■STEP1. BASIC

Q001

- EMP 테이블 구성을 살펴보시오

```
이름           널?        유형
-------- -------- ------------
EMPNO     NOT NULL NUMBER(4)
ENAME              VARCHAR2(10)
JOB                VARCHAR2(9)
MGR                NUMBER(4)
HIREDATE           DATE
SAL                NUMBER(7,2)
COMM               NUMBER(7,2)
DEPTNO             NUMBER(2)
```

```
DESC EMP;
```

Q002

- DEPT 테이블 구성을 살펴보시오

```
이름      널?        유형
------ -------- ------------
DEPTNO NOT NULL NUMBER(2)
DNAME            VARCHAR2(14)
LOC              VARCHAR2(13)
```

```
DESC DEPT;
```

Q003

- SALGRADE 테이블 구성을 살펴보시오

```
이름      널? 유형
-----  -- ------
GRADE     NUMBER
LOSAL     NUMBER
HISAL     NUMBER
```

```
DESC SALGRADE;
```

Q004

- EMP 테이블 전체열을 조회하시오

	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7839	KING	PRESIDENT	(null)	81/11/17	5000	(null)	10
2	7698	BLAKE	MANAGER	7839	81/05/01	2850	(null)	30
3	7782	CLARK	MANAGER	7839	81/05/09	2450	(null)	10
4	7566	JONES	MANAGER	7839	81/04/01	2975	(null)	20
5	7654	MARTIN	SALESMAN	7698	81/09/10	1250	1400	30
6	7499	ALLEN	SALESMAN	7698	81/02/11	1600	300	30
7	7844	TURNER	SALESMAN	7698	81/08/21	1500	0	30
8	7900	JAMES	CLERK	7698	81/12/11	950	(null)	30
9	7521	WARD	SALESMAN	7698	81/02/23	1250	500	30
10	7902	FORD	ANALYST	7566	81/12/11	3000	(null)	20
11	7369	SMITH	CLERK	7902	80/12/09	800	(null)	20
12	7788	SCOTT	ANALYST	7566	82/12/22	3000	(null)	20
13	7876	ADAMS	CLERK	7788	83/01/15	1100	(null)	20
14	7934	MILLER	CLERK	7782	82/01/11	1300	(null)	10

```
SELECT * FROM EMP;
```

Q005

- EMP 테이블의 EMPNO, ENAME, DEPTNO 열을 조회하시오

	EMPNO	ENAME	DEPTNO
1	7839	KING	10
2	7698	BLAKE	30
3	7782	CLARK	10
4	7566	JONES	20
5	7654	MARTIN	30
6	7499	ALLEN	30
7	7844	TURNER	30
8	7900	JAMES	30
9	7521	WARD	30
10	7902	FORD	20
11	7369	SMITH	20
12	7788	SCOTT	20
13	7876	ADAMS	20
14	7934	MILLER	10

```
SELECT EMPNO, ENAME, DEPTNO
  FROM EMP;
```

Q006

- EMP 테이블의 DEPTNO 열의 중복을 제거하고고 조회하시오

	DEPTNO
1	30
2	20
3	10

```sql
SELECT DISTINCT DEPTNO
  FROM EMP;
```

Q007

- EMP 테이블의 JOB, DEPTNO열의 중복을 제거하고 조회하시오
- JOB, DEPTNO 가 모두 중복된 데이터는 한번만 중복이 되게 하시오.

	JOB	DEPTNO
1	PRESIDENT	10
2	MANAGER	20
3	CLERK	10
4	SALESMAN	30
5	ANALYST	20
6	MANAGER	30
7	MANAGER	10
8	CLERK	30
9	CLERK	20

```
SELECT DISTINCT JOB, DEPTNO
  FROM EMP;
```

Q008

- EMP 테이블의 JOB, DEPTNO열의 중복을 제거하지 않고 그대로 모두두 조회하시오

	JOB	DEPTNO
1	PRESIDENT	10
2	MANAGER	30
3	MANAGER	10
4	MANAGER	20
5	SALESMAN	30
6	SALESMAN	30
7	SALESMAN	30
8	CLERK	30
9	SALESMAN	30
10	ANALYST	20
11	CLERK	20
12	ANALYST	20
13	CLERK	20
14	CLERK	10

```
SELECT ALL JOB, DEPTNO
  FROM EMP;
```

Q009

- EMP 테이블의열에 연산식을이용하여 '연간총수입'을 조회하시오.

