-91	TUESDAY
3	Taylor	24-MAR-98	TUESDAY
4	Rajs	17-OCT-95	TUESDAY
5	Mourgos	16-NOV-99	TUESDAY
19	Matos	15-MAR-98	SUNDAY
20	Fay	17-AUG-97	SUNDAY

4. Create a query that displays the employees' last names and commission amounts. If an employee does not earn commission, show "No Commission." Label the column COMM.



16	Vargas	No Commission
17	Zlotkey	.2
18	Abel	.3
19	Taylor	.2
20	Grant	.15

5. Using the DECODE function, write a query that displays the grade of all employees based on the value of the column JOB ID, using the following data: al & Only Academi

Job	Grade
AD_PRES	A
ST_MAN	В
IT_PROG	C
SA_REP	D
ST_CLERK	E
None of the above	0

	∄ JOB_ID	A	GRADE
1	AC_ACCOUNT	0	
2	AC_MGR	0	
3	AD_ASST	0	
4	AD_PRES	Α	
5	AD_VP	0	
6	AD_VP	0	
7	IT_PROG	C	

14 SA_REP	D
15 SA_REP	D
	770

19 ST_CLERK	E
ZO ST_MAN	В

6. Rewrite the statement in the preceding exercise by using the CASE syntax.

	2 JOB_ID	A	GRADE
1	AC_ACCOUNT	0	
2	AC_MGR	0	
3	AD_ASST	0	
4	AD_PRES	А	
5	AD_VP	0	
6	AD_VP	0	
7	IT_PROG	C	

...

14 SA_REP	D
15 SA_REP	D

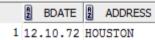
...

19	ST_CLERK	E
20	ST_MAN	В

Please USE stu (fStudentId) accounts!

Company Database Queries:

1. Retrieve the birth date and address of the employee whose name is "JOHN MICC".



2. Retrieve all the attribute values of the employee tuples of department 1.

				p	,			
	\$ LNAME	∯ SSN	BDATE			SEX		⊕ DNO
JOHN	MICC	111	12.10.72	HOUSTON	10000	M	222	1
ALICE	SMITH	333	14.03.67	NEWYORK	15000	F	222	1
ANN	YOUNG	123	20.03.89	COLORADO	13000	F	111	1
JACK	MITO	334	24.11.94	STAFFORD	12000	M	111	1
ARIA	BLAKE	115	13.01.62	HOUSTON	20000	F	222	1

3. Retrieve only distinct Address values.

CALIFORNIA
MARYLAND
HOUSTON
COLORADO
STAFFORD
NEWYORK

4. Retrieve all employees in department 1 whose salary is between \$10,000 and \$15,000.

	\$ LNAME	∯ SSN	₿ BDATE			SEX		∯ DNO
JOHN	MICC	111	12.10.72	HOUSTON	10000	M	222	1
ALICE	SMITH	333	14.03.67	NEWYORK	15000	F	222	1
ANN	YOUNG	123	20.03.89	COLORADO	13000	F	111	1
JACK	MITO	334	24.11.94	STAFFORD	12000	M	111	1

5. Retrieve a list of employees and the projects each works in, ordered by the employees department and within each department ordered alphabetically by name.

DNAME ▼			PNAME	
ADMINISTRATION	FRANK	JANE	PRODUCT	М
ADMINISTRATION	MINELL	MARRY	PRODUCT	Х
PERSONNEL	ABRAM	ARDEN	PRODUCT	Y
PERSONNEL	CURTIS	BILL	PRODUCT	Х
PERSONNEL	CURTIS	BILL	PRODUCT	Y
PERSONNEL	CURTIS	BILL	PRODUCT	Z
RESEARCH	BLAKE	ARIA	PRODUCT	M
RESEARCH	MICC	JOHN	PRODUCT	X
RESEARCH	MICC	JOHN	PRODUCT	Y
RESEARCH	SMITH	ALICE	PRODUCT	Y
RESEARCH	YOUNG	ANN	PRODUCT	Y

6. Retrieve the name and address of all employees who work for the 'Research' department.

FNAME	\$ LNAME	
JOHN	MICC	HOUSTON
ALICE	SMITH	NEWYORK
ANN	YOUNG	COLORADO
JACK	MITO	STAFFORD
ARIA	BLAKE	HOUSTON

7. For every project located in "**Houston**" list the project number, the controlling department number, and the department manager's last name, address, and birth date.

