Q1) Display the Name, manager Id, and hire date of all employees who are either clerks or works in dept 20. the date should be in the following format:

DATE_HIRED
Seventeenth December, 1980
Second April, 1981

=>

```
SELECT
   ename AS name,
       mgr AS manager_id,
       INITCAP(TO_CHAR(hiredate, 'DDspth MONTH, YYYY')) AS
             date_hired
FROM
   emp
WHERE
   job = 'clerk' OR deptno = 20
```

NAME	MANAGER_ID	DATE_HIRED
SMITH	7902	Seventeenth December , 1980
JONES	7839	Second April , 1981
SCOTT	7566	Nineteenth April , 1987
ADAMS	7788	Twenty-Third May , 1987
FORD	7566	Third December , 1981

Q2) List the employee name and old salary and new increased salary by 25% and expressed as a whole number.

=>

```
SELECT
```

```
        ename AS name,
        sal AS old_salary,
    CAST(sal*1.25 AS INT) AS new_salary
FROM emp
```

NAME	OLD_SALARY	NEW_SALARY
SMITH	800	1000
ALLEN	1600	2000
WARD	1250	1563
JONES	2975	3719
MARTIN	1250	1563
BLAKE	2850	3563
CLARK	2450	3063
SCOTT	3000	3750
KING	5000	6250
TURNER	1500	1875
ADAMS	1100	1375
JAMES	950	1188
FORD	3000	3750
MILLER	1300	1625

Q3) List the employee name and salary where name is displayed as left justified and salary with right justified.

=>

```
SELECT
        RPAD(ename, 10, '.') AS name,
```

```
        LPAD(sal, 7, '0') AS salary
FROM emp
```

NAME	SALARY
SMITH.....	0000800
ALLEN.....	0001600
WARD.....	0001250
JONES.....	0002975
MARTIN....	0001250
BLAKE.....	0002850
CLARK.....	0002450
SCOTT.....	0003000
KING.....	0005000
TURNER....	0001500
ADAMS.....	0001100
JAMES.....	0000950
FORD.....	0003000
MILLER....	0001300

Q4) Produce the output as follows(for all employees)

ROLE OF THE EMPLOYEE
Name1 (<Job of Name 1>)
Name2 (<Job of Name 2>)
.....

Note: Only the first character of Name and job will be in uppercase.
=>

```
SELECT
        INITCAP(ename) || ' (' || INITCAP(job) || ')' AS name
FROM
        emp
```

NAME
Smith (Clerk)
Allen (Salesman)
Ward (Salesman)
Jones (Manager)
Martin (Salesman)
Blake (Manager)
Clark (Manager)
Scott (Analyst)
King (President)
Turner (Salesman)
Adams (Clerk)
James (Clerk)
Ford (Analyst)
Miller (Clerk)

Q5) Give the details of an employee whose job is clerk (enter the job value clerk as input).
=>

```
ACCEPT job PROMPT 'Enter Job: '
```

```
SELECT
        *
FROM
        emp
WHERE
        job = '&job'
```

Q6) Display each employee name with hire date and salary review date. Assume that date is one year after hiredate. Order the output in ascending review date order.

=>

```
SELECT
        ename AS name,
        hiredate,
        ADD_MONTHS(hiredate, 12) AS review_date
FROM emp
```

NAME	HIREDATE	REVIEW_DATE
SMITH	17-DEC-80	17-DEC-81
ALLEN	20-FEB-81	20-FEB-82
WARD	22-FEB-81	22-FEB-82
JONES	02-APR-81	02-APR-82
MARTIN	28-SEP-81	28-SEP-82
BLAKE	01-MAY-81	01-MAY-82
CLARK	09-JUN-81	09-JUN-82
SCOTT	19-APR-87	19-APR-88
KING	17-NOV-81	17-NOV-82
TURNER	08-SEP-81	08-SEP-82
ADAMS	23-MAY-87	23-MAY-88
JAMES	03-DEC-81	03-DEC-82
FORD	03-DEC-81	03-DEC-82
MILLER	23-JAN-82	23-JAN-83

Q7) Find the employees(s) who earn the highest salary in each job type sort in descending salary order

=>

```
SELECT
        ename AS employee_name,
        MAX(sal) OVER (PARTITION BY job) AS salary,
        job
FROM emp
ORDER BY salary DESC
```

EMPLOYEE_NAME	SALARY	JOB
KING	5000	PRESIDENT
SCOTT	3000	ANALYST
FORD	3000	ANALYST
BLAKE	2975	MANAGER
CLARK	2975	MANAGER
JONES	2975	MANAGER
ALLEN	1600	SALESMAN
MARTIN	1600	SALESMAN
WARD	1600	SALESMAN
TURNER	1600	SALESMAN
MILLER	1300	CLERK
ADAMS	1300	CLERK
SMITH	1300	CLERK
JAMES	1300	CLERK

Q8) Find the most recently hired employee in each department (give number only).

