10차 SQL 과제

1. CRATE TABLE

CREATE OR REPLACE PROCEDURE PROC\_INS\_TABLE(P\_OWNER IN VARCHAR2, P\_TABLE\_NAME IN VARCHAR2)

IS

L\_COLUMN\_CNT INTEGER;

L\_TABLESPACE\_NAME VARCHAR2(100);

L\_OWNER VARCHAR2(100);

BEGIN

SELECT TABLESPACE\_NAME INTO L\_OWNER FROM ALL\_TABLES WHERE OWNER = P\_OWNER AND TABLE\_NAME = P\_TABLE\_NAME;

SELECT DISTINCT TABLESPACE\_NAME INTO L\_TABLESPACE\_NAME FROM USER\_TABLES;

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'TABLE', P\_TABLE\_NAME, 1, 'CREATE TABLE '|| P\_OWNER || '.'|| P\_TABLE\_NAME);

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'TABLE', P\_TABLE\_NAME, 2, '(');

FOR L\_CURSOR IN (SELECT \* FROM (SELECT OWNER, 'TABLE', TABLE\_NAME, COLUMN\_ID ,

COLUMN\_NAME

|| ' '

|| DATA\_TYPE

|| CASE WHEN DATA\_TYPE = 'DATE' OR DATA\_TYPE ='CLOB' THEN NULL

WHEN DATA\_TYPE = 'VARCHAR2' OR DATA\_TYPE ='RAW' THEN '('|| DATA\_LENGTH ||')'

WHEN DATA\_PRECISION IS NULL THEN NULL

WHEN DATA\_PRECISION IS NOT NULL AND DATA\_SCALE IS NOT NULL AND DATA\_SCALE != 0 THEN '('||DATA\_PRECISION||','||DATA\_SCALE||')'

WHEN DATA\_PRECISION IS NOT NULL AND DATA\_SCALE IS NOT NULL AND DATA\_SCALE = 0 THEN '('||DATA\_PRECISION||')'

END

|| DECODE(NULLABLE, 'N', ' NOT NULL')

|| DECODE(COLUMN\_ID, MAX(COLUMN\_ID) OVER(PARTITION BY P\_OWNER, P\_TABLE\_NAME),NULL,',')

AS TEXT

FROM ALL\_TAB\_COLUMNS

WHERE

OWNER = P\_OWNER

AND TABLE\_NAME = P\_TABLE\_NAME

ORDER BY COLUMN\_ID))

LOOP

INSERT INTO DDL\_SCRIPTS VALUES(L\_CURSOR.OWNER, 'TABLE', L\_CURSOR.TABLE\_NAME, L\_CURSOR.COLUMN\_ID+2, L\_CURSOR.TEXT);

COMMIT;

END LOOP;

SELECT MAX(LINE) INTO L\_COLUMN\_CNT

FROM DDL\_SCRIPTS

WHERE OBJECT\_NAME = P\_TABLE\_NAME

AND OWNER = P\_OWNER

GROUP BY OWNER, OBJECT\_NAME;

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'TABLE', P\_TABLE\_NAME, L\_COLUMN\_CNT +1, ')');

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'TABLE', P\_TABLE\_NAME, L\_COLUMN\_CNT +2, 'TABLESPACE '|| L\_TABLESPACE\_NAME ||';');

COMMIT;

DBMS\_OUTPUT.PUT\_LINE('데이터 입력 성공!');

EXCEPTION

WHEN NO\_DATA\_FOUND

THEN DBMS\_OUTPUT.PUT\_LINE(P\_OWNER || '에 ' || P\_TABLE\_NAME ||'이(가) 없습니다.');

DBMS\_OUTPUT.PUT\_LINE('OWNER 이름과 TABLE 이름을 다시 확인해주세요.');

END PROC\_INS\_TABLE;

2. CRATE INDEX

PROCEDURE PROC\_INS\_INDEX(P\_OWNER IN VARCHAR2, P\_TABLE\_NAME IN VARCHAR2)

IS

L\_TABLESPACE\_NAME VARCHAR2(100);

L\_INDEX\_OWNER VARCHAR2(100);

L\_COLUMNS\_CNT INTEGER;

