```sql
-- Oracle SQL Question BANK
-- 1. WAQ TO PRINT NAME OF EMPLOYEES WHO WERE HIRED ON SAME DAY.
SELECT EMP.FIRST_NAME, EMP.HIRE_DATE
FROM EMPLOYEES EMP, EMPLOYEES EMP2
WHERE EMP.HIRE_DATE = EMP2.HIRE_DATE
AND   EMP.EMPLOYEE_ID <> EMP2.EMPLOYEE_ID;

SELECT FIRST_NAME, TO_CHAR(HIRE_DATE, 'DAY'), TO_CHAR (SYSDATE, 'DAY')
FROM EMPLOYEES
WHERE TO_CHAR(HIRE_DATE, 'DAY') = TO_CHAR (SYSDATE, 'DAY');

-- 2. WAQ TO COUNT NUMBER OF EMPLOYEES HIRED ON DIFFERENT DAYS OF THE WEEK AND SORT THEM
-- BY(SUNDAY,MONDAY,.....SATURDAY).
SELECT COUNT(*), TO_CHAR(HIRE_DATE, 'DAY')
FROM EMPLOYEES
GROUP BY TO_CHAR (HIRE_DATE,'DAY');

-- 3. WAQ TO PRINT NAME OF EMPLOYEES WHO WERE HIRED AFTER 'DAVIES'.
  SELECT LAST_NAME, HIRE_dATE
  FROM EMPLOYEES
  WHERE HIRE_DATE >  (SELECT HIRE_DATE
  FROM EMPLOYEES
  WHERE UPPER(LAST_NAME) = 'DAVIES');
  -- ORDER BY HIRE_DATE;

  SELECT HIRE_DATE
  FROM EMPLOYEES
  WHERE UPPER(LAST_NAME) = 'DAVIES';

-- 4. WAQ TO PRINT NAME OF EMPLOYEES WHO WERE PROMOTED ,THEIR PREVIOUS JOB TITLE AND
PRESENT JOB TITLE. PROBLEM, INCOMPLETE
SELECT FIRST_NAME
FROM EMPLOYEES;

-- 5. WAQ TO PRINT NAME OF MANGER OF MANAGERS FROM EMPLOYEE TABLE.
SELECT MNG.EMPLOYEE_ID, MNG.FIRST_NAME,MANAGERS.EMPLOYEE_ID, MANAGERS.FIRST_NAME
FROM EMPLOYEES MNG, EMPLOYEES MANAGERS
WHERE MNG.EMPLOYEE_ID = MANAGERS.MANAGER_ID;


SELECT DISTINCT EMP3.FIRST_NAME
FROM EMPLOYEES EMP1, EMPLOYEES EMP2, EMPLOYEES EMP3
WHERE EMP1.MANAGER_ID = EMP2.EMPLOYEE_ID
AND   EMP2.MANAGER_ID = EMP3.EMPLOYEE_ID;

-- 6. QUERY TO DETERMINE CURRENT CENTURY.
SELECT TO_CHAR(sysdate, 'CC'), (TO_CHAR (SYSDATE, 'YYYY')/100)+1
FROM DUAL;

-- 7. QUERY TO CALCULATE GRADES OF EMPLOYEES DEPENDING ON THEIR SALARY(USING GRADE TABLE
HAVING COLUMNS LIKE GRADE, MIN_SALARY, MAX_SALARY)
SELECT CASE
  WHEN SALARY > 35000 THEN 'Excellent'
  WHEN SALARY > 20000 THEN 'Very Good'
  WHEN SALARY > 10000 THEN 'Good'
  ELSE 'Poor'
END
FROM GRADE;

-- SELECT * FROM GRADES;
-- SELECT *
-- FROM TAB;
-- 8. QUERY THE NAME OF THE EMPLOYEES HAVING LETTER 'E' AS SECOND LAST LETTER OF THEIR
NAME WITH AND WITHOUT USING SUBSTR AND LIKE .
SELECT FIRST_NAME
FROM EMPLOYEES
WHERE INSTR(UPPER(FIRST_NAME), 'E', -1, 1) = LENGTH(FIRST_NAME) - 1;

-- 9. QUERY THE DEPARTMENT NAME, DEPARTMENT_ID AND MAXIMUM SALARY OF THAT DEPARTMENT.
