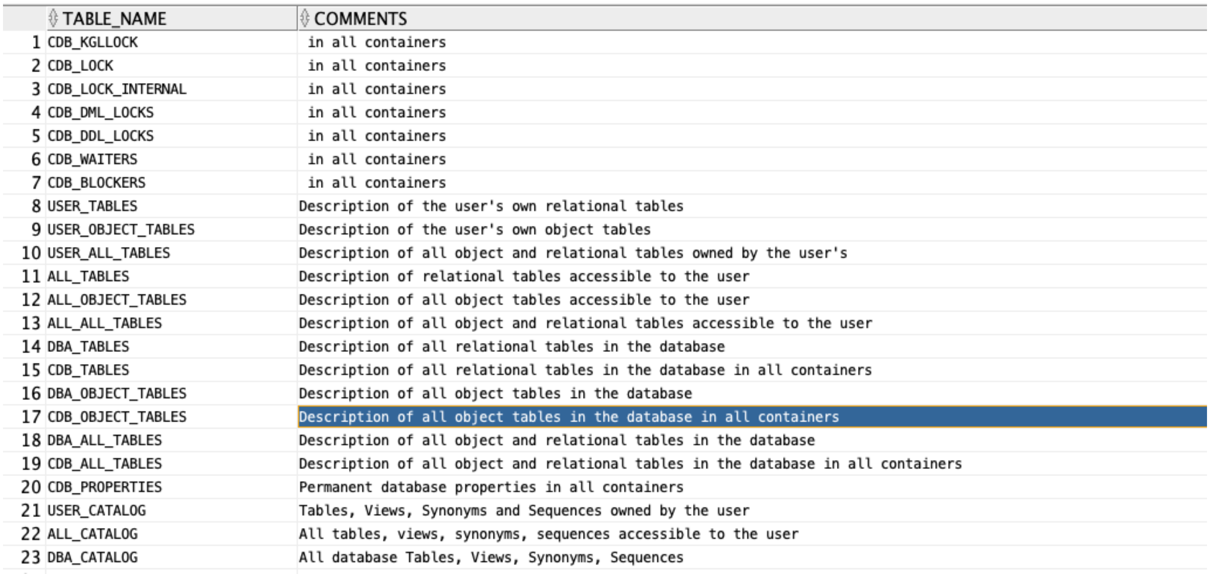
REPORT

과목	:	데이터베이스이론및실습
제출일자	:	2024.04.15
담당교수	:	권기현
학과	:	정보통신공학과
학번	:	201920479
이름	:	김행복

-- 13-1) SCOTT 계정에서 사용 가능한 데이터 사전 살펴보기(DICT)

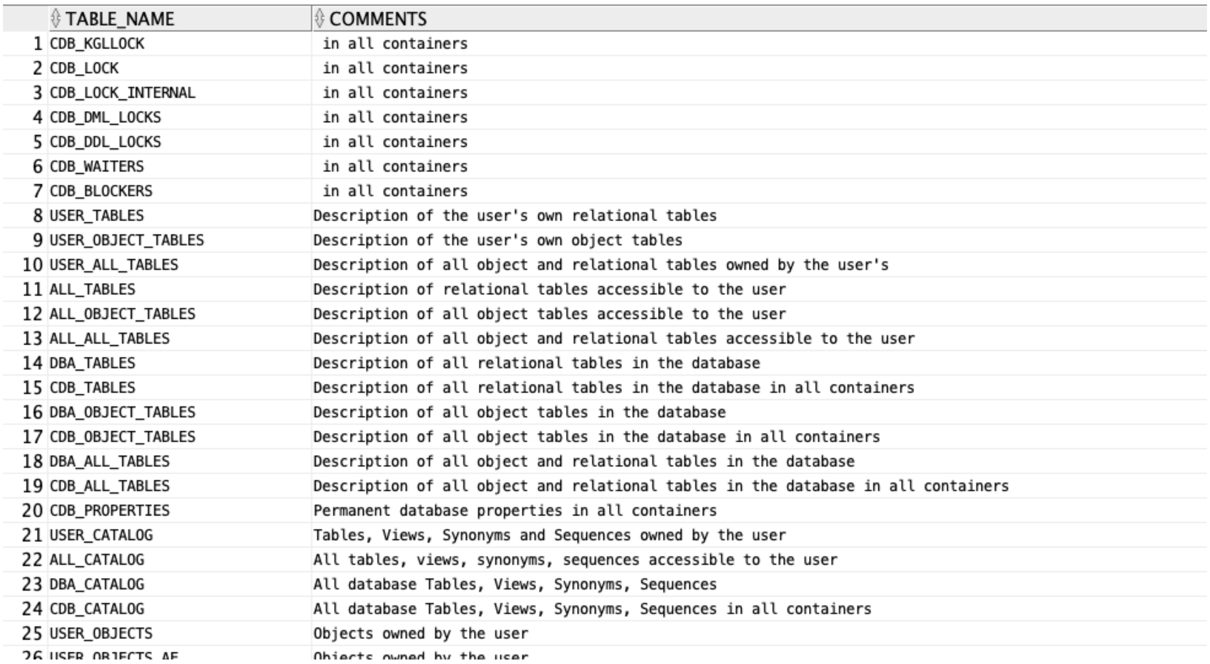
SELECT * FROM DICT;



	TABLE_NAME	COMMENTS
1	CDB_KGLLOCK	in all containers
2	CDB_LOCK	in all containers
3	CDB_LOCK_INTERNAL	in all containers
4	CDB_DML_LOCKS	in all containers
5	CDB_DDL_LOCKS	in all containers
6	CDB_WAITERS	in all containers
7	CDB_BLOCKERS	in all containers
8	USER_TABLES	Description of the user's own relational tables
9	USER_OBJECT_TABLES	Description of the user's own object tables
10	USER_ALL_TABLES	Description of all object and relational tables owned by the user's
11	ALL_TABLES	Description of relational tables accessible to the user
12	ALL_OBJECT_TABLES	Description of all object tables accessible to the user
13	ALL_ALL_TABLES	Description of all object and relational tables accessible to the user
14	DBA_TABLES	Description of all relational tables in the database
15	CDB_TABLES	Description of all relational tables in the database in all containers
16	DBA_OBJECT_TABLES	Description of all object tables in the database
17	CDB_OBJECT_TABLES	Description of all object tables in the database in all containers
18	DBA_ALL_TABLES	Description of all object and relational tables in the database
19	CDB_ALL_TABLES	Description of all object and relational tables in the database in all containers
20	CDB_PROPERTIES	Permanent database properties in all containers
21	USER_CATALOG	Tables, Views, Synonyms and Sequences owned by the user
22	ALL_CATALOG	All tables, views, synonyms, sequences accessible to the user
23	DBA_CATALOG	All database Tables, Views, Synonyms, Sequences

-- 13-2) SCOTT 계정에서 사용 가능한 데이터 사전 살펴보기(DICTIONARY 사용)

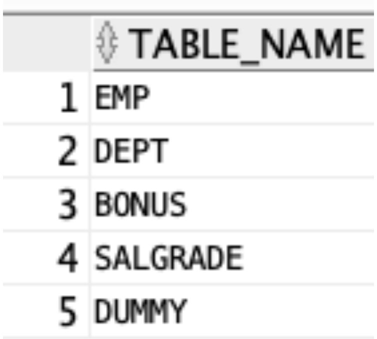
SELECT * FROM DICTIONARY;