BEGIN

SELECT COUNT(\*) INTO L\_COLUMNS\_CNT FROM ALL\_IND\_COLUMNS WHERE INDEX\_OWNER = P\_OWNER AND TABLE\_NAME = P\_TABLE\_NAME;

IF L\_COLUMNS\_CNT = 0 THEN

RAISE NO\_DATA\_FOUND;

END IF;

SELECT DISTINCT TABLESPACE\_NAME INTO L\_TABLESPACE\_NAME FROM USER\_TABLES;

FOR L\_CURSOR\_INDEX\_NAME IN (SELECT DISTINCT INDEX\_NAME, MAX(COLUMN\_POSITION) OVER(PARTITION BY INDEX\_NAME) AS MAX\_COLUMN\_POSITION FROM ALL\_IND\_COLUMNS WHERE INDEX\_OWNER = P\_OWNER AND TABLE\_NAME = P\_TABLE\_NAME)

LOOP

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'INDEX', L\_CURSOR\_INDEX\_NAME.INDEX\_NAME, 1, 'CREATE UNIQUE ' || P\_OWNER || '.' || L\_CURSOR\_INDEX\_NAME.INDEX\_NAME);

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'INDEX', L\_CURSOR\_INDEX\_NAME.INDEX\_NAME, 2, 'ON ' || P\_OWNER || '.' || P\_TABLE\_NAME);

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'INDEX', L\_CURSOR\_INDEX\_NAME.INDEX\_NAME, 3, '(');

FOR L\_CURSOR\_COLUMNS IN (SELECT INDEX\_OWNER, INDEX\_NAME, TABLE\_NAME, COLUMN\_NAME, COLUMN\_POSITION, DESCEND

FROM ALL\_IND\_COLUMNS

WHERE INDEX\_OWNER = P\_OWNER

AND TABLE\_NAME = P\_TABLE\_NAME

AND INDEX\_NAME = L\_CURSOR\_INDEX\_NAME.INDEX\_NAME

ORDER BY COLUMN\_POSITION)

LOOP

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER,

'INDEX',

L\_CURSOR\_INDEX\_NAME.INDEX\_NAME,

L\_CURSOR\_COLUMNS.COLUMN\_POSITION+3,

DECODE(L\_CURSOR\_COLUMNS.COLUMN\_POSITION, L\_CURSOR\_INDEX\_NAME.MAX\_COLUMN\_POSITION, L\_CURSOR\_COLUMNS.DESCEND, L\_CURSOR\_COLUMNS.DESCEND || ',') );

END LOOP;

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'INDEX', L\_CURSOR\_INDEX\_NAME.INDEX\_NAME, L\_CURSOR\_INDEX\_NAME.MAX\_COLUMN\_POSITION +4, ')');

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'INDEX', L\_CURSOR\_INDEX\_NAME.INDEX\_NAME, L\_CURSOR\_INDEX\_NAME.MAX\_COLUMN\_POSITION +5, 'TABLESPACE ' || L\_TABLESPACE\_NAME || ';');

COMMIT;

END LOOP;

DBMS\_OUTPUT.PUT\_LINE('데이터 입력 성공!');

EXCEPTION WHEN NO\_DATA\_FOUND

THEN DBMS\_OUTPUT.PUT\_LINE(P\_OWNER || '에 ' || P\_TABLE\_NAME ||'이(가) 없습니다.');

DBMS\_OUTPUT.PUT\_LINE('OWNER 이름과 TABLE 이름을 다시 확인해주세요.');

END PROC\_INS\_INDEX;

3. CREATE PACKAGE

(PACKAGE 선언부 생성)

CREATE OR REPLACE PACKAGE PAK\_INS\_TABLE\_INDEX

AS

PROCEDURE PROC\_INS\_TABLE(P\_OWNER IN VARCHAR2, P\_TABLE\_NAME IN VARCHAR2);

PROCEDURE PROC\_INS\_INDEX(P\_OWNER IN VARCHAR2, P\_TABLE\_NAME IN VARCHAR2);

PROCEDURE PROC\_INS\_TABLE\_INDEX(P\_OWNER IN VARCHAR2, P\_TABLE\_NAME IN VARCHAR2);

