

Querying Relational Databases Part 5 Notes

Team Treehouse

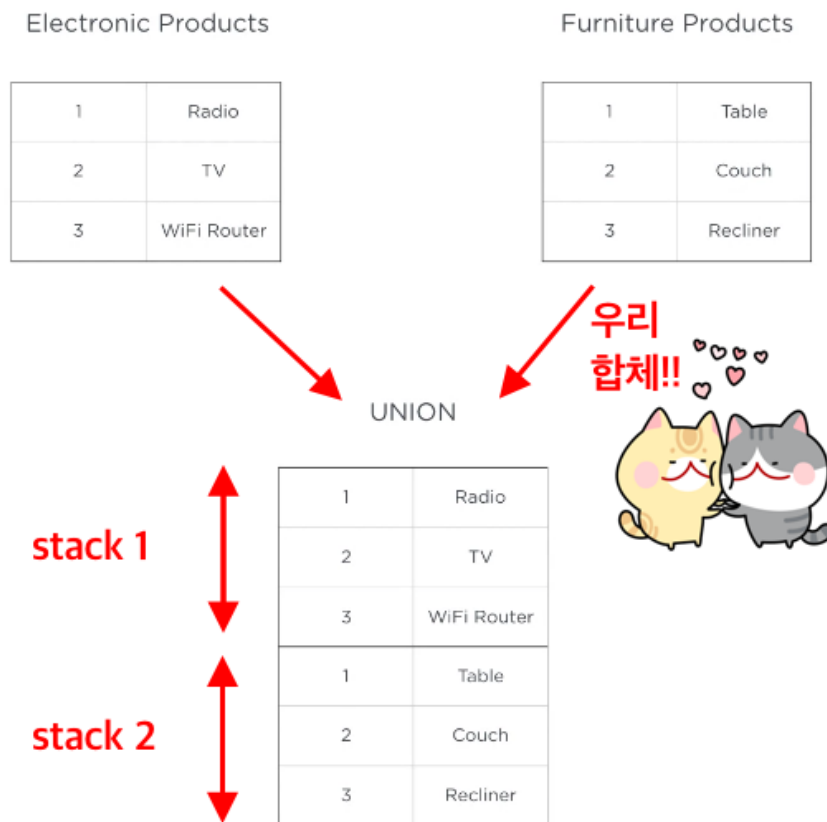
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1 What are Set Operations?

- Combine or limit results using two or more datasets
- has 4 set operations
 - UNION / UNION ALL
 - INTERSET
 - EXCEPT

2 Union Operations

- Stacks data vertically



- has to have matching number of columns
- **Syntax:** *query 1* UNION *query 2*

Example:

```
1 SELECT MakeID, MakeName FROM Make UNION SELECT ForeignMakeID,  
2 MakeName FROM ForeignMake;
```

```
1 -- <Statement 1> UNION <Statement 2>
2
3 -- What are all the domestic and foreign makes?
4
5 SELECT MakeID, MakeName FROM Make UNION SELECT ForeignMakeID, MakeName FROM ForeignMake;
6
```

Reset

Run

MakeID	MakeName
1	BMW
1	Ford
2	Chevy
2	Volkswagen
3	Audi
3	Jeep
4	Dodge
4	Honda
5	Honda

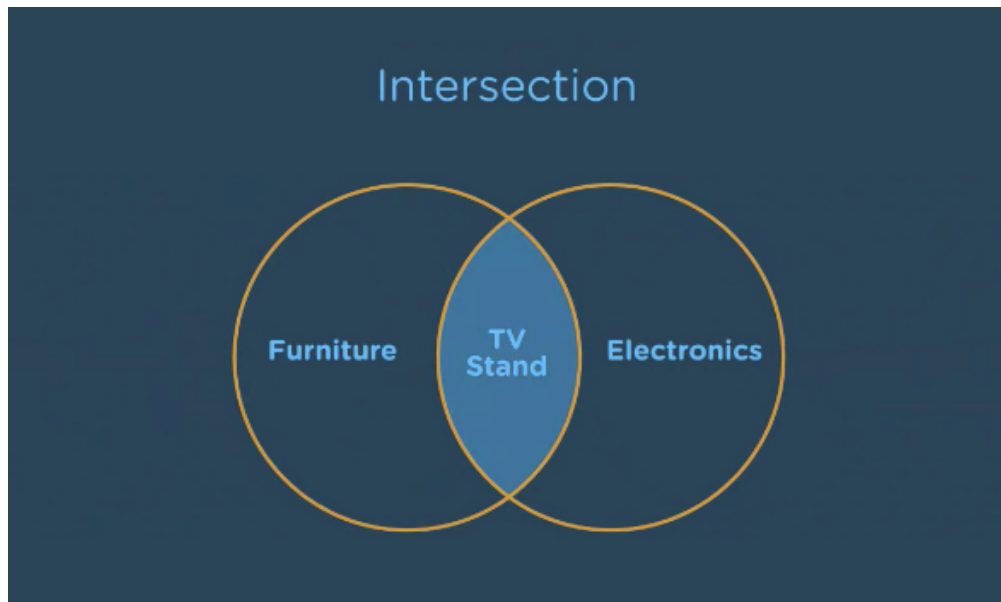
Example 2:

```
1 SELECT MakeID, MakeName FROM Make
2 WHERE MakeName < "D"
3 UNION
4 SELECT ForeignMakeID, MakeName FROM ForeignMake
5 WHERE MakeName < "D"
6 ORDER BY MakeName;
7
```

3 Union All Operations

- Is the same as union but does not eliminate duplicates
- **Syntax:** *query 1* UNION ALL *query 2*

4 Intersect



- Only returns results that exist in both
- Intersection is based on supplied columns
 - multiple columns → intersection is based on intersecting values in those columns
- **Syntax:** *query 1* INTERSECT *query 2*

Example:

```
1  SELECT MakeName FROM Make
2      INTERSET
3  SELECT MakeName FROM ForeignMake ORDER BY MakeName DESC;
4
```

```
1 -- <Statement 1> INTERSECT <Statement 2>
2
3 -- What are makes that are in both the domestic and foreign makes?
4
5 SELECT MakeName FROM Make INTERSECT SELECT MakeName FROM ForeignMake;
6
```

MakeName
BMW
Honda
Kia
Toyota

Example 2:

```
1 SELECT MakeID MakeName FROM Make
2 INTERSECT
3 SELECT ForeignMakeID, MakeName FROM ForeignMake ORDER BY MakeName
4 DESC; // <- Returns empty result
```

```
1 -- <Statement 1> INTERSECT <Statement 2>
2
3 -- What are makes that are in both the domestic and foreign makes?
4
5 SELECT MakeID, MakeName FROM Make
6 INTERSECT
7 SELECT ForeignMakeID, MakeName FROM ForeignMake ORDER BY MakeName DESC;
8
```

Query returned no results.