	TABLE_NAME	COMMENTS
1	CDB_KGLLOCK	in all containers
2	CDB_LOCK	in all containers
3	CDB_LOCK_INTERNAL	in all containers
4	CDB_DML_LOCKS	in all containers
5	CDB_DDL_LOCKS	in all containers
6	CDB_WAITERS	in all containers
7	CDB_BLOCKERS	in all containers
8	USER_TABLES	Description of the user's own relational tables
9	USER_OBJECT_TABLES	Description of the user's own object tables
10	USER_ALL_TABLES	Description of all object and relational tables owned by the user's
11	ALL_TABLES	Description of relational tables accessible to the user
12	ALL_OBJECT_TABLES	Description of all object tables accessible to the user
13	ALL_ALL_TABLES	Description of all object and relational tables accessible to the user
14	DBA_TABLES	Description of all relational tables in the database
15	CDB_TABLES	Description of all relational tables in the database in all containers
16	DBA_OBJECT_TABLES	Description of all object tables in the database
17	CDB_OBJECT_TABLES	Description of all object tables in the database in all containers
18	DBA_ALL_TABLES	Description of all object and relational tables in the database
19	CDB_ALL_TABLES	Description of all object and relational tables in the database in all containers
20	CDB_PROPERTIES	Permanent database properties in all containers
21	USER_CATALOG	Tables, Views, Synonyms and Sequences owned by the user
22	ALL_CATALOG	All tables, views, synonyms, sequences accessible to the user
23	DBA_CATALOG	All database Tables, Views, Synonyms, Sequences
24	CDB_CATALOG	All database Tables, Views, Synonyms, Sequences in all containers
25	USER_OBJECTS	Objects owned by the user
26	USER_OBJECTS_AE	Objects owned by the user

-- 13-3) SCOTT 계정이 가지고 있는 객체 정보 살펴보기(USER_ 접두어 사용)

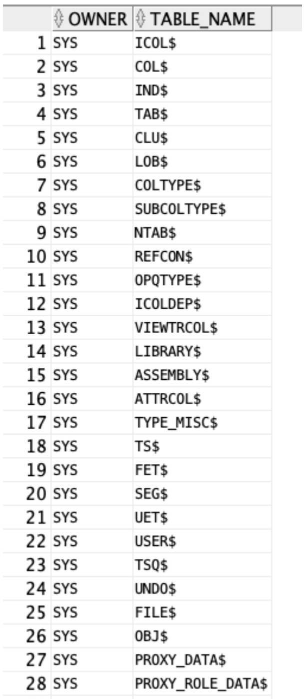
SELECT TABLE_NAME FROM USER_TABLES;



	TABLE_NAME
1	EMP
2	DEPT
3	BONUS
4	SALGRADE
5	DUMMY

-- 13-4) SCOTT 계정이 사용할 수 있는 객체 정보 살펴보기(ALL_ 접두어 사용)

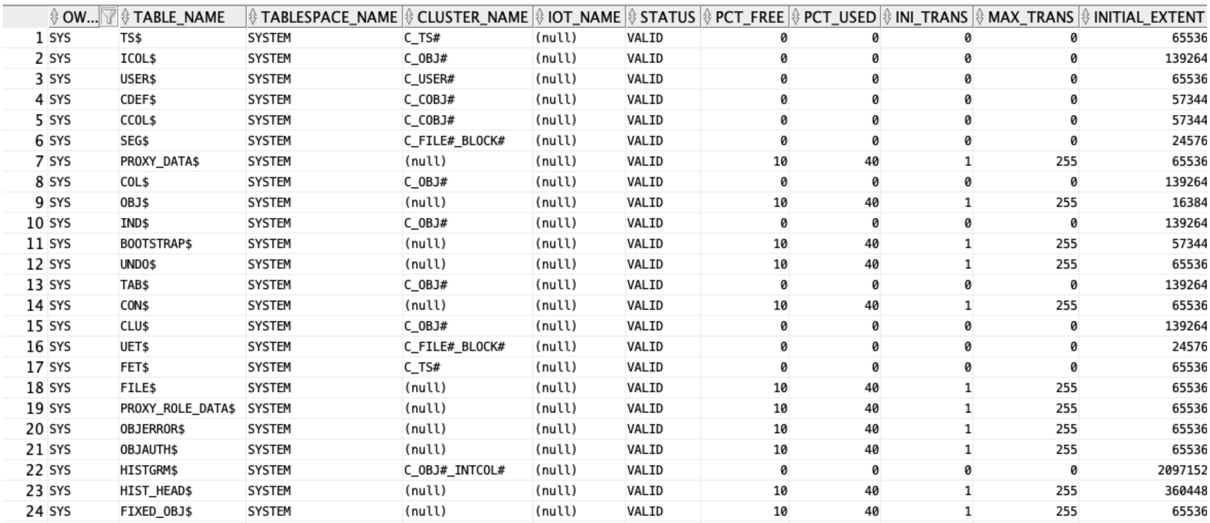
SELECT OWNER, TABLE_NAME FROM ALL_TABLES;



	OWNER	TABLE_NAME
1	SYS	ICOL$
2	SYS	COL$
3	SYS	IND$
4	SYS	TAB$
5	SYS	CLU$
6	SYS	LOB$
7	SYS	COLTYPE$
8	SYS	SUBCOLTYPE$
9	SYS	NTAB$
10	SYS	REFCON$
11	SYS	OPQTYPE$
12	SYS	ICOLDEP$
13	SYS	VIEWTRCOL$
14	SYS	LIBRARY$
15	SYS	ASSEMBLY$
16	SYS	ATTRCOL$
17	SYS	TYPE_MISC$
18	SYS	TS$
19	SYS	FET$
20	SYS	SEG$
21	SYS	UET$
22	SYS	USER$
23	SYS	TSQ$
24	SYS	UNDO$
25	SYS	FILE$
26	SYS	OBJ$
27	SYS	PROXY_DATA$
28	SYS	PROXY_ROLE_DATA$

-- 13-5) SCOTT 계정으로 DBA_ 접두어 사용하기

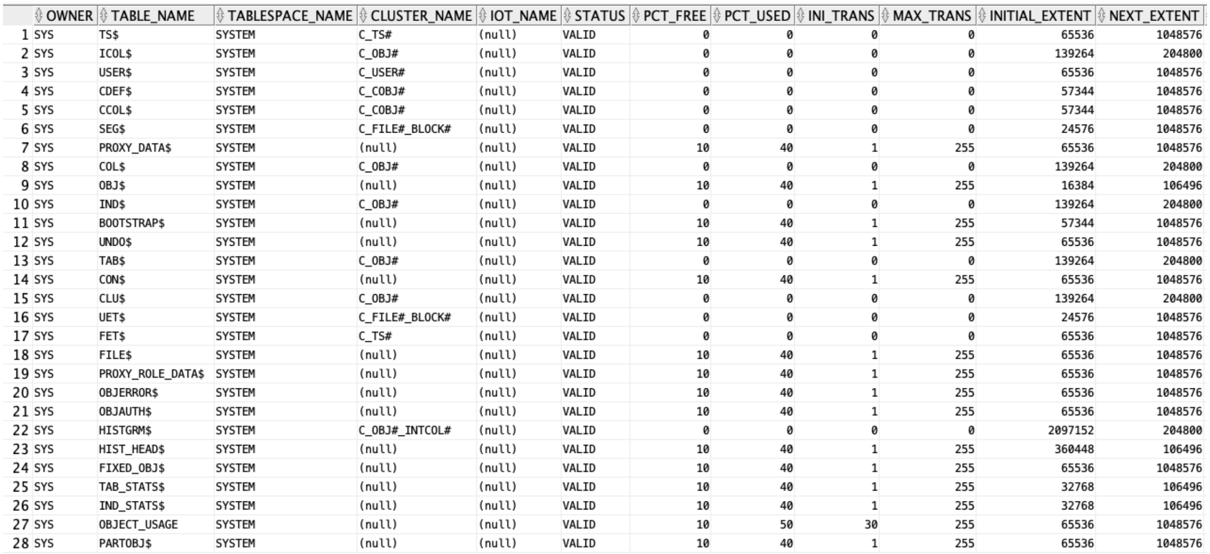
SELECT * FROM DBA_TABLES;



