

# DDL (ALTER, DROP)

# ▶ DDL(Data Definition Language)

## ✓ 실습 테이블 생성

```
CREATE TABLE KH_MEMBER(
  NO NUMBER PRIMARY KEY,
  NAME CHAR(15),
  ID VARCHAR2(20) UNIQUE,
  PASSWORD VARCHAR2(50) DEFAULT '1234',
  REG_DATE DATE NOT NULL
);
```

<테이블 구조>

| ⚡ COLUMN_NAME | ⚡ DATA_TYPE       | ⚡ NULLABLE | DATA_DEFAULT |
|---------------|-------------------|------------|--------------|
| NO            | NUMBER            | No         | (null)       |
| NAME          | CHAR(15 BYTE)     | Yes        | (null)       |
| ID            | VARCHAR2(20 BYTE) | Yes        | (null)       |
| PASSWORD      | VARCHAR2(50 BYTE) | Yes        | '1234'       |
| REG_DATE      | DATE              | No         | (null)       |

<테이블 내 데이터>

| ⚡ NO | ⚡ NAME | ⚡ ID   | ⚡ PASSWORD | ⚡ REG_DATE |
|------|--------|--------|------------|------------|
| 1    | 홍길동    | master | P@ssw0rd   | 19/05/08   |
| 2    | 이길동    | tester | 1234qwer   | 19/05/08   |

```
INSERT INTO KH_MEMBER VALUES(1,'홍길동','master','P@ssw0rd',SYSDATE);
INSERT INTO KH_MEMBER VALUES(2,'이길동','tester','1234qwer',SYSDATE);
```

# ▶ ALTER

테이블에 정의된 내용을 수정할 때 사용하는 데이터 정의로  
컬럼의 추가/삭제, 제약조건의 추가/삭제, 컬럼의 자료형 변경,  
DEFAULT 값 변경, 테이블 명/컬럼 명/제약조건 명 변경 등을 할 수 있음

## ✓ 표현식

ACTION

ACTION

**ALTER TABLE** 테이블명 <ACTION> <옵션 값 ... > ;

### <ACTION>

| 옵션            | 기능         |
|---------------|------------|
| ADD           | column 추가  |
| MODIFY        | column 수정  |
| DROP COLUMN   | column 삭제  |
| RENAME COLUMN | column명 변경 |

# ▶ ALTER

가

## ✓ 컬럼 추가(ADD)

ALTER TABLE 테이블명 **ADD** <컬럼명> <데이터타입> **{<옵션> <제약조건>};**

create

ALTER TABLE KH\_MEMBER **ADD AGE NUMBER;**

ALTER TABLE KH\_MEMBER **ADD COUNTRY VARCHAR(30) DEFAULT '한국';**

<테이블 구조>

| ↕ COLUMN_NAME | ↕ DATA_TYPE       | ↕ NULLABLE | DATA_DEFAULT |
|---------------|-------------------|------------|--------------|
| NO            | NUMBER            | No         | (null)       |
| NAME          | CHAR(15 BYTE)     | Yes        | (null)       |
| ID            | VARCHAR2(20 BYTE) | Yes        | (null)       |
| PASSWORD      | VARCHAR2(50 BYTE) | Yes        | '1234'       |
| REG_DATE      | DATE              | No         | (null)       |
| AGE           | NUMBER            | Yes        | (null)       |
| COUNTRY       | VARCHAR2(30 BYTE) | Yes        | '한국'         |

(null)  
DEFAULT  
DEFAULT

<테이블 내 데이터>

| ↕ NO | ↕ NAME | ↕ ID   | ↕ PASSWORD | ↕ REG_DATE | ↕ AGE  | ↕ COUNTRY |
|------|--------|--------|------------|------------|--------|-----------|
| 1    | 홍길동    | master | P@ssw0rd   | 19/05/08   | (null) | 한국        |
| 2    | 이길동    | tester | 1234qwer   | 19/05/08   | (null) | 한국        |

# ▶ ALTER

## ✓ 컬럼 수정(MODIFY)

ALTER TABLE <테이블명> MODIFY <컬럼명> <데이터타입> <sup>가</sup> <옵션> <제약조건>;

