#### ****EMPLOYEE\_ID FIRST\_NAME LAST\_NAME EMAIL PHONE\_NUMBER HIRE\_DATE JOB\_ID SALARY COMMISSION\_PCT MANAGER\_ID DEPARTMENT\_ID****

#### ****----------- -------------------- ------------------------- ------------------------- -------------------- --------- ---------- ---------- -------------- ---------- -------------****

#### ****198 Donald OConnell DOCONNEL 650.507.9833 21-JUN-99 SH\_CLERK 2600 124 50****

#### ****199 Douglas Grant DGRANT 650.507.9844 13-JAN-00 SH\_CLERK 2600 124 50****

#### ****200 Jennifer Whalen JWHALEN 515.123.4444 17-SEP-87 AD\_ASST 4400 101 10****

#### ****201 Michael Hartstein MHARTSTE 515.123.5555 17-FEB-96 MK\_MAN 13000 100 20****

#### ****202 Pat Fay PFAY 603.123.6666 17-AUG-97 MK\_REP 6000 201 20****

#### ****203 Susan Mavris SMAVRIS 515.123.7777 07-JUN-94 HR\_REP 6500 101 40****

#### ****204 Hermann Baer HBAER 515.123.8888 07-JUN-94 PR\_REP 10000 101 70****

#### ****205 Shelley Higgins SHIGGINS 515.123.8080 07-JUN-94 AC\_MGR 12000 101 110****

#### ****206 William Gietz WGIETZ 515.123.8181 07-JUN-94 AC\_ACCOUNT 8300 205 110****

#### ****100 Steven King SKING 515.123.4567 17-JUN-87 AD\_PRES 24000 90****

#### ****101 Neena Kochhar NKOCHHAR 515.123.4568 21-SEP-89 AD\_VP 17000 100 90****

#### ****102 Lex De Haan LDEHAAN 515.123.4569 13-JAN-93 AD\_VP 17000 100 90****

#### ****103 Alexander Hunold AHUNOLD 590.423.4567 03-JAN-90 IT\_PROG 9000 102 60****

#### ****104 Bruce Ernst BERNST 590.423.4568 21-MAY-91 IT\_PROG 6000 103 60****

#### ****105 David Austin DAUSTIN 590.423.4569 25-JUN-97 IT\_PROG 4800 103 60****

#### ****106 Valli Pataballa VPATABAL 590.423.4560 05-FEB-98 IT\_PROG 4800 103 60****

#### ****107 Diana Lorentz DLORENTZ 590.423.5567 07-FEB-99 IT\_PROG 4200 103 60****

#### ****108 Nancy Greenberg NGREENBE 515.124.4569 17-AUG-94 FI\_MGR 12000 101 100****

#### ****109 Daniel Faviet DFAVIET 515.124.4169 16-AUG-94 FI\_ACCOUNT 9000 108 100****

#### ****110 John Chen JCHEN 515.124.4269 28-SEP-97 FI\_ACCOUNT 8200 108 100****

#### ****111 Ismael Sciarra ISCIARRA 515.124.4369 30-SEP-97 FI\_ACCOUNT 7700 108 100****

#### ****112 Jose Manuel Urman JMURMAN 515.124.4469 07-MAR-98 FI\_ACCOUNT 7800 108 100****

#### ****113 Luis Popp LPOPP 515.124.4567 07-DEC-99 FI\_ACCOUNT 6900 108 100****

#### ****114 Den Raphaely DRAPHEAL 515.127.4561 07-DEC-94 PU\_MAN 11000 100 30****

#### ****115 Alexander Khoo AKHOO 515.127.4562 18-MAY-95 PU\_CLERK 3100 114 30****

#### ****116 Shelli Baida SBAIDA 515.127.4563 24-DEC-97 PU\_CLERK 2900 114 30****

#### ****117 Sigal Tobias STOBIAS 515.127.4564 24-JUL-97 PU\_CLERK 2800 114 30****

#### ****118 Guy Himuro GHIMURO 515.127.4565 15-NOV-98 PU\_CLERK 2600 114 30****

#### ****119 Karen Colmenares KCOLMENA 515.127.4566 10-AUG-99 PU\_CLERK 2500 114 30****

#### ****120 Matthew Weiss MWEISS 650.123.1234 18-JUL-96 ST\_MAN 8000 100 50****

#### ****121 Adam Fripp AFRIPP 650.123.2234 10-APR-97 ST\_MAN 8200 100 50****

#### ****122 Payam Kaufling PKAUFLIN 650.123.3234 01-MAY-95 ST\_MAN 7900 100 50****

#### ****123 Shanta Vollman SVOLLMAN 