**Practice SQL Scalar Functions\_V2\_ans**

## **String Functions Practice**

1. Display the first name in lower case and last name in upper case, for all employees whose employee number is in the range between 80 and 150.

**select lower(first\_name) LOWER\_CASE,UPPER(last\_name) UPPER\_CASE from tblemployees where employee\_id BETWEEN 80 and 150;**

1. Display the first name and last name for all employees whose family name is King, perform this exercise with a case-insensitive search (regardless of the capitalization used for the values within last name column).

**select first\_name,last\_name from tblemployees where last\_name='King';**

1. Generating new email address
   1. For each employee, display the first name, last name, and email address. The email address will be composed from the first letter of first name, concatenated with the three first letters of last name, concatenated with @oracle.com.

**select last\_name,first\_name,upper(SUBSTR(first\_name,1,1))||upper(substr(last\_name,1,3))||'@oracle.com' "Email Address" from tblemployees;**

* 1. For each employee, display the first name, last name, and email address. The email address will be composed from the first letter of first name, concatenated with the three last letters of last name, concatenated with @oracle.com.

**select last\_name,first\_name,upper(SUBSTR(first\_name,1,1))||upper(substr(last\_name,length(last\_name)-2,3))||'@oracle.com' "Email Address" from tblemployees;**

1. Using the CONCAT function
   1. For each employee, use the CONCAT function to display the first name concatenated with the last name.

**select concat(concat(first\_name,' '),last\_name) FULL\_NAME from tblemployees;**

* 1. For each employee, use the CONCAT function to display the first name concatenated with the last name, concatenated with hire date.

**select concat(concat(first\_name,' '),concat(last\_name,concat(' ',hire\_date))) FULL\_NAME from tblemployees;**

1. Display the last name for all employees where last name’s length is greater than 8 characters.

**select last\_name from tblemployees where length(last\_name)>8;**

1. Phone numbers:
   1. For each employee, display the first name, last name, phone number and a new phone number using the REPLACE function. in the new phone number replace all occurrences of 515 with 815.

**select first\_name,last\_name,phone\_number,replace(phone\_number,'515','815') "New Phone Number" from tblemployees;**

* 1. For each employee, display the first name, last name, phone number and a new phone number using the REPLACE function. in the new phone number replace all prefixes of 515 with 815.

**select first\_name,last\_name,phone\_number,replace(substr(phone\_number,1,3),'515','815')||substr(phone\_number,4,12) "New Phone Number" from tblemployees;**

## **Numeric Functions Practice**

1. For each employee, display :
   1. first name
   2. salary
   3. salary after a raise of 12%
   4. salary after a raise of 12%,  expressed as a whole number (ROUND).
   5. salary after a raise of 12%, round down to the nearest whole number.

**select first\_name,salary,salary\*1.12,round(salary\*1.12),floor(salary\*1.12) from tblemployees;**

## **Date Functions Practice**

1. For each employee, display the first name, hire date, hire date minus 10 days, hire date plus one month, and the day difference between current date and hire date.

**SELECT**

**first\_name,last\_name,hire\_date,hire\_date-10,add\_months(hire\_date,1),trunc(sysdate-hire\_date)**

**FROM tblemployees;**

1. For each employee, display the first name, last name, hire date, number of months he works in the company, and number of years he works in the company.

**select first\_name,last\_name,hire\_date,trunc(((sysdate-hire\_date)/365.25)\*12) Months\_Worked,EXTRACT(YEAR from sysdate)-EXTRACT(year from hire\_date) Years\_Worked from tblemployees;**

**or**

**select first\_name,last\_name,hire\_date,trunc(months\_between(sysdate,hire\_date)) Months\_Worked,trunc(months\_between(sysdate,hire\_date)/12) Years\_Worked from tblemployees;**

1. For each employee, display the first name, hire date, and hire date plus one year.

**select first\_name,last\_name,hire\_date,add\_months(hire\_date,12)-1 from tblemployees;**

1. For each employee, display the first name, hire date, hire date rounded up to the nearest year, and hire date rounded up to the nearest month.

**select first\_name,hire\_date,round(hire\_date,'YYYY') NEAREST\_YEAR,round(hire\_date,'MONTH') NEAREST\_MONTH from tblemployees;**

## **Conversion Functions Practice**

1. For each employee, display the first name, the day of his hire date, and the year of his hire date.

**SELECT first\_name,extract(day from hire\_date) DAY,TO\_CHAR(hire\_date, 'DAY') WEEK\_DAY, extract(year from hire\_date) YEAR from tblemployees;**

1. Display the last name in upper case, the salary in format model : ‘9,999.999’, and hire date in format model: ‘DD/MM/YYYY’, for all employees whose last name begins with the letter D or K.

**select UPPER(last\_name) LAST\_NAME,TO\_CHAR(salary, '99,999.999') SALARY,TO\_CHAR(hire\_date,'DD/MM/YYYY') HIRE\_DATE from tblemployees;**

## **NULL-Related Functions Practice**

1. Commission Percentage
   1. For each employee, display the first name, last name, salary and commission percentage. If an employee doesn’t earn a commission, display 0 instead of NULL.

**select first\_name,last\_name,salary,nvl(commission\_pct,0) COMMISSION\_PERCENTAGE from tblemployees;**

* 1. For each employee, display the first name, last name, salary and commission percentage. If an employee doesn’t earn a commission, display “No Commission” instead of NULL.

**select first\_name,last\_name,salary,nvl(TO\_CHAR(commission\_pct),'No Commission') COMMISSION\_PERCENTAGE from tblemployees;**

## **Case Function Practice**

1. For each employee, display the first name, last name, salary, and a salary grade based on these conditions:
   1. if the salary is between 0 and 5000 – salary grade level is A
   2. if the salary is between 5001 and 15000 – salary grade level is B
   3. if the salary is between 15001 and 20000 – salary grade level is C
   4. for any other range – salary grade level is D

**SELECT**

**first\_name,**

**last\_name,**

**SALARY,**

**case**

**when salary between 0 and 5000 then 'A'**

**when salary between 5001 and 15000 then 'B'**

**when salary between 15001 and 20000 then 'C'**

**else 'D'**

**end SALARY\_GRADE**

**FROM tblemployees;**