	OW...	TABLE_NAME	TABLESPACE_NAME	CLUSTER_NAME	IOT_NAME	STATUS	PCT_FREE	PCT_USED	INI_TRANS	MAX_TRANS	INITIAL_EXTENT
1	SYS	TS$	SYSTEM	C_TS#	(null)	VALID	0	0	0	0	65536
2	SYS	ICOL$	SYSTEM	C_OBJ#	(null)	VALID	0	0	0	0	139264
3	SYS	USER$	SYSTEM	C_USER#	(null)	VALID	0	0	0	0	65536
4	SYS	CDEF$	SYSTEM	C_COBJ#	(null)	VALID	0	0	0	0	57344
5	SYS	CCOL$	SYSTEM	C_COBJ#	(null)	VALID	0	0	0	0	57344
6	SYS	SEG$	SYSTEM	C_FILE#_BLOCK#	(null)	VALID	0	0	0	0	24576
7	SYS	PROXY_DATA$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536
8	SYS	COL$	SYSTEM	C_OBJ#	(null)	VALID	0	0	0	0	139264
9	SYS	OBJ$	SYSTEM	(null)	(null)	VALID	10	40	1	255	16384
10	SYS	IND$	SYSTEM	C_OBJ#	(null)	VALID	0	0	0	0	139264
11	SYS	BOOTSTRAP$	SYSTEM	(null)	(null)	VALID	10	40	1	255	57344
12	SYS	UNDO$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536
13	SYS	TAB$	SYSTEM	C_OBJ#	(null)	VALID	0	0	0	0	139264
14	SYS	CON$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536
15	SYS	CLU$	SYSTEM	C_OBJ#	(null)	VALID	0	0	0	0	139264
16	SYS	UET$	SYSTEM	C_FILE#_BLOCK#	(null)	VALID	0	0	0	0	24576
17	SYS	FET$	SYSTEM	C_TS#	(null)	VALID	0	0	0	0	65536
18	SYS	FILE$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536
19	SYS	PROXY_ROLE_DATA$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536
20	SYS	OBJERROR$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536
21	SYS	OBJAUTH$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536
22	SYS	HISTGRM$	SYSTEM	C_OBJ#_INTCOL#	(null)	VALID	0	0	0	0	2097152
23	SYS	HIST_HEAD$	SYSTEM	(null)	(null)	VALID	10	40	1	255	360448
24	SYS	FIXED_OBJ$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536

-- 13-6) SYSTEM 계정으로 DBA_접두어 사용하기 (SYSTEM 계정으로 접속했을 때)

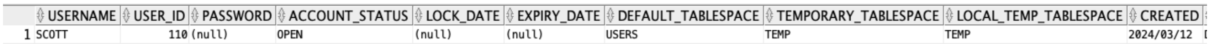
SELECT * FROM DBA_TABLES;



	OWNER	TABLE_NAME	TABLESPACE_NAME	CLUSTER_NAME	IOT_NAME	STATUS	PCT_FREE	PCT_USED	INI_TRANS	MAX_TRANS	INITIAL_EXTENT	NEXT_EXTENT
1	SYS	TS$	SYSTEM	C_TS#	(null)	VALID	0	0	0	0	65536	1048576
2	SYS	ICOL$	SYSTEM	C_OBJ#	(null)	VALID	0	0	0	0	139264	204800
3	SYS	USER$	SYSTEM	C_USER#	(null)	VALID	0	0	0	0	65536	1048576
4	SYS	CDEF$	SYSTEM	C_COBJ#	(null)	VALID	0	0	0	0	57344	1048576
5	SYS	CCOL$	SYSTEM	C_COBJ#	(null)	VALID	0	0	0	0	57344	1048576
6	SYS	SEG$	SYSTEM	C_FILE#_BLOCK#	(null)	VALID	0	0	0	0	24576	1048576
7	SYS	PROXY_DATA$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536	1048576
8	SYS	COL$	SYSTEM	C_OBJ#	(null)	VALID	0	0	0	0	139264	204800
9	SYS	OBJ$	SYSTEM	(null)	(null)	VALID	10	40	1	255	16384	106496
10	SYS	IND$	SYSTEM	C_OBJ#	(null)	VALID	0	0	0	0	139264	204800
11	SYS	BOOTSTRAP$	SYSTEM	(null)	(null)	VALID	10	40	1	255	57344	1048576
12	SYS	UNDO$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536	1048576
13	SYS	TAB$	SYSTEM	C_OBJ#	(null)	VALID	0	0	0	0	139264	204800
14	SYS	CON$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536	1048576
15	SYS	CLU$	SYSTEM	C_OBJ#	(null)	VALID	0	0	0	0	139264	204800
16	SYS	UET$	SYSTEM	C_FILE#_BLOCK#	(null)	VALID	0	0	0	0	24576	1048576
17	SYS	FET$	SYSTEM	C_TS#	(null)	VALID	0	0	0	0	65536	1048576
18	SYS	FILE$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536	1048576
19	SYS	PROXY_ROLE_DATA$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536	1048576
20	SYS	OBJERROR$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536	1048576
21	SYS	OBJAUTH$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536	1048576
22	SYS	HISTGRM$	SYSTEM	C_OBJ#_INTCOL#	(null)	VALID	0	0	0	0	2097152	204800
23	SYS	HIST_HEAD$	SYSTEM	(null)	(null)	VALID	10	40	1	255	360448	106496
24	SYS	FIXED_OBJ$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536	1048576
25	SYS	TAB_STATS$	SYSTEM	(null)	(null)	VALID	10	40	1	255	32768	106496
26	SYS	IND_STATS$	SYSTEM	(null)	(null)	VALID	10	40	1	255	32768	106496
27	SYS	OBJECT_USAGE	SYSTEM	(null)	(null)	VALID	10	50	30	255	65536	1048576
28	SYS	PARTOBJ$	SYSTEM	(null)	(null)	VALID	10	40	1	255	65536	1048576

-- 13-7) DBA_USERS를 사용하여 사용자 정보를 알아보기(SYSTEM 계정으로 접속했을 때)

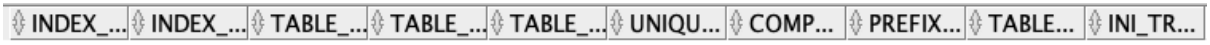
SELECT * FROM DBA_USERS WHERE USERNAME = 'SCOTT';



	USERNAME	USER_ID	PASSWORD	ACCOUNT_STATUS	LOCK_DATE	EXPIRY_DATE	DEFAULT_TABLESPACE	TEMPORARY_TABLESPACE	LOCAL_TEMP_TABLESPACE	CREATED
1	SCOTT	110	(null)	OPEN	(null)	(null)	USERS	TEMP	TEMP	2024/03/12

-- 13-8) SCOTT 계정이 소유한 인덱스 정보 알아보기(SCOTT 계정일 때)

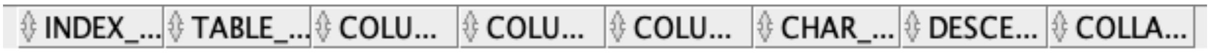
SELECT * FROM USER_INDEXES;



INDEX_...	INDEX_...	TABLE_...	TABLE_...	TABLE_...	UNIQU...	COMP...	PREFIX...	TABLE...	INI_TR...

-- 13-9) SCOTT 계정이 소유한 인덱스 컬럼 정보 알아보기(SCOTT 계정일 때)

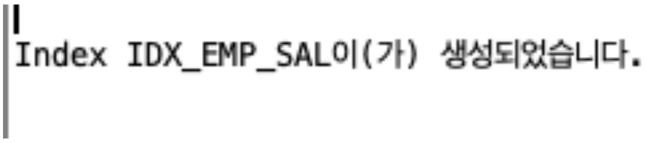
SELECT * FROM USER_IND_COLUMNS;



INDEX_...	TABLE_...	COLU...	COLU...	COLU...	CHAR_...	DESCE...	COLLA...