650.123.4234 10-OCT-97 ST\_MAN 6500 100 50****

#### ****124 Kevin Mourgos KMOURGOS 650.123.5234 16-NOV-99 ST\_MAN 5800 100 50****

#### ****125 Julia Nayer JNAYER 650.124.1214 16-JUL-97 ST\_CLERK 3200 120 50****

#### ****126 Irene Mikkilineni IMIKKILI 650.124.1224 28-SEP-98 ST\_CLERK 2700 120 50****

#### ****127 James Landry JLANDRY 650.124.1334 14-JAN-99 ST\_CLERK 2400 120 50****

#### ****128 Steven Markle SMARKLE 650.124.1434 08-MAR-00 ST\_CLERK 2200 120 50****

#### ****129 Laura Bissot LBISSOT 650.124.5234 20-AUG-97 ST\_CLERK 3300 121 50****

#### ****130 Mozhe Atkinson MATKINSO 650.124.6234 30-OCT-97 ST\_CLERK 2800 121 50****

#### ****131 James Marlow JAMRLOW 650.124.7234 16-FEB-97 ST\_CLERK 2500 121 50****

#### ****132 TJ Olson TJOLSON 650.124.8234 10-APR-99 ST\_CLERK 2100 121 50****

#### ****133 Jason Mallin JMALLIN 650.127.1934 14-JUN-96 ST\_CLERK 3300 122 50****

#### ****134 Michael Rogers MROGERS 650.127.1834 26-AUG-98 ST\_CLERK 2900 122 50****

#### ****135 Ki Gee KGEE 650.127.1734 12-DEC-99 ST\_CLERK 2400 122 50****

#### ****136 Hazel Philtanker HPHILTAN 650.127.1634 06-FEB-00 ST\_CLERK 2200 122 50****

#### ****137 Renske Ladwig RLADWIG 650.121.1234 14-JUL-95 ST\_CLERK 3600 123 50****

#### ****138 Stephen Stiles SSTILES 650.121.2034 26-OCT-97 ST\_CLERK 3200 123 50****

#### ****139 John Seo JSEO 650.121.2019 12-FEB-98 ST\_CLERK 2700 123 50****

#### ****140 Joshua Patel JPATEL 650.121.1834 06-APR-98 ST\_CLERK 2500 123 50****

#### ****141 Trenna Rajs TRAJS 650.121.8009 17-OCT-95 ST\_CLERK 3500 124 50****

#### ****142 Curtis Davies CDAVIES 650.121.2994 29-JAN-97 ST\_CLERK 3100 124 50****

#### ****143 Randall Matos RMATOS 650.121.2874 15-MAR-98 ST\_CLERK 2600 124 50****

#### ****144 Peter Vargas PVARGAS 650.121.2004 09-JUL-98 ST\_CLERK 2500 124 50****

#### ****145 John Russell JRUSSEL 011.44.1344.429268 01-OCT-96 SA\_MAN 14000 .4 100 80****

#### ****146 Karen Partners KPARTNER 011.44.1344.467268 05-JAN-97 SA\_MAN 13500 .3 100 80****

#### ****147 Alberto Errazuriz AERRAZUR 011.44.1344.429278 10-MAR-97 SA\_MAN 12000 .3 100 80****

#### ****148 Gerald Cambrault GCAMBRAU 011.44.1344.619268 15-OCT-99 SA\_MAN 11000 .3 100 80****

#### ****149 Eleni Zlotkey EZLOTKEY 011.44.1344.429018 29-JAN-00 SA\_MAN 10500 .2 100 80****

#### ****150 Peter Tucker PTUCKER 011.44.1344.129268 30-JAN-97 SA\_REP 10000 .3 145 80****

#### ****151 David Bernstein DBERNSTE 011.44.1344.345268 24-MAR-97 SA\_REP 9500 .25 145 80****

#### ****152 Peter Hall PHALL 011.44.1344.478968 20-AUG-97 SA\_REP 9000 .25 145 80****

#### ****153 Christopher Olsen COLSEN 011.44.1344.498718 30-MAR-98 SA\_REP 8000 .2 145 80****

#### ****154 Nanette Cambrault NCAMBRAU 011.44.1344.987668 09-DEC-98 SA\_REP 7500 .2 145 80****

#### ****155 Oliver Tuvault OTUVAULT 011.44.1344.486508 23-NOV-99 SA\_REP 7000 .15 145 80****

#### ****156 Janette King JKING 011.44.1345.429268 30-JAN-96 SA\_REP 10000 .35 146 80****

#### ****157 Patrick Sully PSULLY 011.44.1345.929268 04-MAR-96 SA\_REP 9500 .35 146 80****

#### ****158 Allan McEwen AMCEWEN 