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-- SELECT DE
-- FROM DEPARTMENTS;
SELECT DEPT.DEPARTMENT_NAME, DEPT.DEPARTMENT_ID, JOB.MAX_SALARY
FROM EMPLOYEES EMP, DEPARTMENTS DEPT, JOBS JOB
WHERE EMP.DEPARTMENT_ID = DEPT.DEPARTMENT_ID
AND   EMP.JOB_ID = JOB.JOB_ID;

-- 10. QUERY THE YEARS OF EXPERIENCE EACH EMPLOYEES HAS FROM THE EMPLOYEE TABLE.
SELECT (SYSDATE - HIRE_DATE)/365
FROM EMPLOYEES;

-- 11. QUERY TO DISPLAY THE ANNUAL SALARY OF ANY USER ENTERED EMPLOYEE_ID.
SELECT &SALARY * 12
FROM DUAL;

-- 12. QUERY TO CALCULATE THE NUMBER OF EMPLOYEES WORKING IN USER ENTERED DEPARTMENT_ID.
SELECT COUNT (*)
FROM EMPLOYEES
WHERE DEPARTMENT_ID = &ID;
UNDEFINE ID;

-- 13. QUERY TO PRINT NAME OF COLLEAGUE OF EVERY EMPLOYEE.

SELECT * FROM EMPLOYEES;
SELECT EMP.LAST_NAME, EMP.EMPLOYEE_ID, EMP1.LAST_NAME, EMP1.EMPLOYEE_ID
FROM EMPLOYEES EMP, EMPLOYEES EMP1
WHERE EMP1.DEPARTMENT_ID = EMP.DEPARTMENT_ID
AND   EMP.EMPLOYEE_ID <> EMP1.EMPLOYEE_ID;

-- 14. QUERY TO PRINT NAME AND DEPARTMENT NAME OF EACH EMPLOYEE.
SELECT EMP.FIRST_NAME, DEPT.DEPARTMENT_NAME
FROM EMPLOYEES EMP, DEPARTMENTS DEPT
WHERE EMP.DEPARTMENT_ID = DEPT.DEPARTMENT_ID;

-- 15. QUERY TO PRINT NAME AND HIRE DATE OF EMPLOYEES WHO WERE HIRED BEFORE THEIR
MANAGERS.
SELECT EMP.FIRST_NAME, EMP.HIRE_DATE, MNG.LAST_NAME, MNG.HIRE_DATE
FROM EMPLOYEES EMP, EMPLOYEES MNG
WHERE MNG.EMPLOYEE_ID = EMP.MANAGER_ID
AND   EMP.HIRE_DATE < MNG.HIRE_DATE;

-- 16. WAQ TO PRINT THE NAME OF ALL THE EMPLOYEES WHO GOT PROMOTED.
SELECT DISTINCT EMP.EMPLOYEE_ID, EMP.FIRST_NAME
FROM EMPLOYEES EMP, JOB_HISTORY JH
WHERE EMP.EMPLOYEE_ID = JH.EMPLOYEE_ID;

-- 17. WAQ TO PRINT THE NAME OF ALL EMPLOYEES WHO GOT PROMOTED AND IF NOT PROMOTED THEN
PRINT NULL AT START AND END DATE COLUMN.


-- 18. WAQ TO PRINT NAME OF EMPLOYEES, SALARY, DEPARTMENT_ID AND DEPARTMENT NAME OF ALL
THE EMPLOYEES
SELECT EMP.LAST_NAME, EMP.SALARY, DEPT.DEPARTMENT_NAME
FROM EMPLOYEES EMP, DEPARTMENTS DEPT
WHERE EMP.DEPARTMENT_ID = DEPT.DEPARTMENT_ID;

-- 19. QUERY AND FIND ALL THE CONSTRAINTS FROM EMPLOYEES, LOCATIONS, JOBS AND
DEPARTMENTS TABLE
SELECT *
FROM USER_CONSTRAINTS
WHERE TABLE_NAME IN ('EMPLOYEES', 'JOBS', 'DEPARTMENTS');

-- 20. QUERY TOTAL NUMBER OF EMPLOYEES WHO HAVE SA_REP AS THEIR JOB_ID AND WERE HIRED ON
2005 AND ARE FROM DEPARTMENT_ID =80.
SELECT COUNT(*)
FROM EMPLOYEES
WHERE JOB_ID = 'SA_REP'
AND   TO_CHAR(HIRE_DATE, 'RRRR') = '2005'
AND   DEPARTMENT_ID = 80;
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-- 21. QUERY TO PRINT NUMBER OF EMPLOYEES HIRED EACH YEAR.
