

# 03. Multi Table

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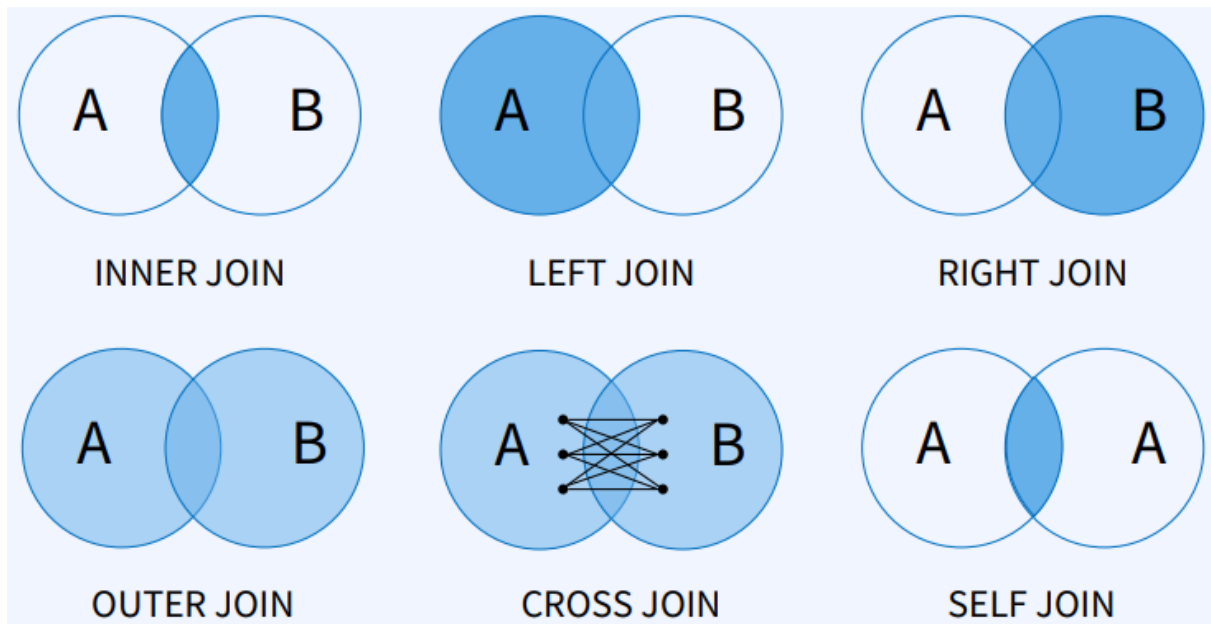
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## [Join]



### ▼ Example

```
DROP DATABASE IF EXISTS pokemon;  
CREATE DATABASE pokemon;  
USE pokemon;  
CREATE TABLE mypokemon (  
    number INT,  
    name VARCHAR(20),  
    type VARCHAR(10)  
);
```

```

INSERT INTO mypokemon (number, name, type)
VALUES (10, 'caterpie', 'bug'),
      (25, 'pikachu', 'electric'),
      (26, 'raichu', 'electric'),
      (133, 'eevee', 'normal'),
      (152, 'chikoirita', 'grass');

CREATE TABLE ability (
  number INT,
  height FLOAT,
  weight FLOAT,
  attack INT,
  defense INT,
  speed int
);

INSERT INTO ability (number, height, weight, attack, defense, speed)
VALUES (10, 0.3, 2.9, 30, 35, 45),
      (25, 0.4, 6, 55, 40, 90),
      (125, 1.1, 30, 83, 57, 105),
      (133, 0.3, 6.5, 55, 50, 55),
      (137, 0.8, 36.5, 60, 70, 40),
      (152, 0.9, 6.4, 49, 65, 45),
      (153, 1.2, 15.8, 62, 80, 60),
      (172, 0.3, 2, 40, 15, 60),
      (470, 1, 25.5, 110, 130, 95);

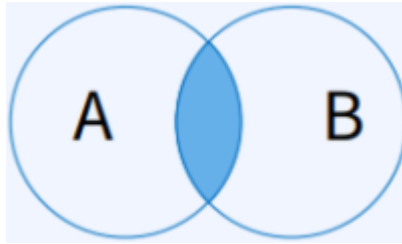
```

	number	name	type
▶	10	caterpie	bug
	25	pikachu	electric
	26	raichu	electric
	133	eevee	normal
	152	chikoirita	grass

	number	height	weight	attack	defense	speed
▶	10	0.3	2.9	30	35	45
	25	0.4	6	55	40	90
	125	1.1	30	83	57	105
	133	0.3	6.5	55	50	55
	137	0.8	36.5	60	70	40
	152	0.9	6.4	49	65	45
	153	1.2	15.8	62	80	60
	172	0.3	2	40	15	60
	470	1	25.5	110	130	95

## 01. Inner Join

### ▼ Grammer



```
SELECT [컬럼명]
FROM [테이블 A명]
INNER JOIN [테이블 B명]
ON [테이블A명].[컬럼명] = [테이블B명].[컬럼명]
WHERE 조건식;
```

#### ▼ Example

	number	name	type
▶	10	caterpie	bug
	25	pikachu	electric
	26	raichu	electric
	133	eevee	normal
	152	chikoirita	grass