011.44.1345.829268 01-AUG-96 SA\_REP 9000 .35 146 80****

#### ****159 Lindsey Smith LSMITH 011.44.1345.729268 10-MAR-97 SA\_REP 8000 .3 146 80****

#### ****160 Louise Doran LDORAN 011.44.1345.629268 15-DEC-97 SA\_REP 7500 .3 146 80****

#### ****161 Sarath Sewall SSEWALL 011.44.1345.529268 03-NOV-98 SA\_REP 7000 .25 146 80****

#### ****162 Clara Vishney CVISHNEY 011.44.1346.129268 11-NOV-97 SA\_REP 10500 .25 147 80****

#### ****163 Danielle Greene DGREENE 011.44.1346.229268 19-MAR-99 SA\_REP 9500 .15 147 80****

#### ****164 Mattea Marvins MMARVINS 011.44.1346.329268 24-JAN-00 SA\_REP 7200 .1 147 80****

#### ****165 David Lee DLEE 011.44.1346.529268 23-FEB-00 SA\_REP 6800 .1 147 80****

#### ****166 Sundar Ande SANDE 011.44.1346.629268 24-MAR-00 SA\_REP 6400 .1 147 80****

#### ****167 Amit Banda ABANDA 011.44.1346.729268 21-APR-00 SA\_REP 6200 .1 147 80****

#### ****168 Lisa Ozer LOZER 011.44.1343.929268 11-MAR-97 SA\_REP 11500 .25 148 80****

#### ****169 Harrison Bloom HBLOOM 011.44.1343.829268 23-MAR-98 SA\_REP 10000 .2 148 80****

#### ****170 Tayler Fox TFOX 011.44.1343.729268 24-JAN-98 SA\_REP 9600 .2 148 80****

#### ****171 William Smith WSMITH 011.44.1343.629268 23-FEB-99 SA\_REP 7400 .15 148 80****

#### ****172 Elizabeth Bates EBATES 011.44.1343.529268 24-MAR-99 SA\_REP 7300 .15 148 80****

#### ****173 Sundita Kumar SKUMAR 011.44.1343.329268 21-APR-00 SA\_REP 6100 .1 148 80****

#### ****174 Ellen Abel EABEL 011.44.1644.429267 11-MAY-96 SA\_REP 11000 .3 149 80****

#### ****175 Alyssa Hutton AHUTTON 011.44.1644.429266 19-MAR-97 SA\_REP 8800 .25 149 80****

#### ****176 Jonathon Taylor JTAYLOR 011.44.1644.429265 24-MAR-98 SA\_REP 8600 .2 149 80****

#### ****177 Jack Livingston JLIVINGS 011.44.1644.429264 23-APR-98 SA\_REP 8400 .2 149 80****

#### ****178 Kimberely Grant KGRANT 011.44.1644.429263 24-MAY-99 SA\_REP 7000 .15 149****

#### ****179 Charles Johnson CJOHNSON 011.44.1644.429262 04-JAN-00 SA\_REP 6200 .1 149 80****

#### ****180 Winston Taylor WTAYLOR 650.507.9876 24-JAN-98 SH\_CLERK 3200 120 50****

#### ****181 Jean Fleaur JFLEAUR 650.507.9877 23-FEB-98 SH\_CLERK 3100 120 50****

#### ****182 Martha Sullivan MSULLIVA 650.507.9878 21-JUN-99 SH\_CLERK 2500 120 50****

#### ****183 Girard Geoni GGEONI 650.507.9879 03-FEB-00 SH\_CLERK 2800 120 50****

#### ****Basic Questions****

1. Display the full name of all employees by concatenating their first and last names. Use an alias "Full Name" for the column.

Select first\_name || ‘ ‘ || last\_name as full\_name from employees;

1. Show the job ID in uppercase for all employees.

Select lower(job\_id) from employees;

1. Display the first three characters of the last names of all employees.

Select substr(first\_name,1,3) from employees;

1. Find the length of the first names of all employees.

Select length(first\_name) from employees;

1. Replace all occurrences of 'a' in the first names with 'A'.

Select replace(first\_name, ‘a’,’A’) from employees;

1. Convert the hire date of employees to a format: 'DD-Mon-YYYY'.