ALTER TABLE KH\_MEMBER **MODIFY NAME VARCHAR(15) NOT NULL;**

ALTER TABLE KH\_MEMBER

**MODIFY PASSWORD VARCHAR2(50) DEFAULT 'qwer1234';**

<테이블 구조>

| ⚡ COLUMN_NAME | ⚡ DATA_TYPE        | ⚡ NULLABLE | ⚡ DATA_DEFAULT |
|---------------|--------------------|------------|----------------|
| NO            | NUMBER             | No         | (null)         |
| NAME          | VARCHAR2 (15 BYTE) | No         | (null)         |
| ID            | VARCHAR2 (20 BYTE) | Yes        | (null)         |
| PASSWORD      | VARCHAR2 (50 BYTE) | Yes        | 'qwer1234'     |
| REG_DATE      | DATE               | No         | (null)         |
| AGE           | NUMBER             | Yes        | (null)         |
| COUNTRY       | VARCHAR2 (30 BYTE) | Yes        | '한국'           |

<테이블 내 데이터>

| ⚡ NO | ⚡ NAME | ⚡ ID   | ⚡ PASSWORD | ⚡ REG_DATE | ⚡ AGE  | ⚡ COUNTRY |
|------|--------|--------|------------|------------|--------|-----------|
| 1    | 홍길동    | master | P@ssw0rd   | 19/05/08   | (null) | 한국        |
| 2    | 이길동    | tester | 1234qwer   | 19/05/08   | (null) | 한국        |

# ▶ ALTER

## ✓ 컬럼 삭제(DROP COLUMN)

ALTER TABLE <테이블명> **DROP COLUMN** <컬럼명> ;

ALTER TABLE KH\_MEMBER **DROP COLUMN NO;**  
ALTER TABLE KH\_MEMBER **DROP COLUMN AGE;**

\* 컬럼 삭제 시 참조하고 있는 컬럼이 있다면 컬럼 삭제 불가능

<테이블 구조>

| ⚡ COLUMN_NAME | ⚡ DATA_TYPE        | ⚡ NULLABLE | DATA_DEFAULT |
|---------------|--------------------|------------|--------------|
| NAME          | VARCHAR2 (15 BYTE) | No         | (null)       |
| ID            | VARCHAR2 (20 BYTE) | Yes        | (null)       |
| PASSWORD      | VARCHAR2 (50 BYTE) | Yes        | 'qwer1234'   |
| REG_DATE      | DATE               | No         | (null)       |
| COUNTRY       | VARCHAR2 (30 BYTE) | Yes        | '한국'         |

<테이블 내 데이터>

| ⚡ NAME | ⚡ ID   | ⚡ PASSWORD | ⚡ REG_DATE | ⚡ COUNTRY |
|--------|--------|------------|------------|-----------|
| 홍길동    | master | P@ssw0rd   | 19/05/08   | 한국        |
| 이길동    | tester | 1234qwer   | 19/05/08   | 한국        |

# ▶ ALTER

## ✓ 컬럼 이름 변경(RENAME COLUMN)

ALTER TABLE <테이블명> RENAME COLUMN <기존컬럼명> TO <변경할컬럼명>;

ALTER TABLE KH\_MEMBER RENAME COLUMN ID TO U\_ID;

ALTER TABLE KH\_MEMBER RENAME COLUMN PASSWORD TO U\_PASS;

<테이블 구조>

| ⚡ COLUMN_NAME | ⚡ DATA_TYPE        | ⚡ NULLABLE | DATA_DEFAULT |
|---------------|--------------------|------------|--------------|
| NAME          | VARCHAR2 (15 BYTE) | No         | (null)       |
| U_ID          | VARCHAR2 (20 BYTE) | Yes        | (null)       |
| U_PASS        | VARCHAR2 (50 BYTE) | Yes        | 'qwer1234'   |
| REG_DATE      | DATE               | No         | (null)       |
| COUNTRY       | VARCHAR2 (30 BYTE) | Yes        | '한국'         |

