The following is the structure of the tables provided by Oracle in Human Resource Schema (HR).

  
Note: Columns in RED color indicate primary key(s).

Queries

1. Display details of jobs where the minimum salary is greater than 10000.

**SELECT \* FROM JOBS WHERE MIN\_SALARY > 10000;**

1. Display the first name and join date of the employees who joined between 2002 and 2005.

**SELECT FIRST\_NAME, HIRE\_DATE FROM EMPLOYEES**

**WHERE TO\_CHAR(HIRE\_DATE, 'YYYY') BETWEEN 2002 AND 2005 ORDER BY HIRE\_DATE;**

1. Display first name and join date of the employees who is either IT Programmer or Sales Man.

**SELECT FIRST\_NAME, HIRE\_DATE**

**FROM EMPLOYEES WHERE JOB\_ID IS 'IT\_PROG' OR 'SA\_MAN';**

1. Display employees who joined after 1st January 2008.

**SELECT \* FROM EMPLOYEES WHERE HIRE\_DATE > '01-JAN-2008' ;**

1. Display details of employee with ID 150 or 160.

**SELECT \* FROM EMPLOYEES WHERE EMPLOYEE\_ID IS 150 OR 160;**

1. Display first name, salary, commission pct, and hire date for employees with salary less than 10000.

**SELECT FIRST\_NAME, SALARY, COMMISSION\_PCT, HIRE\_DATE FROM EMPLOYEES WHERE SALARY < 10000;**

1. Display job Title, the difference between minimum and maximum salaries for jobs with max salary in the range 10000 to 20000.

**SELECT JOB\_TITLE, MAX\_SALARY-MIN\_SALARY DIFFERENCE FROM JOBS WHERE MAX\_SALARY BETWEEN 10000 AND 20000**

1. Display first name, salary, and round the salary to thousands.

**SELECT FIRST\_NAME, SALARY, ROUND(SALARY, -3) FROM EMPLOYEES;**

1. Display details of jobs in the descending order of the title.

**SELECT \* FROM JOBS ORDER BY JOB\_TITLE;**

1. Display employees where the first name or last name starts with S.

**SELECT FIRST\_NAME, LAST\_NAME FROM EMPLOYEES WHERE FIRST\_NAME LIKE 'S%' OR LAST\_NAME LIKE 'S%';**

1. Display employees who joined in the month of May.

**SELECT \* FROM EMPLOYEES WHERE TO\_CHAR(HIRE\_DATE, 'MON') LIKE 'MAY';**

1. Display details of the employees where commission percentage is null and salary in the range 5000 to 10000 and department is 30.

**SELECT \* FROM EMPLOYEES WHERE COMMISSION\_PCT IS NULL AND SALARY BETWEEN 5000 AND 10000 AND DEPARTMENT\_ID=30;**

1. Display first name and date of first salary of the employees.

**SELECT FIRST\_NAME, HIRE\_DATE, LAST\_DAY(HIRE\_DATE)+1 AS FIRST\_SALARY FROM EMPLOYEES;**

1. Display first name and experience of the employees.

**SELECT FIRST\_NAME, HIRE\_DATE, FLOOR((SYSDATE-HIRE\_DATE)/365) AS EXPERIENCE FROM EMPLOYEES;**

1. Display first name of employees who joined in 2001.

**SELECT FIRST\_NAME, HIRE\_DATE FROM EMPLOYEES WHERE TO\_CHAR(HIRE\_DATE, 'YYYY')=2001;**

1. Display first name and last name after converting the first letter of each name to upper case and the rest to lower case.

**SELECT INITCAP(FIRST\_NAME), INITCAP(LAST\_NAME) FROM EMPLOYEES;**

1. Display the first word in job title.

**SELECT JOB\_TITLE, SUBSTR(JOB\_TITLE,1, INSTR(JOB\_TITLE, ' ')-1) FROM JOBS**

1. Display the length of first name for employees where last name contain character ‘b’ after 3rd position.

**SELECT FIRST\_NAME, LAST\_NAME FROM EMPLOYEES WHERE LAST\_NAME LIKE ‘\_\_\_b%’;**

1. Display first name in upper case and email address in lower case for employees where the first name and email address are same irrespective of the case.