SELECT COUNT(*), TO_CHAR (HIRE_DATE, 'RRRR')
FROM EMPLOYEES
GROUP BY TO_CHAR (HIRE_DATE, 'RRRR');

-- 22. QUERY TO PRINT NUMBER OF EMPLOYEES HAVING SAME JOB_ID
SELECT COUNT(*), JOB_ID
FROM EMPLOYEES
GROUP BY JOB_ID;

-- 23. WAQ TO PRINT NUMBER OF EMPLOYEES WORKING ON DIFFERENT DEPARTMENTS.
SELECT COUNT(*), DEPARTMENT_ID
FROM EMPLOYEES
GROUP BY DEPARTMENT_ID;

-- 24. WAQ TO PRINT EMPLOYEE NAME, SALARY, DEPARTMENT NAME JOB ID AND JOB TITLE OF EVERY
EMPLOYEE.
SELECT EMP.LAST_NAME, EMP.SALARY, DEPT.DEPARTMENT_NAME, JOB.JOB_ID, JOB.JOB_TITLE
FROM EMPLOYEES EMP, DEPARTMENTS DEPT, JOBS JOB
WHERE EMP.DEPARTMENT_ID = DEPT.DEPARTMENT_ID
AND EMP.JOB_ID = JOB.JOB_ID
;
-- SELECT * FROM JOBS;

-- 25. WAQ TO FIND THE SECOND HIGHEST SALARY OF AN EMPLOYEE?
SELECT SALARY
FROM EMPLOYEES
ORDER BY SALARY DESC
OFFSET 1 ROW FETCH FIRST 1 ROW ONLY;

SELECT FIRST_NAME, salary
FROM employeeS
WHERE salary = (
    SELECT MAX(salary)
    FROM employeeS
    WHERE salary < (SELECT MAX(salary) FROM employeeS)
);

SELECT *
FROM (
      SELECT SALARY
      FROM EMPLOYEES
      WHERE ROWNUM < 3
      )
-- WHERE ROWNUM = 1
ORDER BY SALARY ;


SELECT
  MAX(SALARY)
FROM
  EMPLOYEES
WHERE
  SALARY <
  (
    SELECT
      MAX(SALARY)
    FROM
      EMPLOYEES
  );


SELECT SALARY
FROM EMPLOYEES
ORDER BY SALARY DESC;
-- OFFSET 1 ROW FETCH FIRST 1 ROW ONLY;

SELECT MAX(SALARY)
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FROM EMPLOYEES
WHERE SALARY < (SELECT MAX(SALARY)
FROM EMPLOYEES);

-- 26. WAQ TO FIND DUPLICATE ROWS IN FIRST_NAME COLUMN IN A TABLE. PROBLEM
SELECT FIRST_NAME, COUNT(*)
FROM EMPLOYEES
GROUP BY FIRST_NAME
HAVING COUNT(*)>2;

-- 27. FETCH THE ANNUAL SALARY OF EMPLOYEES WHERE MONTHLY SALARY IS GIVEN IN THE
EMPLOYEE TABLE.
SELECT LAST_NAME, SALARY, SALARY*12 "ANNUAL SALARY"
FROM EMPLOYEES;

-- 28. FETCH FIRST RECORD OF EMPLOYEE TABLE ONLY BY USING WHERE CLAUSE.
SELECT  *
FROM EMPLOYEES
WHERE ROWNUM = 1;



-- SELECT *
-- FROM EMPLOYEES
-- WHERE EMPLOYEE_ID = MIN(EMPLOYEE_ID)
-- GROUP BY EMPLOYEE_ID;

-- 29. FETCH THE LAST RECORD FROM THE EMPLOYEE TABLE .
SELECT *
FROM EMPLOYEES
WHERE ROWNUM = 1
ORDER BY EMPLOYEE_ID DESC;

-- 30. WRITE A QUERY TO FETCH FIRST 10 RESULTS ONLY USING WHERE CLAUSE.
SELECT *
FROM EMPLOYEES
WHERE ROWNUM <= 10;

-- 31. WAQ TO FETCH ALL RECORDS WHERE FIRST NAME THIRD LETTER IS 'A' WITHOUT USING INSTR
AND LIKE.
