Querying Relational Databases Part 4 Notes

Team Treehouse

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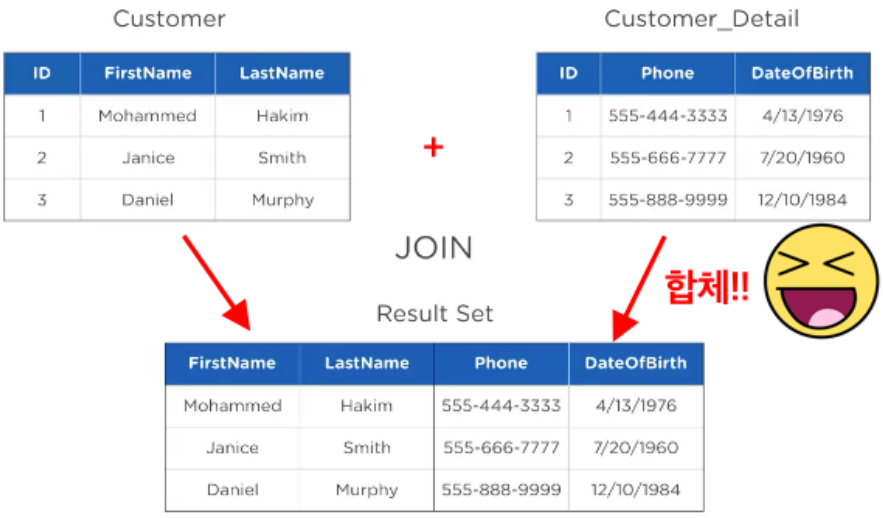
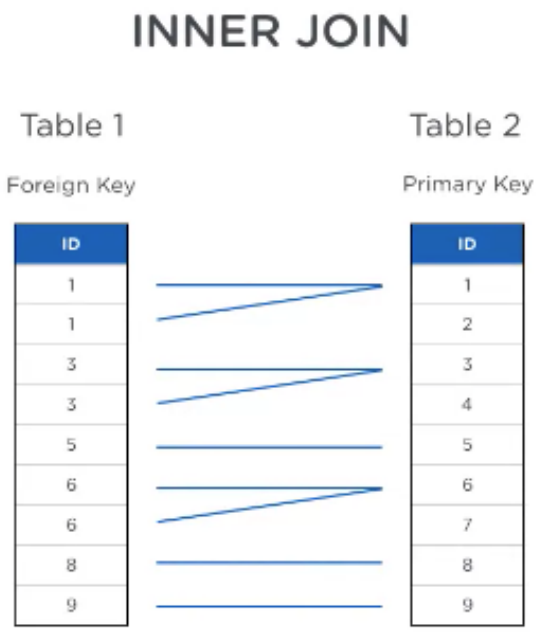
1 Join Queries

- Joins two tables into one
- Is used in tables with one to one relationship



2 Inner Joins



- Is most common type of JOIN
- Is used for joining one to many relationships
- **Syntax:** SELECT *columns name* FROM *table 1 (many) name* INNER JOIN *table 2 (one) name* ON *table 1 name.column name* = *table 1 name.column name*;
  - Can join more than 2 tables

Example:

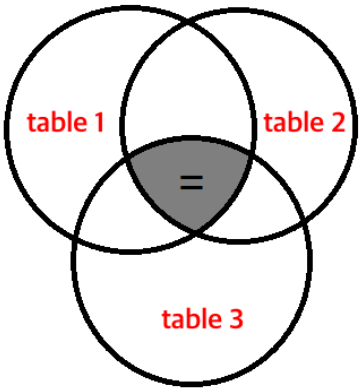
```
1    SELECT mk.MakeName = md.ModelName FROM make AS mk
2    INNER JOIN model AS md ON mk.MakeId = md.MakeId;
3
```

```
-- SELECT <columns> FROM <table1>  INNER JOIN <table2> ON <equality criteria>
--   WHERE <search criteria> ...

-- What are all Chevy models?

SELECT mk.MakeName, md.ModelName FROM make AS mk
  INNER JOIN model AS md ON mk.MakeID = md.MakeID
  WHERE MakeName = "Chevy";
```