<테이블 내 데이터>

| ⚡ NAME | ⚡ U_ID | ⚡ U_PASS | ⚡ REG_DATE | ⚡ COUNTRY |
|--------|--------|----------|------------|-----------|
| 홍길동    | master | P@ssw0rd | 19/05/08   | 한국        |
| 이길동    | tester | 1234qwer | 19/05/08   | 한국        |

# ▶ ALTER

## ✓ 현재 제약조건 확인

### 특정 테이블 내 제약조건 이름,타입 조회

```
SELECT * FROM USER_CONSTRAINTS
      WHERE TABLE_NAME='KH_MEMBER';
```

| OWNER | CONSTRAINT_NAME | CONSTRAINT_TYPE | TABLE_NAME | SEARCH_CONDITION       |
|-------|-----------------|-----------------|------------|------------------------|
| KH    | SYS_C007052     | C               | KH_MEMBER  | "REG_DATE" IS NOT NULL |
| KH    | SYS_C007054     | U               | KH_MEMBER  | (null)                 |
| KH    | SYS_C007058     | C               | KH_MEMBER  | "NAME" IS NOT NULL     |

<CONSTRAINT TYPE >

C : 테이블 열 확인

O :보기 개체에 대한 읽기 전용

P : Primary key Object

R : Foreign key column

U : Unique key column

V :보기 개체에 대한 옵션 확인

### 제약조건 적용 컬럼 조회

```
SELECT * FROM USER_CONS_COLUMNS
      WHERE TABLE_NAME='KH_MEMBER';
```

| OWNER | CONSTRAINT_NAME | TABLE_NAME | COLUMN_NAME | POSITION |
|-------|-----------------|------------|-------------|----------|
| KH    | SYS_C007052     | KH_MEMBER  | REG_DATE    | (null)   |
| KH    | SYS_C007054     | KH_MEMBER  | U_ID        | 1        |
| KH    | SYS_C007058     | KH_MEMBER  | NAME        | (null)   |



# ▶ ALTER

## ✓ 제약조건 추가(ADD CONSTRAINT)

ALTER TABLE 테이블명 ADD CONSTRAINT <제약조건명> <제약조건>(컬럼명);

ALTER TABLE KH\_MEMBER

**ADD CONSTRAINT MEM\_PASS\_UNQ UNIQUE(U\_PASS);**

MEMBER

PASS

UNIQUE

SELECT \* FROM USER\_CONSTRAINTS WHERE TABLE\_NAME='KH\_MEMBER';

| OWNER | CONSTRAINT_NAME | CONSTRAINT_TYPE | TABLE_NAME | SEARCH_CONDITION       |
|-------|-----------------|-----------------|------------|------------------------|
| KH    | SYS_C007052     | C               | KH_MEMBER  | "REG_DATE" IS NOT NULL |
| KH    | SYS_C007054     | U               | KH_MEMBER  | (null)                 |
| KH    | MEM_PASS_UNQ    | U               | KH_MEMBER  | (null)                 |
| KH    | SYS_C007058     | C               | KH_MEMBER  | "NAME" IS NOT NULL     |

SELECT \* FROM USER\_CONS\_COLUMNS WHERE TABLE\_NAME='KH\_MEMBER';

| OWNER | CONSTRAINT_NAME | TABLE_NAME | COLUMN_NAME | POSITION |
|-------|-----------------|------------|-------------|----------|
| KH    | SYS_C007052     | KH_MEMBER  | REG_DATE    | (null)   |
| KH    | MEM_PASS_UNQ    | KH_MEMBER  | U_PASS      | 1        |
| KH    | SYS_C007054     | KH_MEMBER  | U_ID        | 1        |
| KH    | SYS_C007058     | KH_MEMBER  | NAME        | (null)   |

# ▶ ALTER

## ✓ 제약조건 삭제(DROP CONSTRAINT)

ALTER TABLE 테이블명 DROP CONSTRAINT <제약조건명>;