-- 13-10) EMP 테이블의 SAL 열에 인덱스를 생성하기

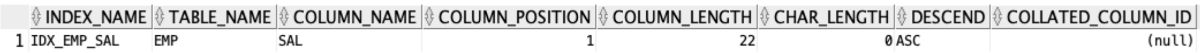
CREATE INDEX IDX_EMP_SAL ON EMP(SAL);



```
Index IDX_EMP_SAL이(가) 생성되었습니다.
```

-- 13-11) 생성된 인덱스 살펴보기(SUER_IND_COLUMNS 사용)

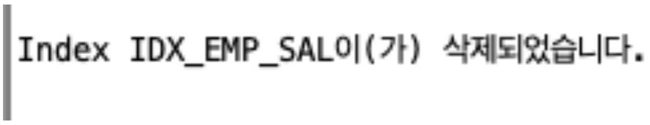
SELECT * FROM USER_IND_COLUMNS;



	INDEX_NAME	TABLE_NAME	COLUMN_NAME	COLUMN_POSITION	COLUMN_LENGTH	CHAR_LENGTH	DESCEND	COLLATED_COLUMN_ID
1	IDX_EMP_SAL	EMP	SAL	1	22	0	ASC	(null)

-- 13-12) 인덱스 삭제하기

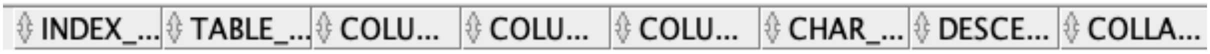
DROP INDEX IDX_EMP_SAL;



```
Index IDX_EMP_SAL이(가) 삭제되었습니다.
```

-- 13-13) 생성된 인덱스 살펴보기(SUER_IND_COLUMNS 사용)

```
SELECT * FROM USER_IND_COLUMNS;
```



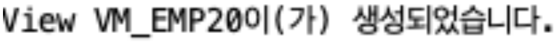
INDEX_...	TABLE_...	COLU...	COLU...	COLU...	CHAR_...	DESCE...	COLLA...

-- 13-14) 뷰를 생성하기 위해 계정 변경 접속하기

```
SQLPLUS SYSTMEM/oracle
GRANT CREAETE VIEW TO SCOTT;
```

-- 13-15) 뷰 생성하기

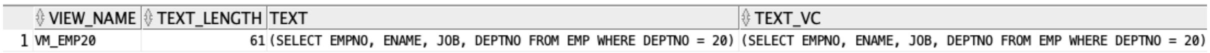
```
CREATE VIEW VW_EMP20 AS (SELECT EMPNO, ENAME, JOB, DEPTNO FROM EMP WHERE DEPTNO = 20);
```



```
View VM_EMP20이(가) 생성되었습니다.
```

-- 13-16) 생성한 뷰 확인하기

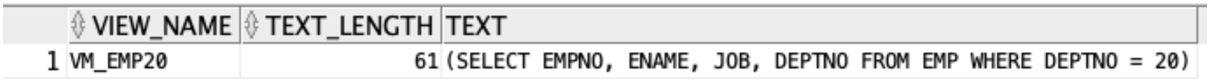
```
SELECT * FROM USER_VIEWS;
```



	VIEW_NAME	TEXT_LENGTH	TEXT	TEXT_VC
1	VM_EMP20	61	(SELECT EMPNO, ENAME, JOB, DEPTNO FROM EMP WHERE DEPTNO = 20)	(SELECT EMPNO, ENAME, JOB, DEPTNO FROM EMP WHERE DEPTNO = 20)

-- 13-17) 생성한 뷰 내용 확인하기(SCOTT 계정으로 접속했을 때)

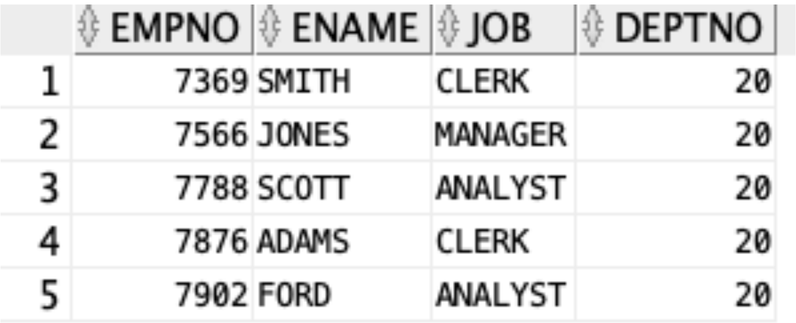
```
SELECT VIEW_NAME, TEXT_LENGTH, TEXT FROM USER_VIEWS;
```



	VIEW_NAME	TEXT_LENGTH	TEXT
1	VM_EMP20	61	(SELECT EMPNO, ENAME, JOB, DEPTNO FROM EMP WHERE DEPTNO = 20)

-- 13-18) 생성한 뷰 조회하기

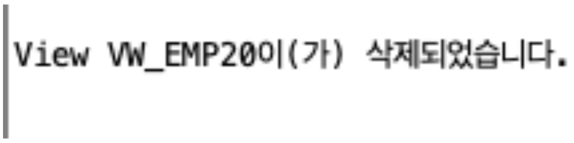
```
SELECT * FROM VW_EMP20;
```



	EMPNO	ENAME	JOB	DEPTNO
1	7369	SMITH	CLERK	20
2	7566	JONES	MANAGER	20
3	7788	SCOTT	ANALYST	20
4	7876	ADAMS	CLERK	20
5	7902	FORD	ANALYST	20

-- 13-19) 뷰 삭제하기

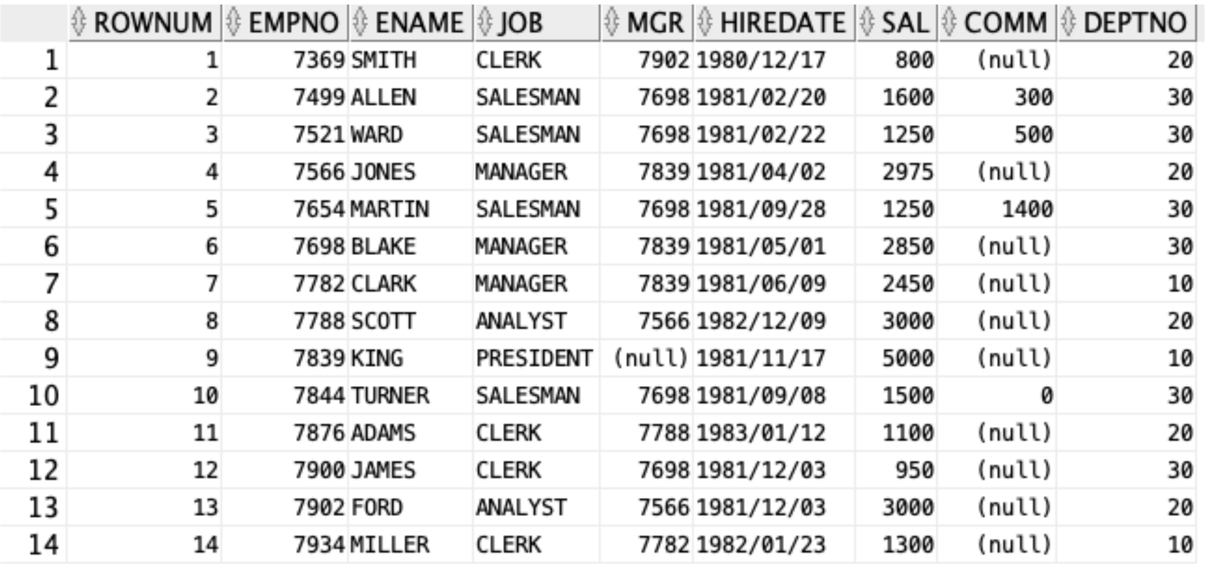
```
DROP VIEW VW_EMP20;
```



```
View VW_EMP20이(가) 삭제되었습니다.
```