Reset Run

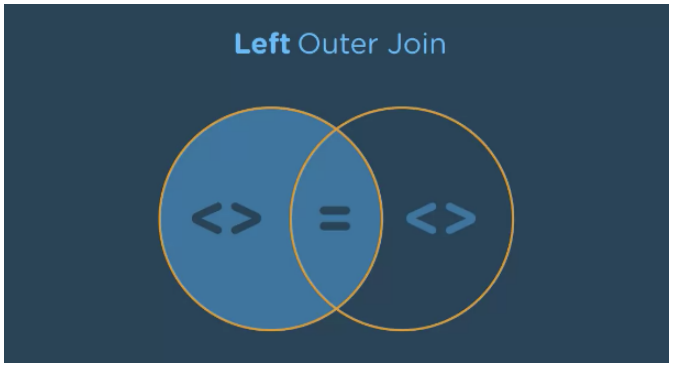
MakeName	ModelName
Chevy	Impala
Chevy	Cruze
Chevy	Colorado

- In venn diagram, looks something like this



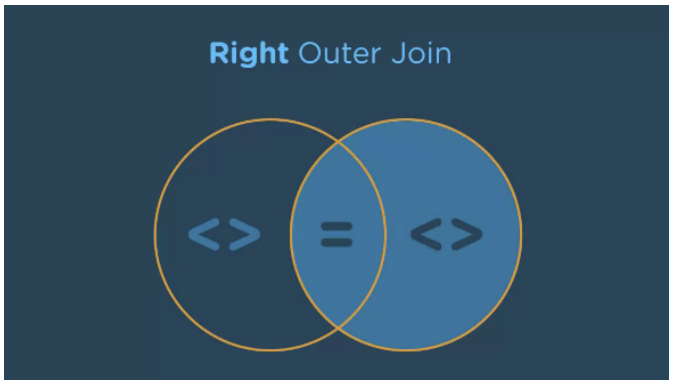
3 Outer Join

- Is less common than inner join, but highly useful
- There are three types
  - Left Outer Join



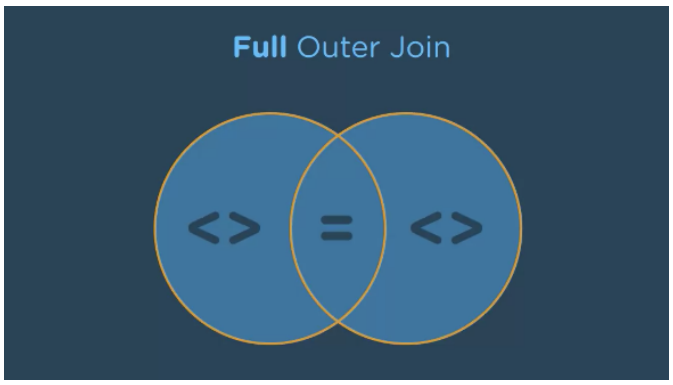
    - **Syntax:** SELECT *columns name* FROM *table 1 name* LEFT OUTER JOIN *table name 2* ON *table 1 name.column name = table 1 name.column name*;
    - joins tables with all columns from table 1 returned

- Right Outer Join



    - **Syntax:** SELECT *columns name* FROM *table 1 name* RIGHT OUTER JOIN *table name 2* ON *table 1 name.column name = table 1 name.column name*;
    - joins tables with all columns from table 2 returned

- Full Outer Join



    - **Syntax:** SELECT *columns name* FROM *table 1 name* FULL OUTER JOIN *table name 2* ON *table 1 name.column name = table 1 name.column name*;
    - joins tables with all columns from both tables returned

Example:

```
SELECT mk.MakeName = md.ModelName FROM make AS mk
LEFT OUTER JOIN model AS md ON mk.MakeId = md.MakeId;

```

```
1 -- SELECT <columns> FROM <table1>  LEFT OUTER JOIN <table2> ON <equality criteria> WHERE
  <search criteria> ...
2
3 -- How many models of each make are there?
4
5 SELECT mk.MakeName, md.ModelName FROM make AS mk
6   LEFT OUTER JOIN model AS md ON mk.MakeID = md.MakeID;
7
```

Reset Run

Dodge	Dart
Honda	Accord
Honda	CRV
Honda	Element
Kia	Rio
Kia	Soul
Toyota	Camry
Toyota	Sienna
BMW	