

## Set Operators

Set operators combine the result of two or more queries into one result

### Types of Set Operators

SR no	Operator name	Description
1	UNION	It returns all distinct rows selected by either query
2	UNION ALL	It returns all rows selected by either query, including duplicate
3	INTERSECT	It selects common data from both queries
4	MINUS	It takes distinct rows selected by first select statement but not selected by second SELECT statement.

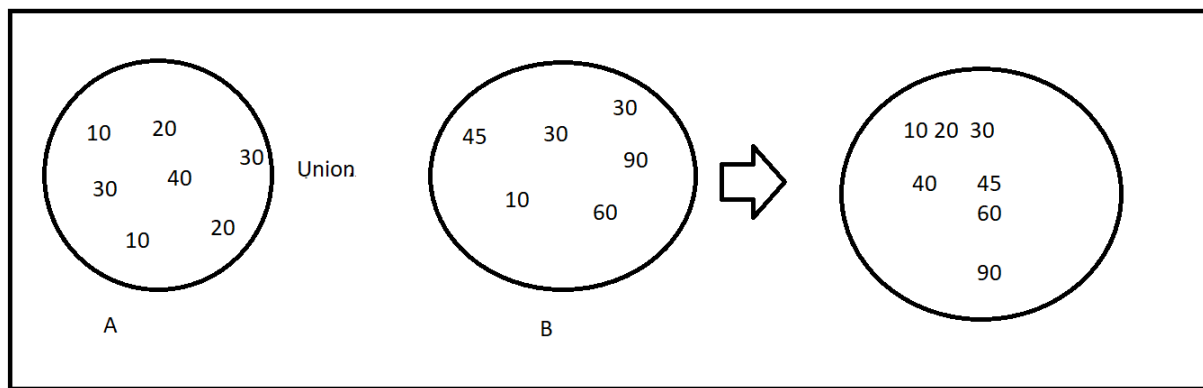
**If we want to use set operators then necessary and sufficient conditions are**

- 1) Number of columns return by first select statement must be equal to number of columns return by second select statement.**
- 2) Data type of column must be same.**

### UNION Operator.

It takes distinct rows or values from two select statement

Consider the below example



Consider below select statements

**First Select Statement**

```
select dept_id from Department
```

DEPT_ID
4
2
3
1
5

5 rows returned in 0.06 seconds

**Second Select Statement**

```
select dept_id from Employee
```

DEPT_ID
1
2
3
1
2
3
1
2
3
1
6

11 rows returned in 0.00 seconds

If we join these two select statment using union operator as below

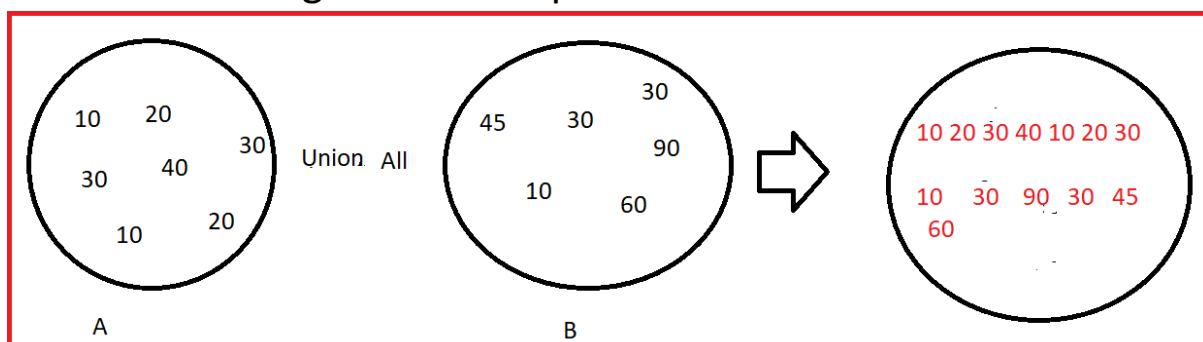
```
select dept_id from Department UNION  
select dept_id from Employee order by dept_id asc
```

DEPT_ID
1
2
3
4
5
6

## UNION ALL

It takes all data selected by first select statement and all data selected by second select statement including duplicate values.