-- 13-20) ROWNUM을 추가로 조회하기

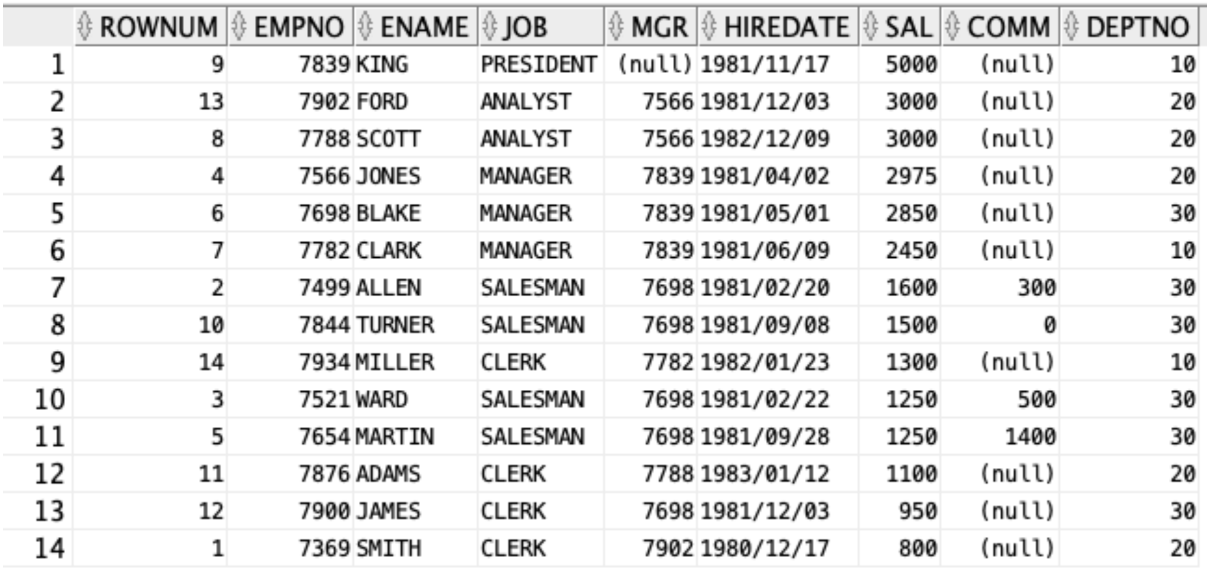
```
SELECT ROWNUM, E.* FROM EMP E;
```



	ROWNUM	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	1	7369	SMITH	CLERK	7902	1980/12/17	800	(null)	20
2	2	7499	ALLEN	SALESMAN	7698	1981/02/20	1600	300	30
3	3	7521	WARD	SALESMAN	7698	1981/02/22	1250	500	30
4	4	7566	JONES	MANAGER	7839	1981/04/02	2975	(null)	20
5	5	7654	MARTIN	SALESMAN	7698	1981/09/28	1250	1400	30
6	6	7698	BLAKE	MANAGER	7839	1981/05/01	2850	(null)	30
7	7	7782	CLARK	MANAGER	7839	1981/06/09	2450	(null)	10
8	8	7788	SCOTT	ANALYST	7566	1982/12/09	3000	(null)	20
9	9	7839	KING	PRESIDENT	(null)	1981/11/17	5000	(null)	10
10	10	7844	TURNER	SALESMAN	7698	1981/09/08	1500	0	30
11	11	7876	ADAMS	CLERK	7788	1983/01/12	1100	(null)	20
12	12	7900	JAMES	CLERK	7698	1981/12/03	950	(null)	30
13	13	7902	FORD	ANALYST	7566	1981/12/03	3000	(null)	20
14	14	7934	MILLER	CLERK	7782	1982/01/23	1300	(null)	10

-- 13-21) EMP 테이블을 SAL 열 기준으로 정렬하기

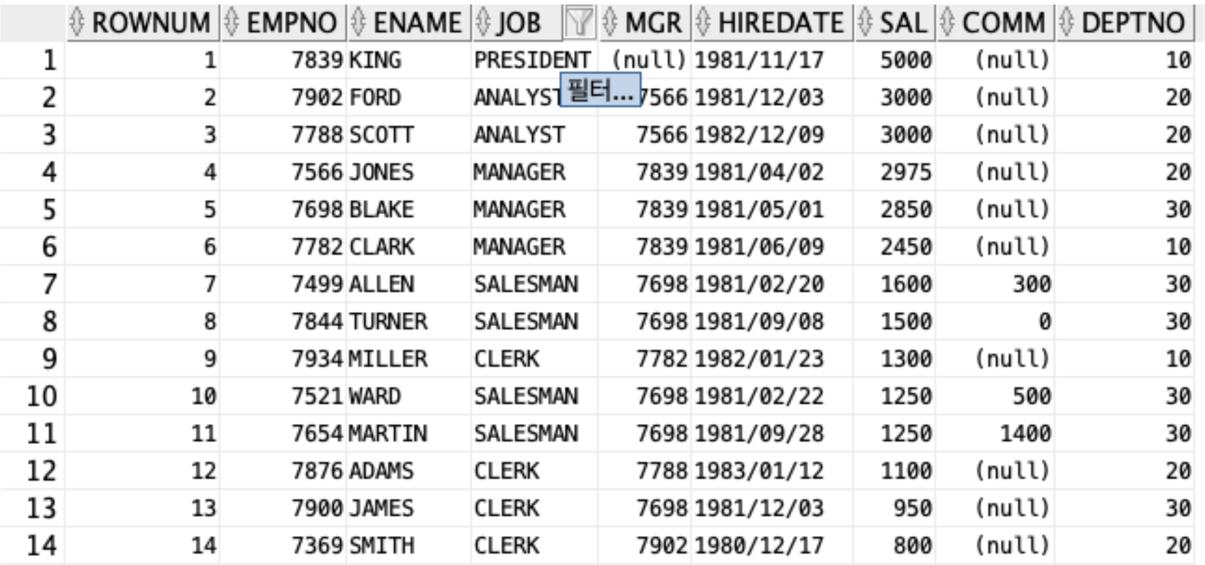
SELECT ROWNUM, E.* FROM EMP E ORDER BY SAL DESC;



	ROWNUM	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	9	7839	KING	PRESIDENT	(null)	1981/11/17	5000	(null)	10
2	13	7902	FORD	ANALYST	7566	1981/12/03	3000	(null)	20
3	8	7788	SCOTT	ANALYST	7566	1982/12/09	3000	(null)	20
4	4	7566	JONES	MANAGER	7839	1981/04/02	2975	(null)	20
5	6	7698	BLAKE	MANAGER	7839	1981/05/01	2850	(null)	30
6	7	7782	CLARK	MANAGER	7839	1981/06/09	2450	(null)	10
7	2	7499	ALLEN	SALESMAN	7698	1981/02/20	1600	300	30
8	10	7844	TURNER	SALESMAN	7698	1981/09/08	1500	0	30
9	14	7934	MILLER	CLERK	7782	1982/01/23	1300	(null)	10
10	3	7521	WARD	SALESMAN	7698	1981/02/22	1250	500	30
11	5	7654	MARTIN	SALESMAN	7698	1981/09/28	1250	1400	30
12	11	7876	ADAMS	CLERK	7788	1983/01/12	1100	(null)	20
13	12	7900	JAMES	CLERK	7698	1981/12/03	950	(null)	30
14	1	7369	SMITH	CLERK	7902	1980/12/17	800	(null)	20

-- 13-22) 인라인 뷰(서브쿼리 사용)

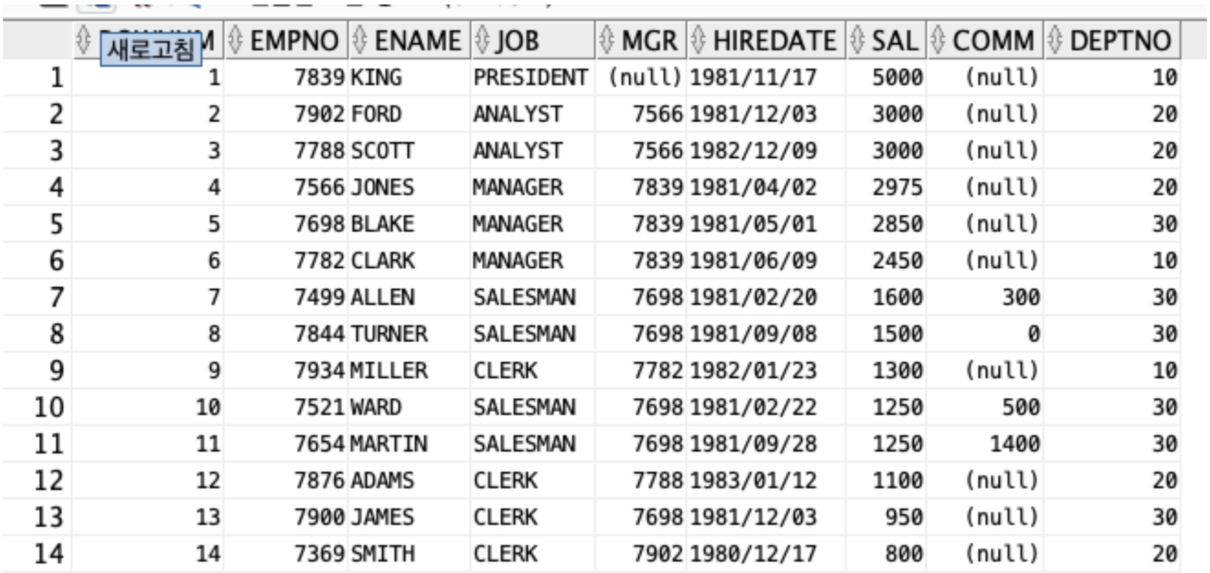
SELECT ROWNUM, E.* FROM (SELECT * FROM EMP E ORDER BY SAL DESC) E;