END PAK\_INS\_TABLE\_INDEX;

(PACKAGE 본문 생성)

CREATE OR REPLACE PACKAGE BODY PAK\_INS\_TABLE\_INDEX

IS

PROCEDURE PROC\_INS\_TABLE(P\_OWNER IN VARCHAR2, P\_TABLE\_NAME IN VARCHAR2)

IS

L\_COLUMN\_CNT INTEGER;

L\_TABLESPACE\_NAME VARCHAR2(100);

L\_OWNER VARCHAR2(100);

BEGIN

SELECT TABLESPACE\_NAME INTO L\_OWNER FROM ALL\_TABLES WHERE OWNER = P\_OWNER AND TABLE\_NAME = P\_TABLE\_NAME;

SELECT DISTINCT TABLESPACE\_NAME INTO L\_TABLESPACE\_NAME FROM USER\_TABLES;

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'TABLE', P\_TABLE\_NAME, 1, 'CREATE TABLE '|| P\_OWNER || '.'|| P\_TABLE\_NAME);

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'TABLE', P\_TABLE\_NAME, 2, '(');

FOR L\_CURSOR IN (SELECT \* FROM (SELECT OWNER, 'TABLE', TABLE\_NAME, COLUMN\_ID ,

COLUMN\_NAME

|| ' '

|| DATA\_TYPE

|| CASE WHEN DATA\_TYPE = 'DATE' OR DATA\_TYPE ='CLOB' THEN NULL

WHEN DATA\_TYPE = 'VARCHAR2' OR DATA\_TYPE ='RAW' THEN '('|| DATA\_LENGTH ||')'

WHEN DATA\_PRECISION IS NULL THEN NULL

WHEN DATA\_PRECISION IS NOT NULL AND DATA\_SCALE IS NOT NULL AND DATA\_SCALE != 0 THEN '('||DATA\_PRECISION||','||DATA\_SCALE||')'

WHEN DATA\_PRECISION IS NOT NULL AND DATA\_SCALE IS NOT NULL AND DATA\_SCALE = 0 THEN '('||DATA\_PRECISION||')'

END

|| DECODE(NULLABLE, 'N', ' NOT NULL')

|| DECODE(COLUMN\_ID, MAX(COLUMN\_ID) OVER(PARTITION BY P\_OWNER, P\_TABLE\_NAME),NULL,',')

AS TEXT

FROM ALL\_TAB\_COLUMNS

WHERE

OWNER = P\_OWNER

AND TABLE\_NAME = P\_TABLE\_NAME

ORDER BY COLUMN\_ID))

LOOP

INSERT INTO DDL\_SCRIPTS VALUES(L\_CURSOR.OWNER, 'TABLE', L\_CURSOR.TABLE\_NAME, L\_CURSOR.COLUMN\_ID+2, L\_CURSOR.TEXT);

COMMIT;

END LOOP;

SELECT MAX(LINE) INTO L\_COLUMN\_CNT

FROM DDL\_SCRIPTS

WHERE OBJECT\_NAME = P\_TABLE\_NAME

AND OWNER = P\_OWNER

GROUP BY OWNER, OBJECT\_NAME;

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'TABLE', P\_TABLE\_NAME, L\_COLUMN\_CNT +1, ')');

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'TABLE', P\_TABLE\_NAME, L\_COLUMN\_CNT +2, 'TABLESPACE '|| L\_TABLESPACE\_NAME ||';');

COMMIT;

DBMS\_OUTPUT.PUT\_LINE('데이터 입력 성공!');

EXCEPTION

WHEN NO\_DATA\_FOUND

THEN DBMS\_OUTPUT.PUT\_LINE(P\_OWNER || '에 ' || P\_TABLE\_NAME ||'이(가) 없습니다.');

DBMS\_OUTPUT.PUT\_LINE('OWNER 이름과 TABLE 이름을 다시 확인해주세요.');

END PROC\_INS\_TABLE;

PROCEDURE PROC\_INS\_INDEX(P\_OWNER IN VARCHAR2, P\_TABLE\_NAME IN VARCHAR2)

IS

L\_TABLESPACE\_NAME VARCHAR2(100);

L\_INDEX\_OWNER VARCHAR2(100);