**SELECT UPPER(FIRST\_NAME), LOWER(EMAIL) FROM EMPLOYEES WHERE UPPER(FIRST\_NAME)= UPPER(EMAIL);**

1. Display employees who joined in the current year.

**SELECT \* FROM EMPLOYEES WHERE TO\_CHAR(HIRE\_DATE,'YYYY')=TO\_CHAR(SYSDATE, 'YYYY');**

1. Display the number of days between system date and 1st January 2011.

**SELECT SYSDATE - ('01-jan-2011') FROM DUPLICATE;**

1. Display how many employees joined in each month of the current year.

**SELECT TO\_CHAR(HIRE\_DATE,'MM'), COUNT (\*) FROM EMPLOYEES**

**WHERE TO\_CHAR(HIRE\_DATE,'YYYY')= TO\_CHAR(SYSDATE,'YYYY') GROUP BY TO\_CHAR(HIRE\_DATE,'MM') ;**

1. Display manager ID and number of employees managed by the manager.

**SELECT MANAGER\_ID, COUNT(EMPLOYEE\_ID) FROM EMPLOYEES GROUP BY MANAGER\_ID;**

1. Display employee ID and the date on which he ended his previous job.

**SELECT EMPLOYEE\_ID, MAX(END\_DATE) FROM JOB\_HISTORY GROUP BY EMPLOYEE\_ID;**

1. Display number of employees joined after 15th of the month.

**SELECT COUNT(EMPLOYEE\_ID) FROM EMPLOYEES WHERE TO\_CHAR(HIRE\_DATE,'DD') > 15;**

1. Display the country ID and number of cities we have in the country.

**SELECT COUNTRY\_ID, COUNT(CITY) FROM LOCATIONS GROUP BY COUNTRY\_ID;**

1. Display average salary of employees in each department who have commission percentage.

**SELECT DEPARTMENT\_ID, AVG(SALARY) FROM EMPLOYEES**

**WHERE COMMISSION\_PCT IS NOT NULL GROUP BY DEPARTMENT\_ID;**

1. Display job ID, number of employees, sum of salary, and difference between highest salary and lowest salary of the employees of the job.

**SELECT JOB\_ID, COUNT(EMPLOYEE\_ID), SUM(SALARY), MAX(SALARY)-MIN(SALARY) ,MIN(SALARY) FROM EMPLOYEES GROUP BY JOB\_ID;**

1. Display job ID for jobs with average salary more than 10000.

**SELECT JOB\_ID,FROM EMPLOYEES GROUP BY JOB\_ID**

**HAVING AVG(SALARY)>10000;**

1. Display years in which more than 10 employees joined.

**SELECT TO\_CHAR(HIRE\_DATE,'YYYY') FROM EMPLOYEES GROUP TO\_CHAR(HIRE\_DATE,'YYYY') HAVING COUNT(EMPLOYEE\_ID) > 10;**

1. Display departments in which more than five employees have commission percentage.

**SELECT DEPARTMENT\_ID FROM EMPLOYEES WHERE COMMISSION\_PCT IS NOT NULL GROUP BY DEPARTMENT\_ID HAVING COUNT(COMMISSION\_PCT)>5;**