	ROWNUM	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	1	7839	KING	PRESIDENT	(null)	1981/11/17	5000	(null)	10
2	2	7902	FORD	ANALYST	7566	1981/12/03	3000	(null)	20
3	3	7788	SCOTT	ANALYST	7566	1982/12/09	3000	(null)	20
4	4	7566	JONES	MANAGER	7839	1981/04/02	2975	(null)	20
5	5	7698	BLAKE	MANAGER	7839	1981/05/01	2850	(null)	30
6	6	7782	CLARK	MANAGER	7839	1981/06/09	2450	(null)	10
7	7	7499	ALLEN	SALESMAN	7698	1981/02/20	1600	300	30
8	8	7844	TURNER	SALESMAN	7698	1981/09/08	1500	0	30
9	9	7934	MILLER	CLERK	7782	1982/01/23	1300	(null)	10
10	10	7521	WARD	SALESMAN	7698	1981/02/22	1250	500	30
11	11	7654	MARTIN	SALESMAN	7698	1981/09/28	1250	1400	30
12	12	7876	ADAMS	CLERK	7788	1983/01/12	1100	(null)	20
13	13	7900	JAMES	CLERK	7698	1981/12/03	950	(null)	30
14	14	7369	SMITH	CLERK	7902	1980/12/17	800	(null)	20

-- 13-23) 인라인 뷰(WITH절 사용)

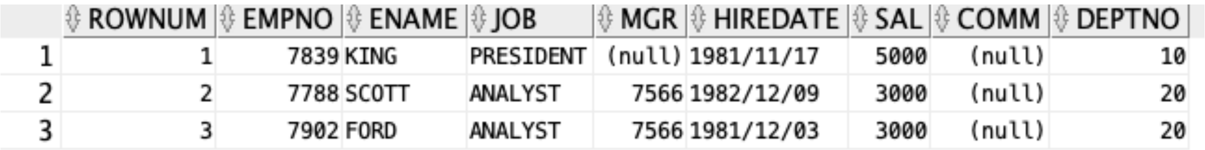
WITH E AS(SELECT * FROm EMP ORDER BY SAL DESC) SELECT ROWNUM, E.* FROM E;



	새로고침 M	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	1	7839	KING	PRESIDENT	(null)	1981/11/17	5000	(null)	10
2	2	7902	FORD	ANALYST	7566	1981/12/03	3000	(null)	20
3	3	7788	SCOTT	ANALYST	7566	1982/12/09	3000	(null)	20
4	4	7566	JONES	MANAGER	7839	1981/04/02	2975	(null)	20
5	5	7698	BLAKE	MANAGER	7839	1981/05/01	2850	(null)	30
6	6	7782	CLARK	MANAGER	7839	1981/06/09	2450	(null)	10
7	7	7499	ALLEN	SALESMAN	7698	1981/02/20	1600	300	30
8	8	7844	TURNER	SALESMAN	7698	1981/09/08	1500	0	30
9	9	7934	MILLER	CLERK	7782	1982/01/23	1300	(null)	10
10	10	7521	WARD	SALESMAN	7698	1981/02/22	1250	500	30
11	11	7654	MARTIN	SALESMAN	7698	1981/09/28	1250	1400	30
12	12	7876	ADAMS	CLERK	7788	1983/01/12	1100	(null)	20
13	13	7900	JAMES	CLERK	7698	1981/12/03	950	(null)	30
14	14	7369	SMITH	CLERK	7902	1980/12/17	800	(null)	20

-- 13-24) 인라인 뷰로 TOP-N 추출하기 (서브쿼리 사용)

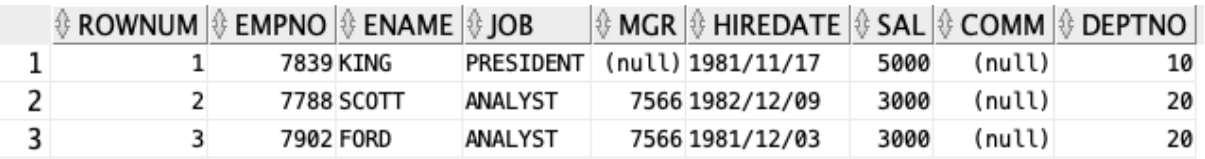
SELECT ROWNUM, E.* FROM (SELECT * FROM EMP E ORDER BY SAL DESC) E WHERE ROWNUM <= 3;



	ROWNUM	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	1	7839	KING	PRESIDENT	(null)	1981/11/17	5000	(null)	10
2	2	7788	SCOTT	ANALYST	7566	1982/12/09	3000	(null)	20
3	3	7902	FORD	ANALYST	7566	1981/12/03	3000	(null)	20

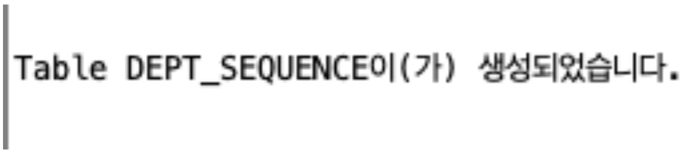
-- 13-25) 인라인 뷰로 TOP-N 추출하기(WITH 절 사용)

WITH E AS (SELECT * FROM EMP ORDER BY SAL DESC) SELECT ROWNUM, E.* FROM E WHERE ROWNUM <= 3;

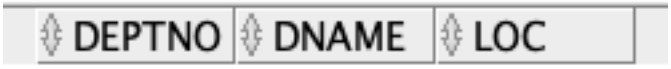


	ROWNUM	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	1	7839	KING	PRESIDENT	(null)	1981/11/17	5000	(null)	10
2	2	7788	SCOTT	ANALYST	7566	1982/12/09	3000	(null)	20
3	3	7902	FORD	ANALYST	7566	1981/12/03	3000	(null)	20

```
-- 13-26) DEPT 테이블을 사용하여 DEPT_SEQUENCE 테이블 생성하기

CREATE TABLE DEPT_SEQUENCE AS SELECT * FROM DEPT WHERE 1<>1 ;

SELECT * FROM DEPT_SEQUENCE;
```

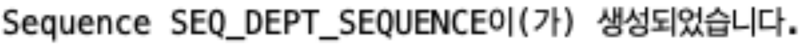


```
Table DEPT_SEQUENCE이(가) 생성되었습니다.
```



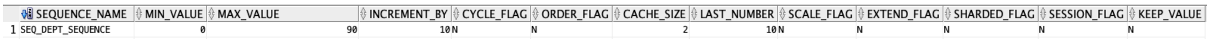
DEPTNO	DNAME	LOC

```
-- 13-27) 시퀀스 생성하기

CREATE SEQUENCE SEQ_DEPT_SEQUENCE

INCREMENT BY 10

START WITH 10

MAXVALUE 90

MINVALUE 0

NOCYCLE

CACHE 2;
```



```
Sequence SEQ_DEPT_SEQUENCE이(가) 생성되었습니다.
```

```
-- 13-28) 생성한 시퀀스 확인하기

SELECT * FROM USER_SEQUENCES;
```