Select to\_char(hire\_date,’DD-MON-YYYY’) from employees;

1. Extract the year from the hire date for each employee.

select first\_name,to\_char(hire\_date,'YYYY') from employees;

1. Round the salary of employees to the nearest thousand.

select first\_name, Round(salary,-3) from employees;

1. Display the email addresses of employees in lowercase.

select lower(email) from employees;

1. Display the first name, last name, and phone number concatenated with a hyphen ("-").

select first\_name || '-' || last\_name || '-' || phone\_number from employees;

#### ****Intermediate Questions****

1. Calculate the total salary for all employees.
   1. select sum(salary) as total\_salary from employees;
2. Find the average salary of employees in department 50.
   1. select avg(salary) as average\_salary from employees where department\_id = 50;
3. Display the maximum and minimum hire date in the table.
   1. Select max(hire\_date),min(hire\_date) from employees;
4. Count the number of employees in each department.
   1. select count(\*),department\_id from employees group by department\_id;
5. Find the total number of employees whose salaries are greater than 5000.
   1. select count(\*) from employees where salary > 5000;
6. List the department ID and the highest salary in each department.
   1. select max(salary),department\_id from employees group by department\_id;
7. Calculate the total commission earned by employees (use commission\_pct with their salary).
   1. select sum(salary \* nvl(commission\_pct,0)) from employees;
   2. select sum(commission\_pct),sum(salary),sum(commission\_pct+salary) from employees;
8. Show the number of employees hired in each year.
   1. select count(\*),to\_char(hire\_date,'YYYY') from employees group by to\_char(hire\_date,'YYYY');
9. Display the count of employees who have "ST\_CLERK" as their job ID.
   1. select count(\*) from employees where job\_id = 'ST\_CLERK';
10. Find the total salary paid to employees in department 80.
    1. Select sum(salary) from employees where department\_id = 80;

#### ****Advanced Questions****

1. List employees whose hire date is earlier than 01-Jan-1990.
   1. select first\_name from employees where hire\_date < '01-JAN-1990';
2. Show the total number of employees reporting to each manager.
   1. select count(\*),manager\_id from employees group by manager\_id;
3. List employees who have not been assigned to any manager (i.e., manager\_id is null).
   1. select first\_name from employees where manager\_id is null;
4. Display the departments with more than 5 employees.
   1. select count(\*),department\_id from employees group by department\_id having count(\*) > 4;

### String Functions

1. Write a query to display the FIRST\_NAME and LAST\_NAME concatenated with a space between them, along with their EMAIL in uppercase.

select first\_name || ' ' || last\_name as full\_name, upper(email) from employees;

1. Retrieve the FIRST\_NAME of employees where the third letter in their name is 'n'.

select first\_name from employees where instr(first\_name,'n') = 3;

