**Set Containment and Set Difference in MySQL**

The problem of set containment: test whether set A contains set B

In SQL, we can write “set A contains set B” as “not exists (B except A)”.

However, MySQL does not support the EXCEPT operation, until MySQL 8.0.31.

Suppose we have the following two relations:

CREATE TABLE A (x INT);

CREATE TABLE B (x INT);

INSERT INTO A VALUES(1);

INSERT INTO A VALUES(2);

INSERT INTO A VALUES(3);

INSERT INTO A VALUES(4);

INSERT INTO B VALUES(1);

INSERT INTO B VALUES(3);

To get the set difference “B-A”, we can have the following 3 alternatives.

1. select \*

from B

where B.x not in (select x from A);

1. select \*

from B left outer join A on B.x=A.x

where A.x is null;

1. select \*

from B where not exists (

select \* from A where A.x = B.x);