17.JOIN

링크	https://dataonair.or.kr/db-tech-reference/d-guide/sql/?pageid=5&mod=document&uid=326

Join() 2개 이상에 테이블을 조합하여 출력

join 전에

ON : join 전에 조건을 필터링

join 후에

WHERE : join 후에 조건을 필터링

```
// WHERE 절을 통한 JOIN
SELECT t1.col1, t1.col2, t2.col1, t2.col2
FROM   table1 t1
LEFT OUTER JOIN table2 t2
ON t1.col1 = t2.col1
AND t2.col2 = '일';

// ON 절을 통한 JOIN

select t1.col1, t1.col2, t2.col1, t2.col2
from  table1 t1
LEFT OUTER JOIN table2 t2
ON t1.col1 = t2.col1
where t2.col2 = '일';
```

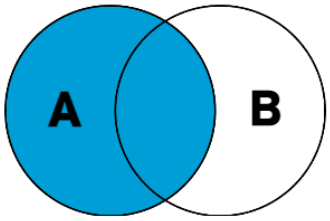
X, Y, Z 3개 테이블을 INNER JOIN하는 경우

```
select x.컬럼이름A,
       y.컬럼이름B,
       z.컬럼이름C, ...
from 테이블이름X x, 테이블이름Y y, 테이블이름Z z, ...
where x.컬럼이름M=y.컬럼이름N
  and y.컬럼이름O=z.컬럼이름Q;
```

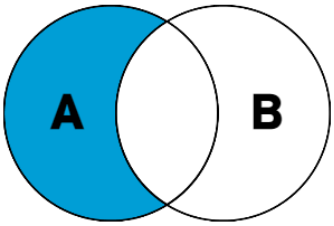
조금 더 알아보기

OUTER JOIN

LEFT OUTER JOIN

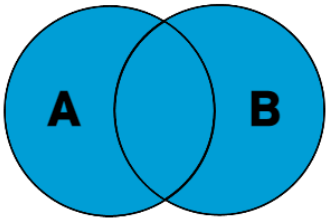



```
SELECT *
FROM A a
    LEFT JOIN B b
    ON a.KEY = b.KEY
```

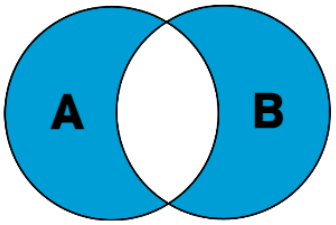



```
SELECT *
FROM A a
    LEFT JOIN B b
    ON a.KEY = b.KEY
WHERE b.KEY IS NULL
```

FULL OUTER JOIN

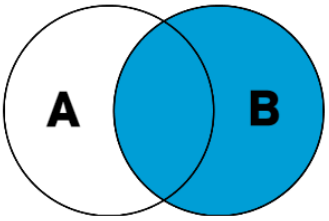



```
SELECT *
FROM A a
    FULL OUTER JOIN B b
    ON a.KEY = b.KEY
```

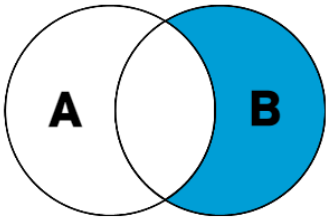



```
SELECT *
FROM A a
    FULL OUTER JOIN B b
    ON a.KEY = b.KEY
WHERE a.KEY IS NULL
    OR b.KEY IS NULL
```

RIGHT OUTER JOIN



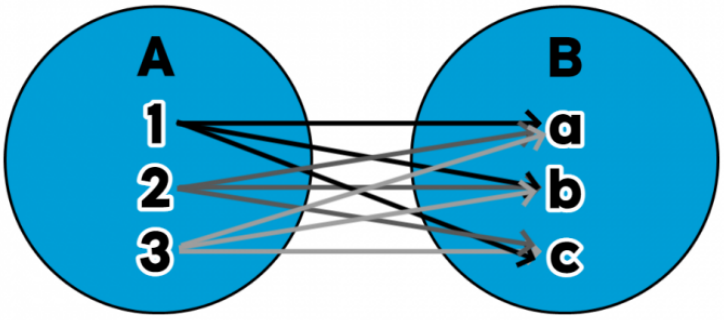

```
SELECT *
FROM A a
    RIGHT OUTER JOIN B b
    ON a.KEY = b.KEY
```




```
SELECT *
FROM A a
    RIGHT OUTER JOIN B b
    ON a.KEY = b.KEY
WHERE a.KEY IS NULL
```

CROSS JOIN

*CARTESIAN PRODUCT



CROSS JOIN 결과: 전체 행 개수 = 9
3(A 테이블의 행 개수) X 3(B 테이블의 행 개수)

```
SELECT *
 FROM <첫 번째 테이블>
           CROSS JOIN <두 번째 테이블>
```