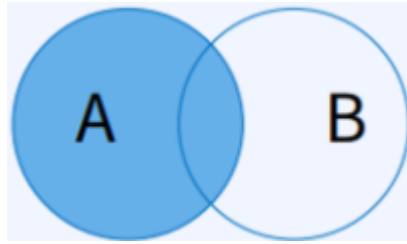
```
SELECT *
FROM pokemon.mypokemon
INNER JOIN pokemon.ability
ON pokemon.mypokemon.number = pokemon.ability.number;
```

	number	name	type	number	height	weight	attack	defense	speed
▶	10	caterpie	bug	10	0.3	2.9	30	35	45
	25	pikachu	electric	25	0.4	6	55	40	90
	133	eevee	normal	133	0.3	6.5	55	50	55
	152	chikoirita	grass	152	0.9	6.4	49	65	45

## 02. Left & Right Join

#### ▼ Left Join

##### ▼ Grammer



```
SELECT [컬럼명]
FROM [테이블 A명]
LEFT JOIN [테이블 B명]
ON [테이블A명].[컬럼명] = [테이블B명].[컬럼명]
WHERE 조건식;
```

#### ▼ Example

```
SELECT *
FROM pokemon.mypokemon
LEFT JOIN pokemon.ability
ON pokemon.mypokemon.number = pokemon.ability.number;
```

	number	name	type	number	height	weight	attack	defense	speed
▶	10	caterpie	bug	10	0.3	2.9	30	35	45
	25	pikachu	electric	25	0.4	6	55	40	90
	26	raichu	electric	NULL	NULL	NULL	NULL	NULL	NULL
	133	eevee	normal	133	0.3	6.5	55	50	55
	152	chikoirita	grass	152	0.9	6.4	49	65	45

#### ▼ Right Join

##### ▼ Grammer



```
SELECT [컬럼명]
FROM [테이블 A명]
RIGHTA JOIN [테이블 B명]
```

```
ON [테이블A명].[컬럼명] = [테이블B명].[컬럼명]
WHERE 조건식;
```

#### ▼ Example

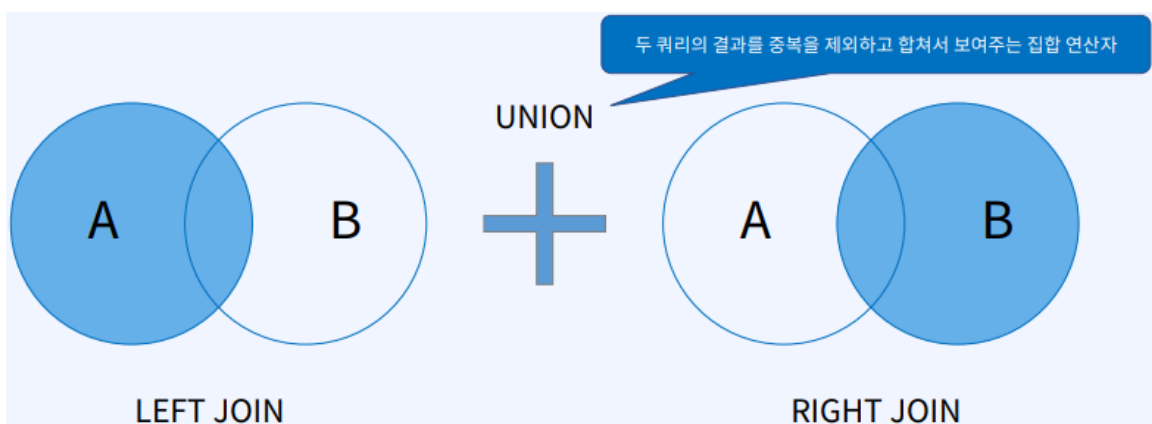
```
SELECT *
FROM pokemon.mypokemon
RIGHT JOIN pokemon.ability
ON pokemon.mypokemon.number = pokemon.ability.number;
```

	number	name	type	number	height	weight	attack	defense	speed
▶	10	caterpie	bug	10	0.3	2.9	30	35	45
	25	pikachu	electric	25	0.4	6	55	40	90
	NULL	NULL	NULL	125	1.1	30	83	57	105
	133	eevee	normal	133	0.3	6.5	55	50	55
	NULL	NULL	NULL	137	0.8	36.5	60	70	40
	152	chikoirita	grass	152	0.9	6.4	49	65	45
	NULL	NULL	NULL	153	1.2	15.8	62	80	60
	NULL	NULL	NULL	172	0.3	2	40	15	60
	NULL	NULL	NULL	470	1	25.5	110	130	95

### 03. Outer Join

| MySQL에는 Outer Join 키워드가 없다.