1. Display employee ID for employees who did more than one job in the past.

**SELECT EMPLOYEE\_ID FROM JOB\_HISTORY GROUP BY EMPLOYEE\_ID HAVING COUNT(JOB\_ID) > 1**

1. Display job ID of jobs that were done by more than 3 employees for more than 100 days.

**SELECT JOB\_ID FROM JOB\_HISTORY WHERE END\_DATE-START\_DATE > 100**

**GROUP BY JOB\_ID HAVING COUNT(EMPLOYEE\_ID)>3;**

1. Display department ID, year, and Number of employees joined.

**SELECT DEPARTMENT\_ID, TO\_CHAR(HIRE\_DATE,'YYYY'), COUNT(EMPLOYEE\_ID)**

**FROM EMPLOYEES**

**GROUP BY DEPARTMENT\_ID, TO\_CHAR(HIRE\_DATE, 'YYYY')**

**ORDER BY DEPARTMENT\_ID;**

1. Display departments where any manager is managing more than 5 employees.

**SELECT DISTINCT DEPARTMENT\_ID**

**FROM EMPLOYEES**

**GROUP BY DEPARTMENT\_ID, MANAGER\_ID**

**HAVING COUNT(EMPLOYEE\_ID) > 5;**

1. Change salary of employee 115 to 8000 if the existing salary is less than 6000.

**UPDATE EMPLOYEES SET SALARY = 8000 WHERE EMPLOYEE\_ID = 115 AND SALARY < 6000;**

1. Insert a new employee into employees with all the required details.

**INSERT INTO EMPLOYEES (EMPLOYEE\_ID, FIRST\_NAME, LAST\_NAME, EMAIL, PHONE\_NUMBER, HIRE\_DATE,JOB\_ID, SALARY, DEPARTMENT\_ID)**

**VALUES (110, 'PETER', 'CHRIS','PETER','7010263908', ’28-JUN-2021’, 'IT\_PROG’, 20000, 30);**

1. Delete department 20.

**DELETE FROM DEPARTMENTS WHERE DEPARTMENT\_ID=20;**

1. Change job ID of employee 110 to IT\_PROG if the employee belongs to department 10 and the existing job ID does not start with IT.

**UPDATE EMPLOYEES SET JOB\_ID= 'IT\_PROG'**

**WHERE EMPLOYEE\_ID=110 AND DEPARTMENT\_ID=10 AND NOT JOB\_ID LIKE 'IT%' ;**

1. Insert a row into departments table with manager ID 120 and location ID in any location ID for city Tokyo.

**INSERT INTO DEPARTMENTS VALUES(150,'SPORTS',120,1200);**

1. Display department name and number of employees in the department.

**SELECT DEPARTMENT\_NAME, COUNT(EMPLOYEE\_ID) FROM EMPLOYEES, DEPARTMENTS GROUP BY DEPARTMENT\_NAME;**

1. Display job title, employee ID, number of days between ending date and starting date for all jobs in department 30 from job history.

**SELECT EMPLOYEE\_ID, JOB\_TITLE, END\_DATE-START\_DATE DAYS**

**FROM JOB\_HISTORY NATURAL JOIN JOBS**

**WHERE DEPARTMENT\_ID=30;**

1. Display department name and manager first name.

**SELECT DEPARTMENT\_NAME, FIRST\_NAME FROM DEPARTMENTS D JOIN EMPLOYEES E ON (D.MANAGER\_ID=E.EMPLOYEE\_ID);**

1. Display department name, manager name, and city.

**SELECT DEPARTMENT\_NAME, FIRST\_NAME, CITY FROM DEPARTMENTS D JOIN EMPLOYEES E ON (D.MANAGER\_ID=E.EMPLOYEE\_ID) JOIN LOCATIONS L USING (LOCATION\_ID);**

1. Display country name, city, and department name.

**SELECT COUNTRY\_NAME, CITY, DEPARTMENT\_NAME**

**FROM COUNTRIES JOIN LOCATIONS USING (COUNTRY\_ID)**

**JOIN DEPARTMENTS USING (LOCATION\_ID)**

1. Display job title, department name, employee last name, starting date for all jobs from 2000 to 2005.

**SELECT JOB\_TITLE, DEPARTMENT\_NAME, LAST\_NAME, START\_DATE**

**FROM JOB\_HISTORY JOIN JOBS USING (JOB\_ID) JOIN DEPARTMENTS**

**USING (DEPARTMENT\_ID) JOIN EMPLOYEES USING (EMPLOYEE\_ID)**

**WHERE TO\_CHAR(START\_DATE,'YYYY') BETWEEN 2000 AND 2005**

1. Display job title and average salary of employees

**SELECT JOB\_TITLE, AVG(SALARY) FROM EMPLOYEES**

**NATURAL JOIN JOBS GROUP BY JOB\_TITLE**

1. Display job title, employee name, and the difference between maximum salary for the job and salary of the employee.

**SELECT JOB\_TITLE, FIRST\_NAME, MAX\_SALARY-SALARY DIFFERENCE FROM EMPLOYEES NATURAL JOIN JOBS**

1. Display last name, job title of employees who have commission percentage and belongs to department 30.

**SELECT JOB\_TITLE, FIRST\_NAME, MAX\_SALARY-SALARY DIFFERENCE FROM EMPLOYEES NATURAL JOIN JOBS WHERE DEPARTMENT\_ID = 30**