-- SELECT LPAD(FIRST_NAME, 3)
-- FROM EMPLOYEES;

SELECT FIRST_NAME, LPAD(FIRST_NAME, 3)
FROM EMPLOYEES
WHERE LENGTH(TRIM(TRAILING 'A' FROM UPPER(LPAD(FIRST_NAME, 3)))) = 2;

-- 32. DISPLAY THE NAME,HIRE DATE AND SALARY OF EMPLOYEES WHO HAVE JOINED IN 2005 AND
SALARY IS GREATER
-- THAN 10000?
SELECT FIRST_NAME, HIRE_DATE, SALARY
FROM EMPLOYEES
WHERE TO_CHAR (HIRE_DATE, 'RRRR') = 2005
AND SALARY > 10000;



-- 33. DISPLAY THE NAME OF EMPLOYEES WHO'S FIRST NAME STARTS WITH LETTER 'A' WITHOUT
USING SUBSTR , INSTR ,
-- LIKE , REPLACE , ASCII .
SELECT FIRST_NAME , LPAD(FIRST_NAME,LENGTH(FIRST_NAME) - LENGTH(FIRST_NAME) + 1)
FROM EMPLOYEES
WHERE LPAD(FIRST_NAME, LENGTH(FIRST_NAME) - LENGTH(FIRST_NAME) + 1) = 'A';

-- 34. WAQ TO DISPLAY THE SALARY AND THE COUNT OF NUMBER OF ZEROS IN THE SALARY.
SELECT SALARY, LENGTH(SALARY) - LENGTH(REPLACE(SALARY, 0, ''))
FROM EMPLOYEES;

-- 35. WE HAVE GIVEN PHONE NUMBERS IN EMPLOYEES TABLE , THE FIRST PART OF THE PHONE
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NUMBER DENOTES THE COUNTRY TO WHICH THE PHONE NUMBER BELONGS (EX- A PHONE NUMBER LIKE
515.123.4567 HERE 515  DENOTES THE COUNTRY WHICH IS USA).
SELECT PHONE_NUMBER, SUBSTR(PHONE_NUMBER, 1, INSTR(PHONE_NUMBER, '.', 1)-1)
FROM EMPLOYEES;

-- 36. WAQ TO FETCH THE COUNTRY NAME AND THE COUNT OF TOTAL PHONE NUMBERS FOR THAT
COUNTRY IN EMPLOYEE TABLE.
--  COUTRY NAME FOR EACH CODE IS - PROBLEM
--  650 - INDIA
--  515 - USA
--  603 - RUSSIA
--  590 - CHINA
--  011 - AUSTRALIA
SELECT *
FROM TAB;

SELECT *
FROM COUNTRIES;

SELECT * FROM LOCATIONS
WHERE COUNTRY_ID = 'IN';

SELECT * FROM EMPLOYEES;

SELECT PHONE_NUMBER, SUBSTR(PHONE_NUMBER, 1, INSTR(PHONE_NUMBER, '.', 1)-1)
FROM EMPLOYEES EMP
WHERE EMP.EMPLOYEE_ID;


-- 37. WAQ TO INPUT A WEIGHT IN KG AND SHOW THE OUTPUT IN TWO COLUMNS SHOWING WEIGHT
DISTRIBUTIONS IN
-- KG AND GRAMS.
--  EXAMPLE - INPUT -> 1.2 KG
--  KILOGRAMS GRAMS
-- 1 200
SELECT TRUNC(1.2) KILOGRAMS, MOD(1.2,1), TO_CHAR (1.2 - TRUNC(1.2), '0D999')
FROM DUAL;

-- 38. DISPLAY THE NAME OF EMPLOYEES WHO'S FIRST NAME STARTS WITH LETTER 'A' WITHOUT
USING SUBSTR ,
-- INSTR , LIKE , REPLACE , ASCII , (> ,<) OPERATORS ,TRIM AND LENGTH FUNCTION.
SELECT LPAD(FIRST_NAME, 1), FIRST_NAME
FROM EMPLOYEES
WHERE LPAD(FIRST_NAME, 1) = 'A';

-- 39. WAQ TO FIND THE COUNT OF DUPLICATE FIRST_NAME RECORDS IN EMPLOYEE TABLE.
SELECT COUNT(*) - COUNT(DISTINCT FIRST_NAME)
FROM EMPLOYEES;

-- 40. WAQ TO CHECK WHETHER THE GIVEN DATE COMES IN A LEAP YEAR OR NOT.