	ENAME	SAL	SAL*12+COMM	COMM
1	KING	5000	(null)	(null)
2	BLAKE	2850	(null)	(null)
3	CLARK	2450	(null)	(null)
4	JONES	2975	(null)	(null)
5	MARTIN	1250	16400	1400
6	ALLEN	1600	19500	300
7	TURNER	1500	18000	0
8	JAMES	950	(null)	(null)
9	WARD	1250	15500	500
10	FORD	3000	(null)	(null)
11	SMITH	800	(null)	(null)
12	SCOTT	3000	(null)	(null)
13	ADAMS	1100	(null)	(null)
14	MILLER	1300	(null)	(null)

```
SELECT ENAME, SAL, SAL*12+COMM, COMM
  FROM EMP;
```

Q010

- EMP 테이블의 열열 더하기 연산식을이용하여 '연간총수입'을 조회하시오.

	ENAME	SAL	SAL+SAL+SAL+SAL+SAL+SAL+SAL+SAL+SAL+SAL+SAL+SAL+COMM	COMM
1	KING	5000	(null)	(null)
2	BLAKE	2850	(null)	(null)
3	CLARK	2450	(null)	(null)
4	JONES	2975	(null)	(null)
5	MARTIN	1250	16400	1400
6	ALLEN	1600	19500	300
7	TURNER	1500	18000	0
8	JAMES	950	(null)	(null)
9	WARD	1250	15500	500
10	FORD	3000	(null)	(null)
11	SMITH	800	(null)	(null)
12	SCOTT	3000	(null)	(null)
13	ADAMS	1100	(null)	(null)
14	MILLER	1300	(null)	(null)

```
SELECT ENAME, SAL, SAL+SAL+SAL+SAL+SAL+SAL+SAL+SAL+SAL+SAL+SAL+SAL+COMM, COMM
  FROM EMP;
```

Q011

- EMP 테이블의 열 별칭을 사용하여 '연간총수입'을 조회하시오.

	ENAME	SAL	ANNSAL	COMM
1	KING	5000	(null)	(null)
2	BLAKE	2850	(null)	(null)
3	CLARK	2450	(null)	(null)
4	JONES	2975	(null)	(null)
5	MARTIN	1250	16400	1400
6	ALLEN	1600	19500	300
7	TURNER	1500	18000	0
8	JAMES	950	(null)	(null)
9	WARD	1250	15500	500
10	FORD	3000	(null)	(null)
11	SMITH	800	(null)	(null)
12	SCOTT	3000	(null)	(null)
13	ADAMS	1100	(null)	(null)
14	MILLER	1300	(null)	(null)

```
SELECT ENAME, SAL, SAL*12+COMM AS ANNSAL, COMM
  FROM EMP;
```

Q012

- EMP 테이블의 모든 열을 급여기준으로 오름차순 정렬하시오.

	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7369	SMITH	CLERK	7902	80/12/09	800	(null)	20
2	7900	JAMES	CLERK	7698	81/12/11	950	(null)	30
3	7876	ADAMS	CLERK	7788	83/01/15	1100	(null)	20
4	7521	WARD	SALESMAN	7698	81/02/23	1250	500	30
5	7654	MARTIN	SALESMAN	7698	81/09/10	1250	1400	30
6	7934	MILLER	CLERK	7782	82/01/11	1300	(null)	10
7	7844	TURNER	SALESMAN	7698	81/08/21	1500	0	30
8	7499	ALLEN	SALESMAN	7698	81/02/11	1600	300	30
9	7782	CLARK	MANAGER	7839	81/05/09	2450	(null)	10
10	7698	BLAKE	MANAGER	7839	81/05/01	2850	(null)	30
11	7566	JONES	MANAGER	7839	81/04/01	2975	(null)	20
12	7902	FORD	ANALYST	7566	81/12/11	3000	(null)	20
13	7788	SCOTT	ANALYST	7566	82/12/22	3000	(null)	20
14	7839	KING	PRESIDENT	(null)	81/11/17	5000	(null)	10

```sql
SELECT *
  FROM EMP
ORDER BY SAL;
```

Q013

- EMP 테이블의 모든 열을 급여기준으로 내림차순순 정렬하시오.