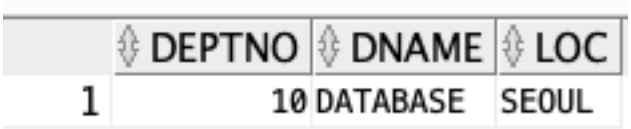
	SEQUENCE_NAME	MIN_VALUE	MAX_VALUE	INCREMENT_BY	CYCLE_FLAG	ORDER_FLAG	CACHE_SIZE	LAST_NUMBER	SCALE_FLAG	EXTEND_FLAG	SHARDED_FLAG	SESSION_FLAG	KEEP_VALUE
1	SEQ_DEPT_SEQUENCE	0	90	10	N	N	2	10	N	N	N	N	N

-- 13-29) 시퀀스에서 생성한 순번을 사용한 INSERT 문 실행하기

INSERT INTO DEPT_SEQUENCE(DEPTNO, DNAME, LOC)

VALUES(SEQ_DEPT_SEQUENCE.NEXTVAL, 'DATABASE', 'SEOUL');

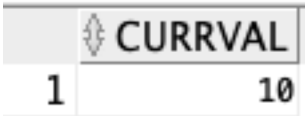
SELECT * FROM DEPT_SEQUENCE ORDER BY DEPTNO;



	DEPTNO	DNAME	LOC
1	10	DATABASE	SEOUL

-- 13-30) 가장 마지막으로 생성된 시퀀스 확인하기

SELECT SEQ_DEPT_SEQUENCE.CURRVAL FROM DUAL;



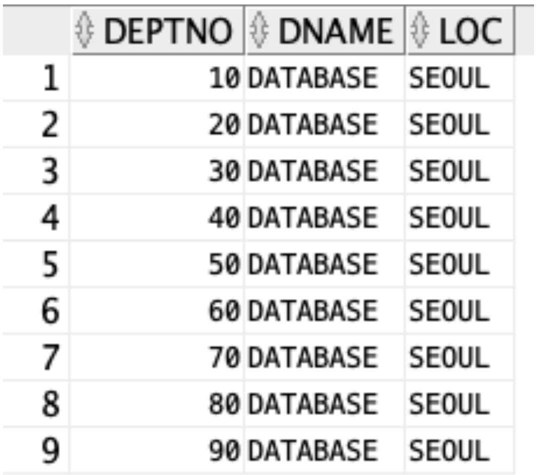
	CURRVAL
1	10

-- 13-31) 시퀀스에서 생성한 순번을 반복 사용하여 INSERT문 실행하기

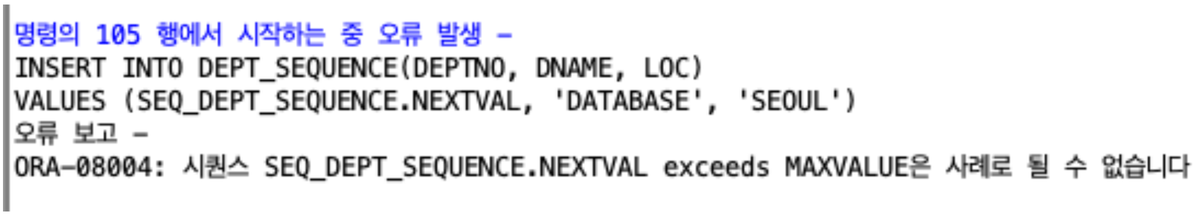
INSERT INTO DEPT_SEQUENCE(DEPTNO, DNAME, LOC)

VALUES (SEQ_DEPT_SEQUENCE.NEXTVAL, 'DATABASE', 'SEOUL');

SELECT * FROM DEPT_SEQUENCE ORDER BY DEPTNO;



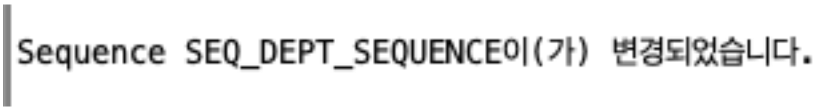
	DEPTNO	DNAME	LOC
1	10	DATABASE	SEOUL
2	20	DATABASE	SEOUL
3	30	DATABASE	SEOUL
4	40	DATABASE	SEOUL
5	50	DATABASE	SEOUL
6	60	DATABASE	SEOUL
7	70	DATABASE	SEOUL
8	80	DATABASE	SEOUL
9	90	DATABASE	SEOUL



```
명령의 105 행에서 시작하는 중 오류 발생 -
INSERT INTO DEPT_SEQUENCE(DEPTNO, DNAME, LOC)
VALUES (SEQ_DEPT_SEQUENCE.NEXTVAL, 'DATABASE', 'SEOUL')
오류 보고 -
ORA-08004: 시퀀스 SEQ_DEPT_SEQUENCE.NEXTVAL exceeds MAXVALUE은 사례로 될 수 없습니다
```

-- 13-32) 시퀀스 옵션 수정하기

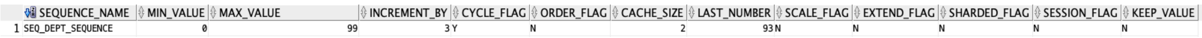
ALTER SEQUENCE SEQ_DEPT_SEQUENCE INCREMENT BY 3 MAXVALUE 99 CYCLE;



```
Sequence SEQ_DEPT_SEQUENCE이(가) 변경되었습니다.
```

-- 13-33) 옵션을 수정한 시퀀스 조회하기

SELECT * FROM USER_SEQUENCES;



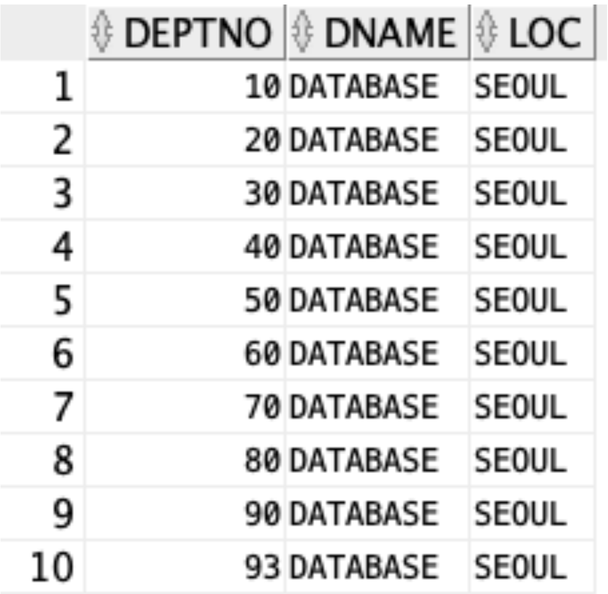
	SEQUENCE_NAME	MIN_VALUE	MAX_VALUE	INCREMENT_BY	CYCLE_FLAG	ORDER_FLAG	CACHE_SIZE	LAST_NUMBER	SCALE_FLAG	EXTEND_FLAG	SHARDED_FLAG	SESSION_FLAG	KEEP_VALUE
1	SEQ_DEPT_SEQUENCE	0	99	3	Y	N	2	93	N	N	N	N	N

-- 13-34) 수정한 시퀀스를 사용하여 INSERT문 실행하기

INSERT INTO DEPT_SEQUENCE(DEPTNO, DNAME, LOC)

VALUES(SEQ_DEPT_SEQUENCE.NEXTVAL, 'DATABASE', 'SEOUL');