=>

```
SELECT
    deptno AS department_number,
    empno AS employee_number
FROM
    emp
WHERE
    (deptno, hiredate) IN
    (SELECT
        deptno, MAX(hiredate)
     FROM
        emp
     GROUP BY
        deptno
    )
```

DEPARTMENT_NUMBER	EMPLOYEE_NUMBER
20	7876
30	7900
10	7934

Q9) Show the name of the department and no. of employees who work in that department. Sort in department number.

=>

```
SELECT
    d.dname AS department_name,
    COUNT(e.empno) AS employee_count
FROM
    dept d
    FULL OUTER JOIN emp e
    ON d.deptno = e.deptno
GROUP BY
    d.dname
```

DEPARTMENT_NAME	EMPLOYEE_COUNT
RESEARCH	5
SALES	6
ACCOUNTING	3
OPERATIONS	0

Q10) Display the Id, name, salary and the salary grade for any employee who earns the maximum salary for their department. Sort in department number.

=>

```
SELECT
    empno AS id,
    ename AS name,
    sal AS salary,
    (SELECT
        grade
     FROM
        salgrade s
     WHERE
        e.sal >= s.losal AND e.sal <= s.hisal
    ) AS salary_grade
FROM
        emp e
WHERE
        (deptno, sal) IN  (SELECT
                                deptno, max(sal)
                           FROM
                                emp
                           GROUP BY
                                deptno
                            )
ORDER BY
        Deptno
```

ID	NAME	SALARY	SALARY_GRADE
7839	KING	5000	5
7902	FORD	3000	4
7788	SCOTT	3000	4
7698	BLAKE	2850	4

Q11) In which year did most people join the company? Display the year and number of employees.

=>

```
SELECT
        year,
        number_of_employees_joined
FROM
        (SELECT
                EXTRACT(YEAR FROM hiredate) AS year,
                COUNT(empno) AS number_of_employees_joined,
                RANK() OVER (ORDER BY COUNT(empno) DESC) AS
                rank_number
        FROM
                emp
        GROUP BY
                EXTRACT(YEAR FROM hiredate)
        ) employee_turnover
WHERE
        rank_number = 1
```

YEAR	NUMBER_OF_EMPLOYEES_JOINED
1981	10

Q12) Show every alternate row in the employee table.

=>

```
SELECT
        m_emp.*
FROM
        (SELECT
        ROW_NUMBER() OVER(ORDER BY e.empno) AS row_number,
       e.*
   FROM
        emp e
   ) m_emp
WHERE
        MOD(row_number, 2) = 0
```

ROW_NUMBER	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
2	7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	-	-
4	7566	JONES	MANAGER	7839	02-APR-81	2975	-	20	-	-
6	7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30	-	-
8	7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	20	-	-
10	7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30	-	-
12	7900	JAMES	CLERK	7698	03-DEC-81	950	-	30	-	-
14	7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10	-	-

Q13) Display the total salary of all employees.
Total salary = salary + commission.

=>

```
SELECT
   empno AS id,
   ename AS name,
   NVL(sal, 0) + NVL(comm, 0) AS total_salary
FROM emp
```

ID	NAME	TOTAL_SALARY
7369	SMITH	800
7499	ALLEN	1900
7521	WARD	1750
7566	JONES	2975
7654	MARTIN	2650
7698	BLAKE	2850
7782	CLARK	2450
7788	SCOTT	3000
7839	KING	5000
7844	TURNER	1500
7876	ADAMS	1100
7900	JAMES	950
7902	FORD	3000
7934	MILLER	1300

Q14) Display the department name and available jobs in that department.

=>

```
WITH jobs AS (
    SELECT DISTINCT
        d.dname AS department_name,
        e.job AS jobs
    FROM
        dept d
        FULL OUTER JOIN emp e
        ON d.deptno = e.deptno
)

SELECT
    department_name,
    LISTAGG(jobs, ', ') WITHIN GROUP (ORDER BY jobs) AS jobs
FROM
    jobs
GROUP BY
    department_name
ORDER BY
    department_name
```

DEPARTMENT_NAME	JOBS
ACCOUNTING	CLERK, MANAGER, PRESIDENT
OPERATIONS	-
RESEARCH	ANALYST, CLERK, MANAGER
SALES	CLERK, MANAGER, SALESMAN

Q15) Display all the available departments and the employee(s) working under it.

=>

```
SELECT
    d.dname AS department_name,
    LISTAGG(e.ename, ', ') WITHIN GROUP (ORDER BY e.ename) AS
        employees
FROM
    dept d
    FULL OUTER JOIN emp e
    ON d.deptno = e.deptno
GROUP BY
    d.dname
ORDER BY
    d.dname
```

DEPARTMENT_NAME	EMPLOYEES
ACCOUNTING	CLARK, KING, MILLER
OPERATIONS	-
RESEARCH	ADAMS, FORD, JONES, SCOTT, SMITH
SALES	ALLEN, BLAKE, JAMES, MARTIN, TURNER, WARD