Consider below general example



Consider below two select statements

First Select Statement

```
select dept_id from Department
```

DEPT_ID
4
2
3
1
5

5 rows returned in 0.06 seconds

Second Select Statement

```
select dept_id from Employee
```

DEPT_ID
1
2
3
1
2
3
1
2
3
1
6

11 rows returned in 0.00 seconds

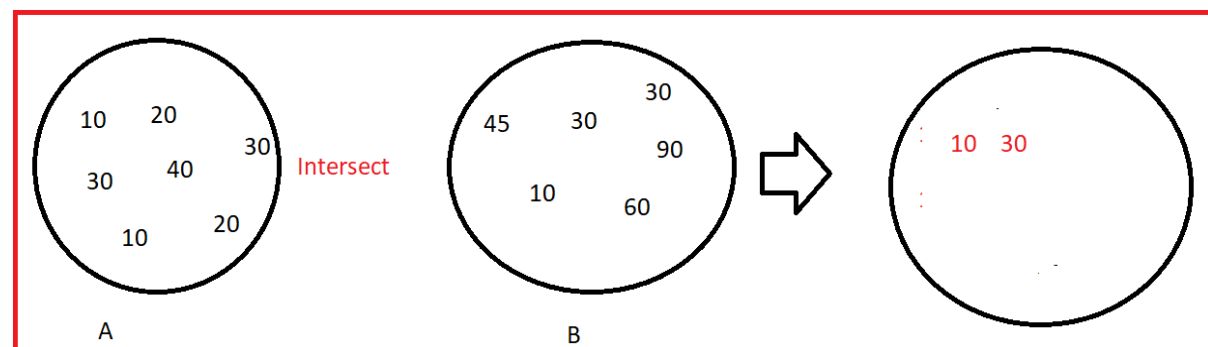
If we join these two select statement using union ALL operator as below

```
select dept_id from Department UNION ALL  
select dept_id from Employee order by dept_id asc
```

DEPT_ID
1
1
1
1
1
2
2
2
2
2
3
3
3
3
3
4
5
6

## INTERSECT:

It selects only common data from both queries



Consider below two select statements

**First Select Statement**

```
select dept_id from Department
```

DEPT_ID
4
2
3
1
5

5 rows returned in 0.06 seconds

**Second Select Statement**

```
select dept_id from Employee
```

DEPT_ID
1
2
3
1
2
3
1
2
3
1
6

11 rows returned in 0.00 seconds

If we join these two select statement using INTERSECT operator as below

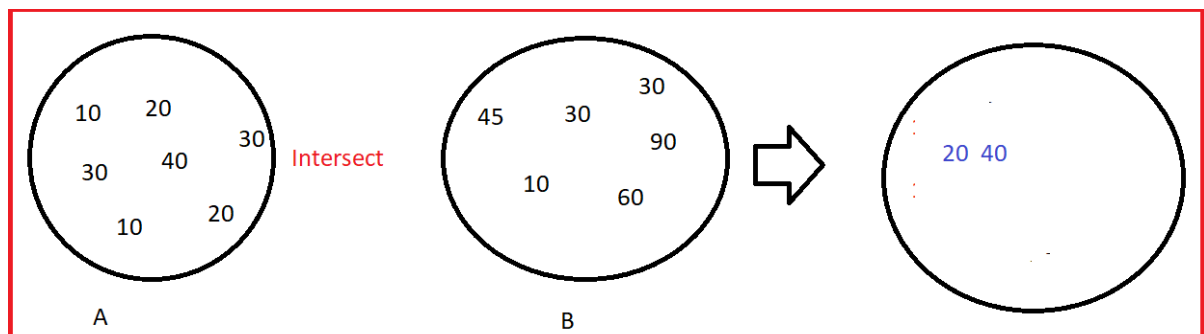
```
select dept_id from Department INTERSECT
select dept_id from Employee order by dept_id asc
```

DEPT_ID
1
2
3

## MINUS:

It selects values which present in first select statement but not present in second select statement

Consider below examples



Consider below example

**First Select Statement**

```
select dept_id from Department
```

DEPT_ID
4
2
3
1
5

5 rows returned in 0.06 seconds

**Second Select Statement**

```
select dept_id from Employee
```

DEPT_ID
1
2
3
1
2
3
1
2
3
1
6

11 rows returned in 0.00 seconds

If we join these two select statement using MINUS operator as below

```
select dept_id from Department MINUS
select dept_id from Employee order by dept_id asc
```

DEPT_ID
4
5

2 rows returned in 0.00 seconds

