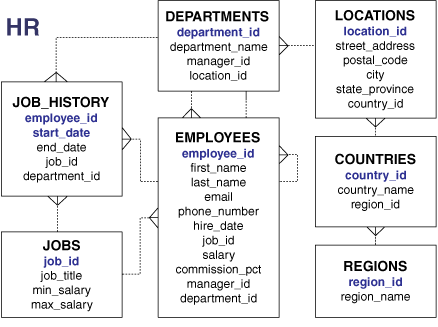
## **Objectives:**

The aim of this lab is to exercise the single row functions that exist in SQL.

The following SQL queries are based on the HR database with the schema shown below.



## **Lab Work:**

1. To retrieve the employee name converted to upper case and his job id converted to lower case and display them along with description:

SELECT 'The job id for '||UPPER(last\_name) ||' is '

||LOWER(job\_id) AS "EMPLOYEE DETAILS"

FROM employees;

1. Display the employee number, name, and department number for employee Higgins:

SELECT employee\_id, last\_name, department\_id

FROM employees

WHERE LOWER(last\_name) = 'higgins';

Another version:

SELECT employee\_id, UPPER(last\_name), department\_id

FROM employees

WHERE INITCAP(last\_name) = 'Higgins';

1. Displays employee first names and last names joined together, the lengthof the employee last name, and the numeric position of the letter a in the employee lastname.

SELECT employee\_id, CONCAT(first\_name, last\_name) NAME,

job\_id, LENGTH (last\_name),

INSTR(last\_name, 'a') "Contains 'a'?"

FROM employees;

1. Demonstrate the round function and the dummy table dual.

SELECT ROUND (45.923,2), ROUND (45.923,0) from dual;

1. For all employees with job title of Sales Representative, calculate the remainder of the salary after it is divided by 5,000.

SELECT last\_name, salary, MOD (salary, 5000)

FROM employees

WHERE job\_id = 'SA\_REP';

1. Display the system time.

SELECT SYSDATE

FROM DUAL;

1. Display the last name and the number of weeks employed for all employees in department 90.

SELECT last\_name, (SYSDATE-hire\_date)/7 AS WEEKS

FROM employees

WHERE department\_id = 90;

1. Display the employee number, hire date, number of months employed for allemployees who have been employed for fewer than 200 months.

SELECT employee\_id, hire\_date,

MONTHS\_BETWEEN (SYSDATE, hire\_date) TENURE

FROM employees

WHERE MONTHS\_BETWEEN (SYSDATE, hire\_date) < 200;

1. Display the month and year of hiring a specific employee.

SELECT employee\_id, TO\_CHAR(hire\_date, 'MM/YY') Month\_Hired

FROM employees

WHERE last\_name = 'Higgins';

Another version to display the month of hiring

SELECT employee\_id, TO\_CHAR(hire\_date,'MONTH') from employees;

Other variation could include DAY, YYYY, YEAR,…. In place ofmonth in the above query.

1. Display the salary of the employee Ernst in the format ‘$99,999.00’

SELECT TO\_CHAR (salary, '$99,999.00') SALARY

FROM employees

WHERE last\_name = 'Ernst';

1. Display the names of employees with salaries and commissions if any. If there are no commission, then display 0.

SELECT last\_name, salary, NVL (commission\_pct, 0) from employees;

1. Display the employees and salarie’s revisions based on the job id of the employee.

SELECT last\_name, job\_id, salary,

CASE job\_id WHEN 'IT\_PROG' THEN 1.10\*salary

WHEN 'ST\_CLERK' THEN 1.15\*salary

WHEN 'SA\_REP' THEN 1.20\*salary

ELSE salary END "REVISED\_SALARY"

FROM employees;

Another variation of CASE expression

SELECT last\_name,salary,

(CASE WHEN salary<5000 THEN 'Low'

WHEN salary<10000 THEN 'Medium'

WHEN salary<20000 THEN 'Good'

ELSE 'Excellent'

END) qualified\_salary

FROM employees;

1. Redo point 12 with decode expression.

SELECT last\_name, job\_id, salary,

DECODE(job\_id, 'IT\_PROG', 1.10\*salary,

'ST\_CLERK', 1.15\*salary,

'SA\_REP', 1.20\*salary,

salary)

REVISED\_SALARY

FROM employees;

## **Class Exercise:**

1. Write a query to display the current date. Label the column Date.
2. The HR department needs a report to display the employee number, last\_name, salary, and salary increased by 15.5% (expressed as a whole number) for each employee.
3. Modify the query in 2, to add a column that subtracts the old salary from the

new salary.

1. Write a query that displays the last name (with the first letter uppercase and all other letters lowercase) and the length of the last name for all employees whose name starts with the letters J, A, or M.
2. Rewrite the query in 4 so that the user is prompted to enter a letter that starts the last name. For example, if the user enters H when prompted for a letter, then the output should show all employees whose last name starts with the letter *H.*
3. For each employee, display the last name and calculate the number of months between today and the date on which the employee was hired. Label the column MONTHS\_WORKED. Order your results by the number of months employed.
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.

1. 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:

**Job Grade**

AD\_PRES A

ST\_MAN B

IT\_PROG C

SA\_REP D

ST\_CLERK E

None of the above 0.

1. Rewrite the statement in the preceding exercise using the CASE syntax.