1. Display the EMAIL of all employees, but replace all occurrences of the letter 'a' with '@'.

select replace(email,'A','@') from employees;

1. Extract the first three letters of the JOB\_ID and concatenate them with the last two digits of the HIRE\_DATE (year part).

select substr(job\_id,1,3) || to\_char(hire\_date,'YY') from employees;

1. Display the LAST\_NAME in reverse order for all employees.

select reverse(last\_name) from employees;

### Number Functions

1. Retrieve the SALARY and round it to the nearest thousand for all employees.

select round(salary,-3) from employees;

1. Display the SALARY and its absolute difference from 5000.

select salary-5000 from employees;

1. Write a query to show the SALARY increased by 15% and truncated to two decimal places.

select trunc(salary+salary\*.15,-2) from employees;

1. Find the square root of the SALARY for employees with JOB\_ID as SA\_REP.

select power(salary,2) from employees where job\_id = 'SA\_REP';

1. For employees in department 50, calculate the remainder when their SALARY is divided by 3000.

select mod(salary,3000) from employees where department\_id = 50;

### Date Functions

1. Display the FIRST\_NAME, HIRE\_DATE, and the number of months they have worked for the company till date.

select months\_between(sysdate,hire\_date) from employees;

1. Retrieve the names of employees who were hired in the year 1997.

select first\_name,hire\_Date from employees where to\_char(hire\_date,'YYYY') = 1997;

1. Display the FIRST\_NAME, HIRE\_DATE, and the day of the week they were hired.

select first\_name,to\_char(hire\_date,'DY') from employees;

1. Write a query to calculate the next Friday from the current date for each employee's hire date.
2. Find the HIRE\_DATE of employees and add 100 days to it.

select to\_date(hire\_date)+100 from employees;

### Conditional Expressions

1. Display the FIRST\_NAME and SALARY, and show "Above Average" or "Below Average" based on whether their salary is above or below the company average.

select first\_name,salary,case when salary>6400 then 'Above average'

2 when salary<6400 then 'Below average'

3 end as status

4 from employees;

1. Write a query to display FIRST\_NAME and JOB\_ID, and replace SA\_REP with "Sales Representative" and all other job IDs with "Other".
2. Retrieve the FIRST\_NAME and SALARY of employees who earn a SALARY less than 5000; otherwise, display their salary reduced by 10%.
3. Display the FIRST\_NAME and SALARY, and assign a "Low", "Medium", or "High" label based on the salary range (<5000, 5000–10000, >10000).
4. Display FIRST\_NAME and MANAGER\_ID, but replace any null MANAGER\_ID with "No Manager".

1. Find employees who earn more than any employee in department 50.

select first\_name,salary from employees where salary > (select max(salary) from employees where department\_id = 50);

2. Find employees who earn less than the highest salary in department 30.

select first\_name,salary from employees where salary < (select max(salary) from employees where department\_id = 30);

3. Find employees whose hire date is earlier than all employees in department 60.

select first\_name,hire\_date from employees where hire\_date < (select min(hire\_date) from employees where department\_id = 60);

4. Find employees whose salary is greater than the salary of 'Alexander'.

select first\_name,last\_name,salary from employees where salary > (select avg(salary) from employees where first\_name = 'Alexander');

5. Find employees who share the same job ID as 'Steven King'.

select first\_name,job\_id from employees where job\_id = (select job\_id from employees where first\_name = 'Steven' and last\_name = 'King');

6. Find employees who were hired on the same date as 'Neena Kochhar'.

select first\_name,hire\_date from employees where hire\_date = (select hire\_date from employees where first\_name = 'Neena' and last\_name = 'Kochhar');

7. Find employees who earn more than the employee with ID 101.

select first\_name,salary,department\_id from employees where salary > (select max(salary) from employees where department\_id = 101);

8. Find employees working in the same department as 'Nancy Greenberg'.

select first\_name,department\_id from employees where department\_id = (select department\_id from employees where first\_name = 'Nancy' and last\_name = 'Greenberg');