DEFINE DATE = &DATE;

SELECT
  DECODE(365 , ADD_MONTHS(TRUNC(TO_DATE(&DATE, 'RRRR'), 'YEAR'),12) -
  TRUNC(TO_DATE(&DATE, 'RRRR'), 'YEAR'), 'NOT LEAP YEAR', 'LEAP YEAR')
FROM DUAL;

UNDEFINE DATE;

-- 41. WAQ TO REVERSE THE CASE OF FIRST AND LAST LETTER OF A NAME IF BOTH THE FIRST AND
LAST LETTER
-- OF THE NAME IS SAME. PROBLEM
--  EX- INPUT->TEST
-- OUTPUT -> TEST
SELECT FIRST_NAME
FROM EMPLOYEES
WHERE SUBSTR(FIRST_NAME, 1, 1) = SUBSTR(FIRST_NAME, -1, 1);

SELECT CASE
```

```
326     WHEN SUBSTR('TESt', 1, 1) = LOWER(SUBSTR(TESt), -1, 1) THEN REPLACE('TESt',
        SUBSTR('TESt', 1,1), SUBSTR('TESt', -1,1))
327     ELSE 'NO CHANGE'
328   END
329   FROM DUAL;
330
331   SELECT DECODE(SUBSTR(&&STR, 1,1), SUBSTR(&STR, -1,1), 'NO CHANGE',
332                                                         REPLACE(&STR, SUBSTR(&STR, -1,1),
                                                          SUBSTR(&STR, 1,1)))
333   FROM DUAL;
334
335   -- 42. WAQ TO PRINT THE * IN PLACE OF SALARY. EX- IF SALARY IS 12300 OUTPUT MUST BE
      *****.
336   select LPAD(' ', length(salary) + 1, '*')
337   from  EMPLOYEES;
338
339
340   -- 43. WAQ TO FIND THE COUNT OF UNIQUE FIRST_NAME RECORDS IN EMPLOYEES TABLE WHICH ARE
      COMPLETELY
341   -- UNIQUE.
342   SELECT FIRST_NAME from EMPLOYEES;
343
344   SELECT COUNT(DISTINCT FIRST_NAME)
345   FROM EMPLOYEES;
346
347   -- 44. WAQ TO PRINT THE NAME OF EMPLOYEES WHO GOT THE PROMOTIONS AND COUNT OF PROMOTIONS
      - PROBLEM
348   -- (WHICH MEANS TOTAL NUMBER OF PROMOTIONS A PARTICULAR EMPLOYEE GOT).
349   SELECT EMP.EMPLOYEE_ID, EMP.FIRST_NAME, COUNT(JH.EMPLOYEE_ID)
350   FROM EMPLOYEES EMP, JOB_HISTORY JH
351   WHERE EMP.EMPLOYEE_ID = JH.EMPLOYEE_ID
352   GROUP BY EMP.EMPLOYEE_ID,EMP.FIRST_NAME, JH.EMPLOYEE_ID;
353
354   SELECT * FROM EMPLOYEES;
355
356   SELECT EMPLOYEE_ID, TO_CHAR (START_DATE, 'DD/MM/RRRR'), JOB_ID
357   FROM JOB_HISTORY
358   ORDER BY EMPLOYEE_ID;
359
360   SELECT *
361   FROM JOBS;
362
363
364   -- 45. WAQ TO COUNT THE NUMBER OF EMPLOYEES FROM A PARTICULAR CITY.
365   -- SELECT * FROM EMPLOYEES;
366   SELECT COUNT(*), CITY
367   FROM EMPLOYEES
368   GROUP BY CITY;
369
370   -- 46. WAQ TO FETCH LAST 50 % ROWS.
371   SELECT *
372   FROM EMPLOYEES
373   FETCH FIRST 50 PERCENT ROW ONLY;
374
375   -- 47. WAQ TO PRINT EMPLOYEES NAME THEIR PREVIOUS JOB POSITION TITLE AND THEIR CURRENT
      JOB POSITION TITLE FROM EMPLOYEES TABLE.
376   SELECT EMP.FIRST_NAME, EMP.JOB_ID, JH.JOB_ID "PREVIOUS JOB", EMP.EMPLOYEE_ID
377   FROM EMPLOYEES EMP, JOB_HISTORY JH
378   WHERE EMP.EMPLOYEE_ID = JH.EMPLOYEE_ID
379   AND   EMP.JOB_ID <> JH.JOB_ID;
380
381   SELECT * FROM JOB_HISTORY;
382
383   SELECT * FROM DEPARTMENTS;
```