1. Display details of jobs that were done by any employee who is currently drawing more than 15000 of salary.

**SELECT JH.\***

**FROM JOB\_HISTORY JH JOIN EMPLOYEES E ON (JH.EMPLOYEE\_ID = E.EMPLOYEE\_ID)**

**WHERE SALARY > 15000**

1. Display department name, manager name, and salary of the manager for all managers whose experience is more than 5 years.

**SELECT DEPARTMENT\_NAME, FIRST\_NAME, SALARY**

**FROM DEPARTMENTS D JOIN EMPLOYEES E ON (D.MANAGER\_ID=E.MANAGER\_ID)**

**WHERE (SYSDATE-HIRE\_DATE) / 365 > 5**

1. Display employee name if the employee joined before his manager.

**SELECT FIRST\_NAME FROM EMPLOYEES E1 JOIN EMPLOYEES E2 ON (E1.MANAGER\_ID=E2.EMPLOYEE\_ID)**

**WHERE E1.HIRE\_DATE < E2.HIRE\_DATE**

1. Display employee name, job title for the jobs employee did in the past where the job was done less than six months.

**SELECT FIRST\_NAME, JOB\_TITLE FROM EMPLOYEES E JOIN JOB\_HISTORY JH ON (JH.EMPLOYEE\_ID = E.EMPLOYEE\_ID) JOIN JOBS J ON( JH.JOB\_ID = J.JOB\_ID)**

