**KIT712 Week 4 Tutorial Solution**

**SQL QUERIES**

**You need to write SQL queries to get the required information.**

**Single Table Queries**

1. Display the last name, job code, hire date, and employee number for each employee, with the employee number appearing first

SELECT employee\_id, last\_name, job\_id, hire\_date StartDate FROM employees;

1. Display all unique job codes from the EMPLOYEES table.

SELECT DISTINCT job\_id FROM employees;

1. Display the last name and salary of employees earning more than $12,000.

SELECT last\_name, salary FROM employees WHERE salary > 12000;

1. Display the last name and salary of employees who earn between $5000 and $12,000 and are in department 20 or 50. Label the columns Employee and Monthly Salary, respectively.

Select last\_name as "Employee", salary as "MonthlySalary" From employees where (salary BETWEEN 5000 AND 12000) AND (department\_id=20 or department\_id=50);

1. List the last name and department ID of all employees in departments 20, 30 or 50 in ascending alphabetical order by name.

*Select last\_name, department\_id*

*From employees*

*Where department\_id IN (20,30,50) order by last\_name ASC;*

1. Display the last name and department number of all employees in departments 20 or 50 in ascending alphabetical order by name

SELECT last\_name, department\_id FROM employees WHERE department\_id IN (20, 50) ORDER BY last\_name ASC

1. List the last name and hire date for all employees who are hired in 2005.

Select last\_name, hire\_date

From employees

Where hire\_date like ‘%05’;

SELECT LAST\_NAME, HIRE\_DATE FROM HR.EMPLOYEES

WHERE HIRE\_DATE<'1-JAN-2006' AND HIRE\_DATE >'31-DEC-2004';

SELECT LAST\_NAME, HIRE\_DATE FROM HR.EMPLOYEES

WHERE EXTRACT(YEAR FROM HIRE\_DATE) =2005;

1. Create a query that displays the last name and salary of employees who earn more than an amount the user specifies after a prompt.

Select last\_name, salary

From employees

Where salary>&sal\_amt;

1. Create a query that prompt the user for a manager ID and generates the employee ID, last name, salary and department for that manager’s employees.

Select employee\_id, last\_name, salary, department\_id

From employees

Where manager\_id=&mgr\_num*;*

1. Display minimum and maximum salary given in the company.

Select max(salary), min(salary) from employees;

1. For each employee, list the last name and calculate the number months between today and the date on which the employee was hired. Label the column months\_worked. Round the number of months up to the closes whole number.

Select last\_name, ROUND (MONTHS\_BETWEEN(SYSDATE, hire\_date)) MONTHS\_WORKED

From employees

Order by MONTHS\_WORKED;

**Multiple Table Queries (joins)**

1. Write a query that list addresses of all the departments. Hint: For this you have to use Locations and countries tables. Show the location ID, street address, city, state and country in the output. Use Natural join to produce the results*.*

SELECT location\_id, street\_address, city, state\_province, country\_name from locations natural join countries;

1. Write a query to display the last name, department number and department name for all the employees.

*Select last\_name, department\_id, department\_name*

*From employees Join departments using (department\_id);*

1. Display employees’s last names and employee number along with their managers’s last names and manager number. Label the columns Employee, Emp#, Manager and Mgr#, respectively.

Select w.last\_name “Employee”, w.employee\_id “EMP#”,m.last\_name “Manager”, m.employee\_id “Mgr#”

From employees w join employees m

ON (w.manager\_id=m.employee\_id);

1. Display employee name and id with their manager id including those employees who has no manager.

SELECT w.last\_name "Employee", w.employee\_id "EMP#", m.last\_name "Manager", m.employee\_id "Mgr#" FROM employees w LEFT OUTER JOIN employees m ON (w.manager\_id = m.employee\_id)

1. Find those department names which have no employees allocated in them.

Select department\_name from employees m right outer join departments d on m.department\_id= d.department\_id where m.employee\_id is null;

***Group By***

1. Display the minimum, maximum, sum, and average salary for each job type.

SELECT job\_id, ROUND(MAX(salary),0) "Maximum", ROUND(MIN(salary),0) "Minimum", ROUND(SUM(salary),0) "Sum", ROUND(AVG(salary),0) "Average" FROM employees GROUP BY job\_id;

1. Write a query to display the number of people with the same job id.

Select job\_id, COUNT(\*) from employees GROUP BY job\_id;

Generalise about query so that the user in HR department is prompted for a job title.

Select job\_id, COUNT(\*) from employees where job\_id=’&job\_title’ GROUP BY job\_id;

***Subqueries***

1. List last name and salary of every employee who reports to manager with last name King. Manager King has no manager.

*Select last\_name, salary from employees*

*Where manager\_id=(Select employee\_id from employees where last\_name=’King’ and manager\_id is null}*

1. Display the department number, last name, and job\_ID for every employee in the Executive department.

*Select department\_id, last\_name, job\_id from employees*

*Where department\_id IN (select department\_id from departments where department\_name=’Executive’);*