L\_COLUMNS\_CNT INTEGER;

BEGIN

SELECT COUNT(\*) INTO L\_COLUMNS\_CNT FROM ALL\_IND\_COLUMNS WHERE INDEX\_OWNER = P\_OWNER AND TABLE\_NAME = P\_TABLE\_NAME;

IF L\_COLUMNS\_CNT = 0 THEN

RAISE NO\_DATA\_FOUND;

END IF;

SELECT DISTINCT TABLESPACE\_NAME INTO L\_TABLESPACE\_NAME FROM USER\_TABLES;

FOR L\_CURSOR\_INDEX\_NAME IN (SELECT DISTINCT INDEX\_NAME, MAX(COLUMN\_POSITION) OVER(PARTITION BY INDEX\_NAME) AS MAX\_COLUMN\_POSITION FROM ALL\_IND\_COLUMNS WHERE INDEX\_OWNER = P\_OWNER AND TABLE\_NAME = P\_TABLE\_NAME)

LOOP

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'INDEX', L\_CURSOR\_INDEX\_NAME.INDEX\_NAME, 1, 'CREATE UNIQUE ' || P\_OWNER || '.' || L\_CURSOR\_INDEX\_NAME.INDEX\_NAME);

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'INDEX', L\_CURSOR\_INDEX\_NAME.INDEX\_NAME, 2, 'ON ' || P\_OWNER || '.' || P\_TABLE\_NAME);

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'INDEX', L\_CURSOR\_INDEX\_NAME.INDEX\_NAME, 3, '(');

FOR L\_CURSOR\_COLUMNS IN (SELECT INDEX\_OWNER, INDEX\_NAME, TABLE\_NAME, COLUMN\_NAME, COLUMN\_POSITION, DESCEND

FROM ALL\_IND\_COLUMNS

WHERE INDEX\_OWNER = P\_OWNER

AND TABLE\_NAME = P\_TABLE\_NAME

AND INDEX\_NAME = L\_CURSOR\_INDEX\_NAME.INDEX\_NAME

ORDER BY COLUMN\_POSITION)

LOOP

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER,

'INDEX',

L\_CURSOR\_INDEX\_NAME.INDEX\_NAME,

L\_CURSOR\_COLUMNS.COLUMN\_POSITION+3,

DECODE(L\_CURSOR\_COLUMNS.COLUMN\_POSITION, L\_CURSOR\_INDEX\_NAME.MAX\_COLUMN\_POSITION, L\_CURSOR\_COLUMNS.DESCEND, L\_CURSOR\_COLUMNS.DESCEND || ',') );

END LOOP;

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'INDEX', L\_CURSOR\_INDEX\_NAME.INDEX\_NAME, L\_CURSOR\_INDEX\_NAME.MAX\_COLUMN\_POSITION +4, ')');

INSERT INTO DDL\_SCRIPTS VALUES(P\_OWNER, 'INDEX', L\_CURSOR\_INDEX\_NAME.INDEX\_NAME, L\_CURSOR\_INDEX\_NAME.MAX\_COLUMN\_POSITION +5, 'TABLESPACE ' || L\_TABLESPACE\_NAME || ';');

COMMIT;

END LOOP;

DBMS\_OUTPUT.PUT\_LINE('데이터 입력 성공!');

EXCEPTION WHEN NO\_DATA\_FOUND

THEN DBMS\_OUTPUT.PUT\_LINE(P\_OWNER || '에 ' || P\_TABLE\_NAME ||'이(가) 없습니다.');

DBMS\_OUTPUT.PUT\_LINE('OWNER 이름과 TABLE 이름을 다시 확인해주세요.');

END PROC\_INS\_INDEX;

PROCEDURE PROC\_INS\_TABLE\_INDEX(P\_OWNER IN VARCHAR2, P\_TABLE\_NAME IN VARCHAR2)

IS

BEGIN

PROC\_INS\_TABLE(P\_OWNER, P\_TABLE\_NAME);

PROC\_INS\_INDEX(P\_OWNER, P\_TABLE\_NAME);

END PROC\_INS\_TABLE\_INDEX;

END PAK\_INS\_TABLE\_INDEX;