#### ▼ Grammer



```
SELECT [컬럼명]
FROM [테이블 A명]
LEFT JOIN [테이블 B명]
```

```

ON [테이블A명].[컬럼명] = [테이블B명].[컬럼명]
UNION
SELECT [컬럼명]
FROM [테이블 A명]
RIGHT JOIN [테이블 B명]
ON [테이블A명].[컬럼명] = [테이블B명].[컬럼명];

```

#### ▼ Example

```

SELECT *
FROM pokemon.mypokemon
LEFT JOIN pokemon.ability
ON pokemon.mypokemon.number = pokemon.ability.number
UNION
SELECT *
FROM pokemon.mypokemon
RIGHT JOIN pokemon.ability
ON pokemon.mypokemon.number = pokemon.ability.number;

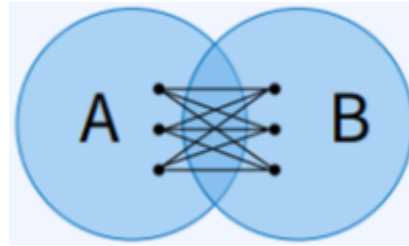
```

	number	name	type	number	height	weight	attack	defense	speed
▶	10	caterpie	bug	10	0.3	2.9	30	35	45
	25	pikachu	electric	25	0.4	6	55	40	90
	26	raichu	electric	NULL	NULL	NULL	NULL	NULL	NULL
	133	eevee	normal	133	0.3	6.5	55	50	55
	152	chikoirita	grass	152	0.9	6.4	49	65	45
	NULL	NULL	NULL	125	1.1	30	83	57	105
	NULL	NULL	NULL	137	0.8	36.5	60	70	40
	NULL	NULL	NULL	153	1.2	15.8	62	80	60
	NULL	NULL	NULL	172	0.3	2	40	15	60
	NULL	NULL	NULL	470	1	25.5	110	130	95

## 04. Cross Join

| On 키워드 생략, 모든 경우의 수 생성

#### ▼ Grammer



```

SELECT [컬럼명]
FROM [테이블 A명]
CROSS JOIN [테이블 B명]
WHERE 조건식;

```

#### ▼ Example

```

SELECT *
FROM pokemon.mypokemon
CROSS JOIN pokemon.ability;

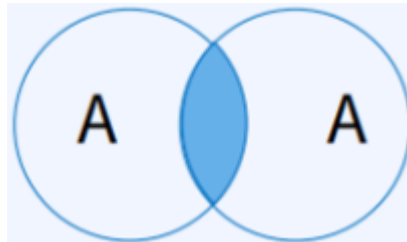
```

	number	name	type	number	height	weight	attack	defense	speed
▶	10	caterpie	bug	10	0.3	2.9	30	35	45
	10	caterpie	bug	25	0.4	6	55	40	90
	10	caterpie	bug	125	1.1	30	83	57	105
	10	caterpie	bug	133	0.3	6.5	55	50	55
	10	caterpie	bug	137	0.8	36.5	60	70	40
	10	caterpie	bug	152	0.9	6.4	49	65	45
	10	caterpie	bug	153	1.2	15.8	62	80	60
	10	caterpie	bug	172	0.3	2	40	15	60
	10	caterpie	bug	470	1	25.5	110	130	95
	25	pikachu	electric	10	0.3	2.9	30	35	45
	25	pikachu	electric	25	0.4	6	55	40	90
	25	pikachu	electric	125	1.1	30	83	57	105
	25	pikachu	electric	133	0.3	6.5	55	50	55
	25	pikachu	electric	137	0.8	36.5	60	70	40
	25	pikachu	electric	152	0.9	6.4	49	65	45
	25	pikachu	electric	153	1.2	15.8	62	80	60
	25	pikachu	electric	172	0.3	2	40	15	60
	25	pikachu	electric	470	1	25.5	110	130	95
	26	raichu	electric	10	0.3	2.9	30	35	45
	26	raichu	electric	25	0.4	6	55	40	90
	26	raichu	electric	125	1.1	30	83	57	105
	26	raichu	electric	133	0.3	6.5	55	50	55
	26	raichu	electric	137	0.8	36.5	60	70	40
	26	raichu	electric	152	0.9	6.4	49	65	45
	26	raichu	electric	153	1.2	15.8	62	80	60
	26	raichu	electric	172	0.3	2	40	15	60
	26	raichu	electric	470	1	25.5	110	130	95

## 05. Self Join

### | 동일한 테이블끼리 조인

#### ▼ Grammer



```
SELECT [컬럼명]
FROM [테이블 A명] AS T1
INNER JOIN [테이블 A명] AS T2
ON T1.[컬럼 A명] = t2.[컬럼 B명]
WHERE 조건식;
```

#### ▼ Example

```
SELECT *
FROM pokemon.mypokemon as T1
INNER JOIN pokemon.mypokemon as T2
on T1.number = t2.number;
```

	number	name	type	number	name	type
▶	10	caterpie	bug	10	caterpie	bug
	25	pikachu	electric	25	pikachu	electric
	26	raichu	electric	26	raichu	electric
	133	eevee	normal	133	eevee	normal
	152	chikoirita	grass	152	chikoirita	grass