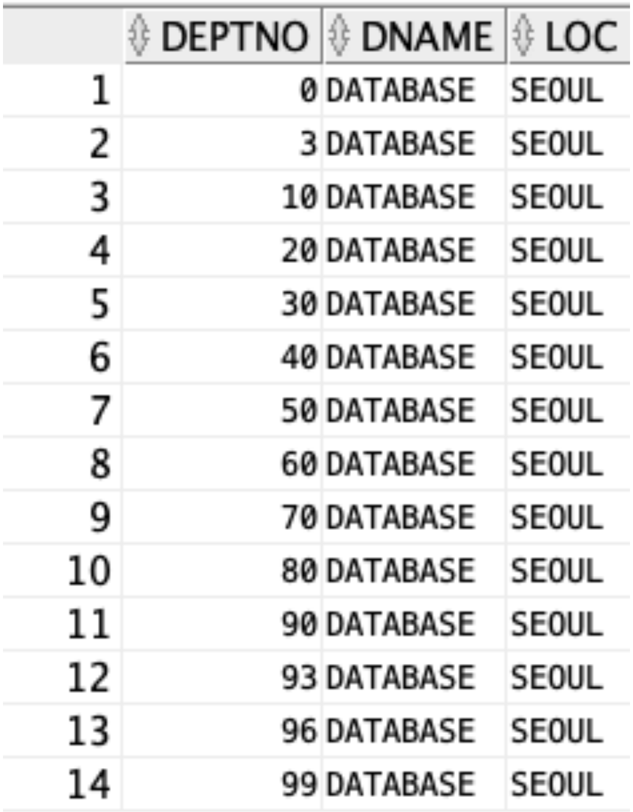
SELECT * FROM DEPT_SEQUENCE ORDER BY DEPTNO;



	DEPTNO	DNAME	LOC
1	10	DATABASE	SEOUL
2	20	DATABASE	SEOUL
3	30	DATABASE	SEOUL
4	40	DATABASE	SEOUL
5	50	DATABASE	SEOUL
6	60	DATABASE	SEOUL
7	70	DATABASE	SEOUL
8	80	DATABASE	SEOUL
9	90	DATABASE	SEOUL
10	93	DATABASE	SEOUL

-- 13-35) CYCLE 옵션을 사용한 시퀀스의 최댓값 도달 후 수행 결과 확인하기

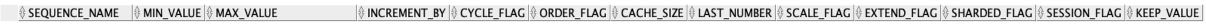
```
INSERT INTO DEPT_SEQUENCE(DEPTNO, DNAME, LOC)

VALUES(SEQ_DEPT_SEQUENCE.NEXTVAL, 'DATABASE', 'SEOUL');

SELECT * FROM DEPT_SEQUENCE ORDER BY DEPTNO;
```



	DEPTNO	DNAME	LOC
1	0	DATABASE	SEOUL
2	3	DATABASE	SEOUL
3	10	DATABASE	SEOUL
4	20	DATABASE	SEOUL
5	30	DATABASE	SEOUL
6	40	DATABASE	SEOUL
7	50	DATABASE	SEOUL
8	60	DATABASE	SEOUL
9	70	DATABASE	SEOUL
10	80	DATABASE	SEOUL
11	90	DATABASE	SEOUL
12	93	DATABASE	SEOUL
13	96	DATABASE	SEOUL
14	99	DATABASE	SEOUL

-- 13-36) 시퀀스 삭제 후 확인하기

```
DROP SEQUENCE SEQ_DEPT_SEQUENCE;

SELECT * FROM USER_SEQUENCES;
```



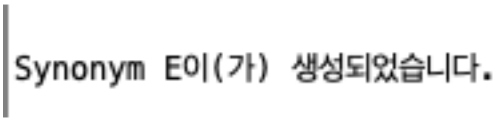
SEQUENCE_NAME	MIN_VALUE	MAX_VALUE	INCREMENT_BY	CYCLE_FLAG	ORDER_FLAG	CACHE_SIZE	LAST_NUMBER	SCALE_FLAG	EXTEND_FLAG	SHARDED_FLAG	SESSION_FLAG	KEEP_VALUE

-- 13-37) 권한 부여하기(SQL * PLUS)

```
SQLPLUS SYSTEM/oracle

GRANT CREAT SYNONYM TO SCOTT;

GRANT CREATE PUBLIC SYNONYM TO SCOTT;
```

-- 13-38) EMP 테이블의 동의어 생성하기

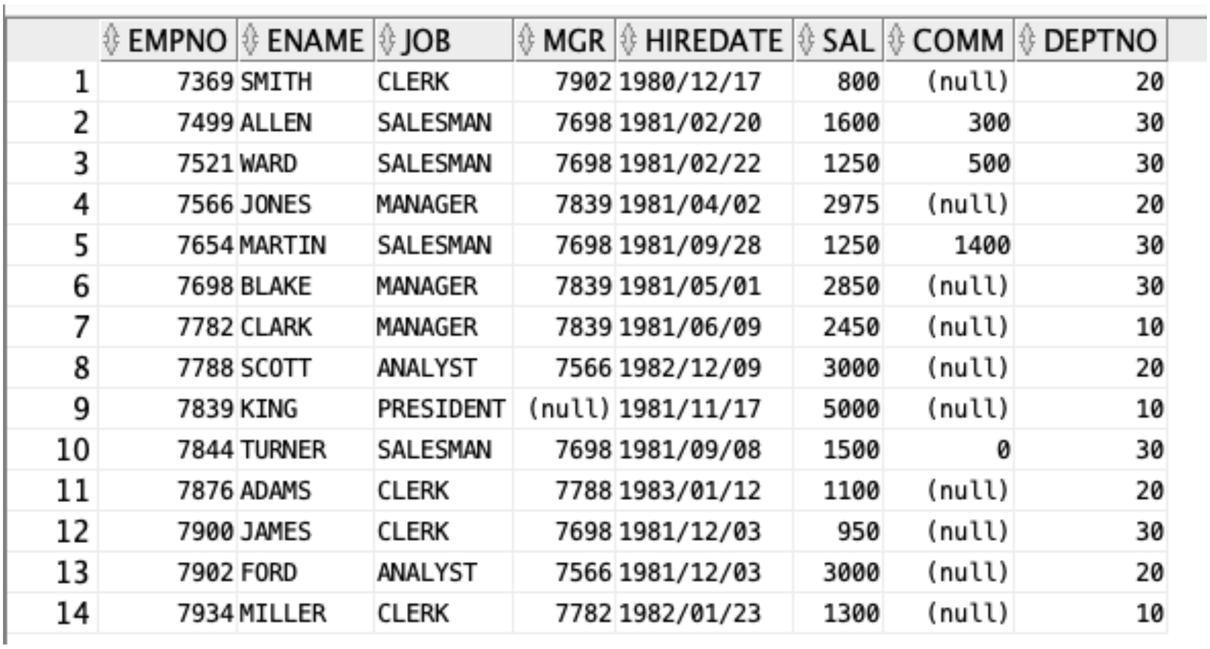
CREATE SYNONYM E FOR EMP;



Synonym E이(가) 생성되었습니다.

-- 13-39) E 테이블 전체 내용 조회하기

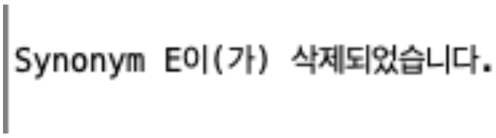
SELECT * FROM E;



	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7369	SMITH	CLERK	7902	1980/12/17	800	(null)	20
2	7499	ALLEN	SALESMAN	7698	1981/02/20	1600	300	30
3	7521	WARD	SALESMAN	7698	1981/02/22	1250	500	30
4	7566	JONES	MANAGER	7839	1981/04/02	2975	(null)	20
5	7654	MARTIN	SALESMAN	7698	1981/09/28	1250	1400	30
6	7698	BLAKE	MANAGER	7839	1981/05/01	2850	(null)	30
7	7782	CLARK	MANAGER	7839	1981/06/09	2450	(null)	10
8	7788	SCOTT	ANALYST	7566	1982/12/09	3000	(null)	20
9	7839	KING	PRESIDENT	(null)	1981/11/17	5000	(null)	10
10	7844	TURNER	SALESMAN	7698	1981/09/08	1500	0	30
11	7876	ADAMS	CLERK	7788	1983/01/12	1100	(null)	20
12	7900	JAMES	CLERK	7698	1981/12/03	950	(null)	30
13	7902	FORD	ANALYST	7566	1981/12/03	3000	(null)	20
14	7934	MILLER	CLERK	7782	1982/01/23	1300	(null)	10

-- 13-40) 동의어 삭제하기

DROP SYNONYM E;



Synonym E이(가) 삭제되었습니다.