	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7839	KING	PRESIDENT	(null)	81/11/17	5000	(null)	10
2	7788	SCOTT	ANALYST	7566	82/12/22	3000	(null)	20
3	7902	FORD	ANALYST	7566	81/12/11	3000	(null)	20
4	7566	JONES	MANAGER	7839	81/04/01	2975	(null)	20
5	7698	BLAKE	MANAGER	7839	81/05/01	2850	(null)	30
6	7782	CLARK	MANAGER	7839	81/05/09	2450	(null)	10
7	7499	ALLEN	SALESMAN	7698	81/02/11	1600	300	30
8	7844	TURNER	SALESMAN	7698	81/08/21	1500	0	30
9	7934	MILLER	CLERK	7782	82/01/11	1300	(null)	10
10	7521	WARD	SALESMAN	7698	81/02/23	1250	500	30
11	7654	MARTIN	SALESMAN	7698	81/09/10	1250	1400	30
12	7876	ADAMS	CLERK	7788	83/01/15	1100	(null)	20
13	7900	JAMES	CLERK	7698	81/12/11	950	(null)	30
14	7369	SMITH	CLERK	7902	80/12/09	800	(null)	20

```
SELECT *
  FROM EMP
ORDER BY SAL DESC;
```

Q014

- EMP 테이블의 모든 열을 전체열을 부서번호(오름차순)와 급여(내림차순)으로 정렬하시오.

	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7839	KING	PRESIDENT	(null)	81/11/17	5000	(null)	10
2	7782	CLARK	MANAGER	7839	81/05/09	2450	(null)	10
3	7934	MILLER	CLERK	7782	82/01/11	1300	(null)	10
4	7788	SCOTT	ANALYST	7566	82/12/22	3000	(null)	20
5	7902	FORD	ANALYST	7566	81/12/11	3000	(null)	20
6	7566	JONES	MANAGER	7839	81/04/01	2975	(null)	20
7	7876	ADAMS	CLERK	7788	83/01/15	1100	(null)	20
8	7369	SMITH	CLERK	7902	80/12/09	800	(null)	20
9	7698	BLAKE	MANAGER	7839	81/05/01	2850	(null)	30
10	7499	ALLEN	SALESMAN	7698	81/02/11	1600	300	30
11	7844	TURNER	SALESMAN	7698	81/08/21	1500	0	30
12	7654	MARTIN	SALESMAN	7698	81/09/10	1250	1400	30
13	7521	WARD	SALESMAN	7698	81/02/23	1250	500	30
14	7900	JAMES	CLERK	7698	81/12/11	950	(null)	30

```
SELECT *
  FROM EMP
ORDER BY DEPTNO ASC, SAL DESC;
```

■STEP2. EX

EX001.

- EMP테이블의 JOB열 데이터를 중복없이 조회하시오.

	JOB
1	SALESMAN
2	CLERK
3	PRESIDENT
4	MANAGER
5	ANALYST

EX002.

- 조회할 테이블은 EMP 테이블이며 모든 열을 출력하시오.
- 별칭

  EMPNO → EMPLOYEE_NO,

  ENAME → EMPLOYEE_NAME,

  MGR → MANAGER,

  SAL → SALARY,

  COMM → COMMISSION,

  DEPTNO → DEPARTMENT_NO
- 부서번호를 기준으로 내림차순으로 정렬하되,

  부서번호가 같다면 사원이름을 기준으로 오름차순 정렬하시오.

	EMPLOYEE_NO	EMPLOYEE_NAME	JOB	MANAGER	HIREDATE	SALARY	COMMISSION	DEPARTMENT_NO
1	7499	ALLEN	SALESMAN	7698	81/02/11	1600	300	30
2	7698	BLAKE	MANAGER	7839	81/05/01	2850	(null)	30
3	7900	JAMES	CLERK	7698	81/12/11	950	(null)	30
4	7654	MARTIN	SALESMAN	7698	81/09/10	1250	1400	30
5	7844	TURNER	SALESMAN	7698	81/08/21	1500	0	30
6	7521	WARD	SALESMAN	7698	81/02/23	1250	500	30
7	7876	ADAMS	CLERK	7788	83/01/15	1100	(null)	20
8	7902	FORD	ANALYST	7566	81/12/11	3000	(null)	20
9	7566	JONES	MANAGER	7839	81/04/01	2975	(null)	20
10	7788	SCOTT	ANALYST	7566	82/12/22	3000	(null)	20
11	7369	SMITH	CLERK	7902	80/12/09	800	(null)	20
12	7782	CLARK	MANAGER	7839	81/05/09	2450	(null)	10
13	7839	KING	PRESIDENT	(null)	81/11/17	5000	(null)	10
14	7934	MILLER	CLERK	7782	82/01/11	1300	(null)	10