**WHERE MONTHS\_BETWEEN(END\_DATE,START\_DATE) < 6**

1. Display employee name and country in which he is working.

**SELECT FIRST\_NAME, COUNTRY\_NAME FROM EMPLOYEES JOIN DEPARTMENTS USING(DEPARTMENT\_ID)**

**JOIN LOCATIONS USING( LOCATION\_ID)**

**JOIN COUNTRIES USING ( COUNTRY\_ID)**

1. Display department name, average salary and number of employees with commission within the department.

**SELECT DEPARTMENT\_NAME, AVG(SALARY), COUNT(COMMISSION\_PCT)**

**FROM DEPARTMENTS JOIN EMPLOYEES USING (DEPARTMENT\_ID)**

**GROUP BY DEPARTMENT\_NAME**

1. Display the month in which more than 5 employees joined in any department located in Sydney.

**SELECT TO\_CHAR(HIRE\_DATE,'MON-YY')**

**FROM EMPLOYEES JOIN DEPARTMENTS USING (DEPARTMENT\_ID) JOIN LOCATIONS USING (LOCATION\_ID)**

**WHERE CITY = 'Seattle'**

**GROUP BY TO\_CHAR(HIRE\_DATE,'MON-YY')**

**HAVING COUNT(\*) > 5**

1. Display details of departments in which the maximum salary is more than 10000.

**SELECT \* FROM DEPARTMENTS WHERE DEPARTMENT\_ID IN**

**( SELECT DEPARTMENT\_ID FROM EMPLOYEES**

**GROUP BY DEPARTMENT\_ID**

**HAVING MAX(SALARY)>10000)**

1. Display details of departments managed by ‘Smith’.

**SELECT \* FROM DEPARTMENTS WHERE MANAGER\_ID IN**

**(SELECT EMPLOYEE\_ID FROM EMPLOYEES WHERE FIRST\_NAME='SMITH')**

1. Display jobs into which employees joined in the current year.

**SELECT \* FROM JOBS WHERE JOB\_ID IN**

**(SELECT JOB\_ID FROM EMPLOYEES WHERE TO\_CHAR(HIRE\_DATE,'YYYY')=TO\_CHAR(SYSDATE,'YYYY'))**

1. Display employees who did not do any job in the past.

**SELECT \* FROM EMPLOYEES WHERE EMPLOYEE\_ID NOT IN**

**(SELECT EMPLOYEE\_ID FROM JOB\_HISTORY)**

1. Display job title and average salary for employees who did a job in the past.

**SELECT JOB\_TITLE, AVG(SALARY) FROM JOBS NATURAL JOIN EMPLOYEES**

**GROUP BY JOB\_TITLE**

**WHERE EMPLOYEE\_ID IN**

**(SELECT EMPLOYEE\_ID FROM JOB\_HISTORY)**

1. Display country name, city, and number of departments where department has more than 5 employees.

**SELECT COUNTRY\_NAME, CITY, COUNT(DEPARTMENT\_ID)**

**FROM COUNTRIES JOIN LOCATIONS USING (COUNTRY\_ID) JOIN DEPARTMENTS USING (LOCATION\_ID)**

**WHERE DEPARTMENT\_ID IN**

**(SELECT DEPARTMENT\_ID FROM EMPLOYEES**

**GROUP BY DEPARTMENT\_ID**

**HAVING COUNT(DEPARTMENT\_ID)>5)**

**GROUP BY COUNTRY\_NAME, CITY;**

1. Display details of manager who manages more than 5 employees.

**SELECT FIRST\_NAME FROM EMPLOYEES**

**WHERE EMPLOYEE\_ID IN**

**(SELECT MANAGER\_ID FROM EMPLOYEES**

**GROUP BY MANAGER\_ID**

**HAVING COUNT(\*)>5)**

1. Display employee name, job title, start date, and end date of past jobs of all employees with commission percentage null.

**SELECT FIRST\_NAME, JOB\_TITLE, START\_DATE, END\_DATE**

**FROM JOB\_HISTORY JH JOIN JOBS J USING (JOB\_ID) JOIN EMPLOYEES E ON ( JH.EMPLOYEE\_ID = E.EMPLOYEE\_ID)**

**WHERE COMMISSION\_PCT IS NULL**

1. Display the departments into which no employee joined in last two years.

**SELECT \* FROM DEPARTMENTS**

**WHERE DEPARTMENT\_ID NOT IN**

**( SELECT DEPARTMENT\_ID FROM EMPLOYEES WHERE FLOOR((SYSDATE-HIRE\_DATE)/365) < 2)**

1. Display the details of departments in which the max salary is greater than 10000 for employees who did a job in the past.

**SELECT \* FROM DEPARTMENTS**

**WHERE DEPARTMENT\_ID IN**

**(SELECT DEPARTMENT\_ID FROM EMPLOYEES**

**WHERE EMPLOYEE\_ID IN (SELECT EMPLOYEE\_ID FROM JOB\_HISTORY)**

**GROUP BY DEPARTMENT\_ID**

**HAVING MAX(SALARY) >10000)**

1. Display details of current job for employees who worked as IT Programmers in the past.

**SELECT \* FROM JOBS**

**WHERE JOB\_ID IN**

**(SELECT JOB\_ID FROM EMPLOYEES WHERE EMPLOYEE\_ID IN**

**(SELECT EMPLOYEE\_ID FROM JOB\_HISTORY WHERE JOB\_ID='IT\_PROG'))**

1. Display the details of employees drawing the highest salary in the department.

**SELECT DEPARTMENT\_ID,FIRST\_NAME, SALARY FROM EMPLOYEES OUTER WHERE SALARY =**

**(SELECT MAX(SALARY) FROM EMPLOYEES WHERE DEPARTMENT\_ID = OUTER.DEPARTMENT\_ID)**

1. Display the city of employee whose employee ID is 105.

**SELECT CITY FROM LOCATIONS WHERE LOCATION\_ID =**

**(SELECT LOCATION\_ID FROM DEPARTMENTS WHERE DEPARTMENT\_ID =**

**(SELECT DEPARTMENT\_ID FROM EMPLOYEES WHERE EMPLOYEE\_ID=105)**

**)**

1. Display third highest salary of all employees

**select salary**

**from employees main**

**where 2 = (select count( distinct salary )**

**from employees**

**where salary > main.salary);**