ALTER TABLE KH\_MEMBER **DROP CONSTRAINT MEM\_PASS\_UNQ;**

SELECT \* FROM USER\_CONSTRAINTS WHERE TABLE\_NAME='KH\_MEMBER';

| OWNER | CONSTRAINT_NAME | CONSTRAINT_TYPE | TABLE_NAME | SEARCH_CONDITION       |
|-------|-----------------|-----------------|------------|------------------------|
| KH    | SYS_C007052     | C               | KH_MEMBER  | "REG_DATE" IS NOT NULL |
| KH    | SYS_C007054     | U               | KH_MEMBER  | (null)                 |
| KH    | SYS_C007058     | C               | KH_MEMBER  | "NAME" IS NOT NULL     |

SELECT \* FROM USER\_CONS\_COLUMNS WHERE TABLE\_NAME='KH\_MEMBER';

| OWNER | CONSTRAINT_NAME | TABLE_NAME | COLUMN_NAME | POSITION |
|-------|-----------------|------------|-------------|----------|
| KH    | SYS_C007052     | KH_MEMBER  | REG_DATE    | (null)   |
| KH    | SYS_C007054     | KH_MEMBER  | U_ID        | 1        |
| KH    | SYS_C007058     | KH_MEMBER  | NAME        | (null)   |

# ▶ ALTER

## ✓ 제약조건 이름 변경(RENAME CONSTRAINT)

ALTER TABLE <테이블명> RENAME CONSTRAINT  
<기존 제약조건명> TO <변경할 제약조건명>;

ALTER TABLE KH\_MEMBER  
RENAME CONSTRAINT SYS\_C007058 TO MEM\_NAME\_NN;

SELECT \* FROM USER\_CONSTRAINTS WHERE TABLE\_NAME='KH\_MEMBER';

| OWNER | CONSTRAINT_NAME | CONSTRAINT_TYPE | TABLE_NAME | SEARCH_CONDITION       |
|-------|-----------------|-----------------|------------|------------------------|
| KH    | SYS_C007052     | C               | KH_MEMBER  | "REG_DATE" IS NOT NULL |
| KH    | SYS_C007054     | U               | KH_MEMBER  | (null)                 |
| KH    | MEM_NAME_NN     | C               | KH_MEMBER  | "NAME" IS NOT NULL     |

SELECT \* FROM USER\_CONS\_COLUMNS WHERE TABLE\_NAME='KH\_MEMBER';

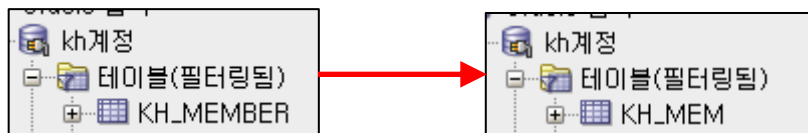
| OWNER | CONSTRAINT_NAME | TABLE_NAME | COLUMN_NAME | POSITION |
|-------|-----------------|------------|-------------|----------|
| KH    | SYS_C007052     | KH_MEMBER  | REG_DATE    | (null)   |
| KH    | SYS_C007054     | KH_MEMBER  | U_ID        | 1        |
| KH    | MEM_NAME_NN     | KH_MEMBER  | NAME        | (null)   |

# ▶ ALTER

## ✓ 테이블 이름 변경

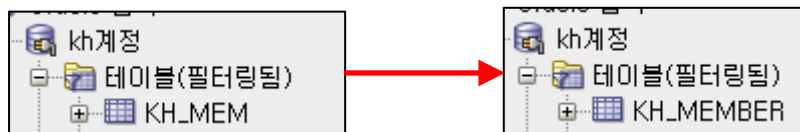
1. ALTER TABLE <기존 테이블명> RENAME TO <변경할 테이블명>;

ALTER TABLE **KH\_MEMBER** RENAME TO KH\_MEM;



2. RENAME <기존 테이블명> TO <변경할 테이블명>

**RENAME KH\_MEM** TO KH\_MEMBER;



# ▶ DROP

데이터베이스 객체를 삭제하는 구문

## ✓ 표현식

**DROP TABLE** 테이블명 ;

**DROP TABLE KH\_MEMBER;**

Table KH\_MEMBER0이 (가) 삭제되었습니다.