

SQL: Inequi join and Problem solving.

Recap:

- Joins
- Self join
- Union - distinct, all
- Distinct
- Cross Join.

Agenda:

Inequi Join

Problem solving.

NOT

What is equi-join?

Select *

from DB.table1 T1

inner join

DB.table2 T2

on T1.col1 = T2.col1 → equi join

What is non equi?

Anything other than = in the ON clause
i.e. >, >=, <, <=, <>

↓
NOT
equal

Recommended new countries not visited by the user.

T1

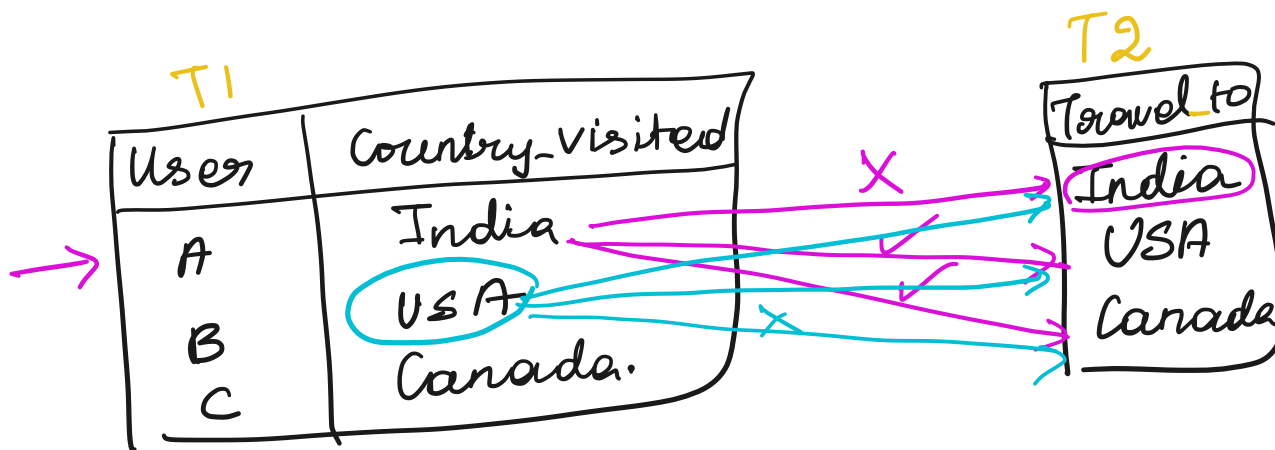
User	Country-visited
A	India
B	USA
C	Canada.

T2

Travel to
India
USA
Canada

select * from
T1, country-visited = T2, travel-to \Rightarrow 3 rows

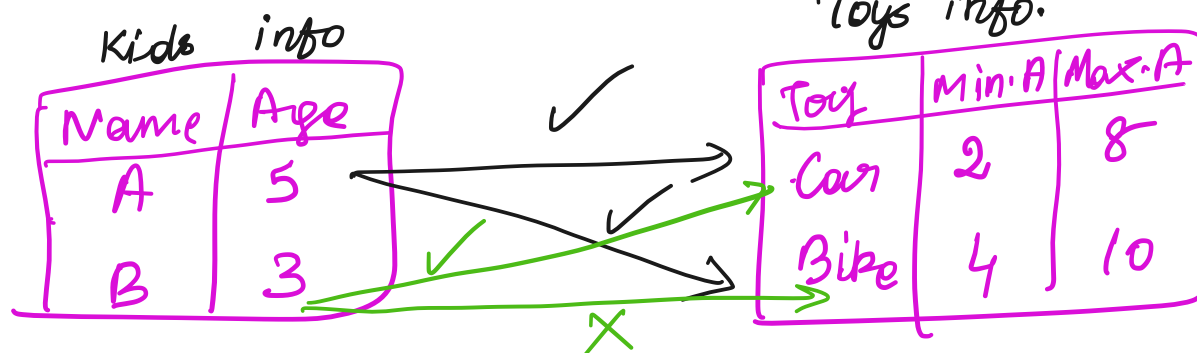
select * from
T1, country-visited <> T2, travel-to



User	Country-visited	travel to
A	India	USA
A	India	Canada
B	USA	India
B	USA	Canada
C	Canada	India
C	Canada	USA

6

Suggest Toys to kids if the min. age is greater than the kids age.



A	5	Car	2
A	5	Bike	4
B	3	Car	2

Homework problem:

T2.

T1

id
1
2
2
NULL

id
1
2
3
NULL

Inner

id	id
1	1
1	1
2	2
2	2

Left Join.

Left	Join.
id	id
1	1
1	1
2	2
2	2
NULL	

Right join.

1	1
1	1
2	2
2	2
3	
NULL	

outer.

id	id
1	1
1	1
2	2
2	2
3	
NULL	

1	1
2	2
2	2
NULL	NULL

This is not the NULL from T2

2	2
2	2
NULL	3
NULL	NULL

This is not the NULL from T1

2	2
2	2
NULL	NULL
NULL	3
NULL	NULL

Problem Solving:

Keyword Movies:

Movies	
basket sport	←
Sport Star	←
Don Sequel	X
D1 Sequel D2	←
Suspense	
A Suspense	
Suspense Z	
Annabelle	X
PS 2	X

% → anything, any length.

sport, suspense, sequel

where

lower(keyword) like "%sport%"
 Q1 lower(keyword) like "%sequel%"
 Q1 lower(keyword) like "%suspense%"

keyword in ("%sport%",
 "%sequel%",
 "%suspense%")

Employee 107:

Dept

employees

dept-id

employee-id dept-id job-id

dept-id	emp-id	emp-name	dept-name
	107
	108

select
 from employee where
job-id = (select job-id from employee
 where emp-id = 107)

Salary (5000 - 1000)

select

where dept-id in (50, 80, 100) and
 salary betw — and —
 and commission-pct is NOT NULL

• Bonus is 100% (if ID is even) •
 and (Name starts with "M") •
 • Bonus 0 Otherwise-

• NOT like "M%."

• $\text{substr}(\text{Name}, 1, 1) \neq \text{"M"}$

% - modulus

$4 \% 2 = 0 \rightarrow \text{remainder} \rightarrow \text{even}$
 $3 \% 2 = 1 \rightarrow \text{remainder} \rightarrow \text{odd}$

$\text{mod}(\text{---}, 2)$

Case when $(\text{Id} \% 2 \neq 0) \text{ AND } (\text{substr}(\text{name}, 1, 1) \neq \text{"M"})$

then Salary

Else
END

as Bonus

Using If statement:

$\text{if} (\text{Id} \% 2 \neq 0 \text{ and } \text{substr}(\dots) > \text{salary}, 0) \text{ as bonus}$

$\text{if}(\text{condition}, \text{if true}, \text{if false}) \text{ as bonus}$

Handles no customers

cus service table

cust	Sales rep
A	1
B	2
C	1
	3

emp. table

emp. numb.
1
2
3

Right Join.

Customer	Sales rep	emp n.
A	1	1
B	2	2
C	1	1
NULL	NULL	3

where cust is NULL

where sales rep is NULL