9. Find employees who have a salary equal to any employee in department 20.

10. Find employees whose job ID is different from all employees in department 100.

Q waqtd the position of char @ in email id

Select instr(email,’@’,1) from customers;

Q waqtd the customers whose mail id contain the word gmail

Select full\_name from customers where instr(email, ‘gmail’, 1) != 0;

Q waqtd the customer details if their mobile number contains the seq 123

Select \* from customer where instr(phno,’123’, 1) != 0;

Q waqtd swap the first name and last name of customer

Q waqtd the text before the symbol @ in the mail\_id column

Select substr(email\_id, 1, instr(email\_id, [‘@’,](mailto:‘@gmail.com’,) 1)-1) from customers;

Q waqtd the digit which is present after the second - in phone number

Select substr(phno,instr(phno,’-’, 1,2)+1) from customers;

### ****Basic Subqueries****

Find the **name of the department** where employee "ALLEN" works.

select dname from dept where deptno = (select deptno from emp where ename = 'ALLEN');

Retrieve the **salary of SMITH's manager**.

SELECT ENAME,SAL FROM EMP WHERE EMPNO = (SELECT MGR FROM EMP WHERE ENAME = 'SMITH');

List all employees who earn **more than JONES**.

SELECT ENAME,SAL FROM EMP WHERE SAL > (SELECT SAL FROM EMP WHERE ENAME = 'JONES');

Find the **location** of the department where employee "WARD" works.

SELECT LOC FROM DEPT WHERE DEPTNO = (SELECT DEPTNO FROM EMP WHERE ENAME = 'WARD');

Display the **highest salary** from the emp table.

SELECT MAX(SAL) FROM EMP;

### ****Single-row Subqueries****

Find the **name of the employee** who earns the **highest salary**.

SELECT ENAME FROM EMP WHERE SAL = (SELECT MAX(SAL) FROM EMP);

Retrieve the **department name** where the highest-paid employee works.

SELECT DNAME FROM DEPT WHERE DEPTNO = (SELECT DEPTNO FROM EMP WHERE SAL = (SELECT MAX(SAL) FROM EMP));

Display the **name of the manager** of employee "SCOTT".

SELECT ENAME FROM EMP WHERE EMPNO = (SELECT MGR FROM EMP WHERE ENAME = 'SCOTT');

Find the **name of the department** where the employee with the lowest salary works.

SELECT DNAME FROM DEPT WHERE DEPTNO = (SELECT DEPTNO FROM EMP WHERE SAL = (SELECT MIN(SAL) FROM EMP));

Find the **hiring date of the employee** with the second-highest salary.

SELECT HIREDATE FROM EMP WHERE SAL = (SELECT MAX(SAL) FROM EMP WHERE SAL < (SELECT MAX(SAL) FROM EMP));

### ****Multi-row Subqueries****

List the **employees** working in the same department as "SCOTT".

SELECT ENAME FROM EMP WHERE DEPTNO = (SELECT DEPTNO FROM EMP WHERE ENAME = 'SCOTT');

Retrieve the names of employees whose salaries are equal to **any salary in department 30**.

SELECT ename FROM emp WHERE sal IN (SELECT sal FROM emp WHERE deptno = 30);E.

Display the **departments** where at least one employee earns more than 3000.

SELECT dname FROM dept WHERE deptno IN (SELECT deptno FROM emp WHERE sal > 3000);

List the **employees** who have the same job as "FORD".

SELECT ENAME,JOB FROM EMP WHERE JOB = (SELECT JOB FROM EMP WHERE ENAME = 'FORD');

Find the **employees** whose salaries are higher than the average salary in their department.

SELECT ENAME,SAL,DEPTNO FROM EMP WHERE SAL > (SELECT AVG(SAL) FROM EMP WHERE DEPTNO IN (SELECT DEPTNO FROM DEPT));

### ****Correlated Subqueries****

Retrieve the **names of employees** who earn more than the average salary of their department.

List the **employees** whose salaries are higher than their managers.

Display the **department name and employee name** for employees earning the highest salary in each department.

Retrieve the **name of the employee** who was hired before their manager.

Find the **departments** where all employees earn less than 2000.