how to develop database object for enhance join feature using mysql RDBMS backend software

01.press ctrl + ESC keys for click windows start button

02.type XAMPP control panel in Type here to search textbox

03.press open or run as administrator menu item

04.press start button from MySQL module

05.optional: press start button from apache module

-> mysql or appache default hostname is local host

->mysql default port number is 3306

->apache default port number is 80

06. if display following messages in XAMPP control panel v3.3.0 window then press quit button else skip this step

->15:32:51 [apache] XAMPP apache is already running on port 80

->15:32:51 [apache] XAMPP apache is already running on port 443

->15:32:51 [apache] XAMPP apache is already running on port 3306

07.#mysql -u root -p

Enter password:

Welcome to the MariaDB monitor. Commands end with ; or \g.

Your MariaDB connection id is 8

Server version: 10.4.32-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

08. MariaDB[(none)]>system cls

09.MariaDB[(none)]>show databases;

+--------------------+

| Database |

+--------------------+

| dbstk |

| information\_schema |

| mysql |

| performance\_schema |

| phpmyadmin |

| test |

+--------------------+

6 rows in set (0.059 sec)

10. MariaDB[(none)]>create database if not exists stkdb character set latin1 collate latin1\_swedish\_ci;

Query OK, 1 row affected (0.001 sec)

11. MariaDB[(none)]>system cls

12. MariaDB[(none)]>show databases;

+--------------------+

| Database |

+--------------------+

| dbstk |

| information\_schema |

| mysql |

| performance\_schema |

| phpmyadmin |

| stk2db |

| stkdb |

| test |

+--------------------+

8 rows in set (0.001 sec)

13. MariaDB[(none)]>select database();

+------------+

| database() |

+------------+

| NULL |

+------------+

1 row in set (0.000 sec)

14. MariaDB[(none)]>use stkdb;

Database changed

15. MariaDB[(stkdb)]>system cls

16. MariaDB[(stkdb)]>select database();

+------------+

| database() |

+------------+

| stkdb |

+------------+

1 row in set (0.000 sec)

17. MariaDB[(stkdb)]>show tables;

Empty set (0.001 sec)

How to develop table object for enhance join feature using MySQL RDBMS backend software?

01.MariaDB[(stkdb)]>drop table if exists stdtbl;

Query OK, 0 rows affected, 1 warning (0.141 sec)

02.MariaDB[(stkdb)]>drop table if exists usttbl;

Query OK, 0 rows affected, 1 warning (0.141 sec)

03.MariaDB[(stkdb)]>drop table if exist psttble;

Query OK, 0 rows affected, 1 warning (0.141 sec)

04.MariaDB[(stkdb)]>show tables;

Empty set (0.001 sec)

05.MariaDB[(stkdb)]>create or replace table stdtbl

(

pid integer primary key,pname varchar(3) not null,edu enum(‘UG’,’PG’,’-‘) default ’-‘ check(upper(edu) in (‘UG’,’PG’,’-‘))

);

Query OK, 0 rows affected (0.415 sec)

06.MariaDB[(stkdb)]>create or replace table usttbl

(

pid integer primary key,prole enum('Tutor','HM')default"Tutor"check(upper(prole)in("Tutor","HM"))

);

07.MariaDB[(stkdb)]>create or replace table psttbl

(

pid integer primary key,

prole enum("coach","HOD")default"coach"check(upper(prole)in("coach","HOD"))

);

Query OK, 0 rows affected (0.231 sec)

08.MariaDB[(stkdb)]>show tables;

+-----------------+

| Tables\_in\_stkdb |

+-----------------+

| stdtbl |

| usttbl |

+-----------------+

2 rows in set (0.001 sec)

09.MariaDB[(stkdb)]>select \* from stdtbl;

Empty set (0.002 sec)

10.MariaDB[(stkdb)]>

insert into stdtbl

values

(1001,'x1','UG')

(1002,'x2','PG')

(1003,'x3','-')

(1004,'x4','UG')

(1005,'x5','PG');

Query OK, 5 rows affected (0.104 sec)

Records: 5 Duplicates: 0 Warnings: 0

11.MariaDB[(stkdb)]>

insert into stdtbl

(pid,pname)

values

(1006,'x6');

Query OK, 1 row affected (0.628 sec)

12.MariaDB[(stkdb)]>

insert into stdtbl

(pid,pname,edu)

values

(1007,'x7','UG'),

(1008,'x8','PG');

Query OK, 2 rows affected (0.055 sec)

Records: 2 Duplicates: 0 Warnings:

13..MariaDB[(stkdb)]>

insert into stdtbl

(pid,pname)

values

(1009,'x9');

Query OK, 1 row affected (0.018 sec)

14..MariaDB[(stkdb)]>select \* from stdtbl;

+------+-------+------+

| pid | pname | edu |

+------+-------+------+

| 1001 | x1 | UG |

| 1002 | x2 | PG |

| 1003 | x3 | - |

| 1004 | x4 | UG |

| 1005 | x5 | PG |

| 1006 | x6 | - |

| 1007 | x7 | UG |

| 1008 | x8 | PG |

| 1009 | x9 | - |

+------+-------+------+

9 rows in set (0.000 sec)

15..MariaDB[(stkdb)]>select count(\*) from stdtbl;

+----------+

| count(\*) |

+----------+

| 9 |

+----------+

1 row in set (0.000 sec)

16..MariaDB[(stkdb)]>select \* from usttbl;

Empty set (0.007 sec)

17..MariaDB[(stkdb)]>

insert into usttbl values

(1001,"Tutor");

(1004,"HM");

Query OK, 2 rows affected (0.116 sec)

Records: 2 Duplicates: 0 Warnings: 0

18..MariaDB[(stkdb)]>

insert into usttbl

(pid)

values

(1007);

Query OK, 1 row affected (0.946 sec)

19..MariaDB[(stkdb)]>select \* from usttbl;

+------+-------+

| pid | prole |

+------+-------+

| 1001 | Tutor |

| 1004 | HM |

| 1007 | Tutor |

+------+-------+

20..MariaDB[(stkdb)]>select count(\*) from usttbl;

+----------+

| count(\*) |

+----------+

| 3 |

+----------+

1 row in set (0.000 sec)

21..MariaDB[(stkdb)]>select \* from psttbl;

Empty set (0.002 sec)

22..MariaDB[(stkdb)]>insert into psttbl;

(pid)

values

(1001);

Query OK, 1 row affected (0.048 sec)

23..MariaDB[(stkdb)]>insert into psttbl;

values

(1001,"HOD"),

(1005,"coach")

(1008,"HOD")

Query OK, 3 rows affected (0.301 sec)

Records: 3 Duplicates: 0 Warnings: 0

24..MariaDB[(stkdb)]>select \* from psttbl;

+------+-------+

| pid | prole |

+------+-------+

| 1001 | coach |

| 1002 | HOD |

| 1005 | coach |

| 1008 | HOD |

+------+-------+

4 rows in set (0.000 sec)

25..MariaDB[(stkdb)]>select count(\*) from psttbl;

+----------+

| count(\*) |

+----------+

| 4 |

+----------+

1 row in set (0.000 sec)

How to develop inner join feature(way:01) ?

01..MariaDB[(stkdb)]>

select \* from stdtbl

inner join usttbl

using (pid);

+------+-------+------+-------+

| pid | pname | edu | prole |

+------+-------+------+-------+

| 1001 | x1 | UG | Tutor |

| 1004 | x4 | UG | HM |

| 1007 | x7 | UG | Tutor |

+------+-------+------+-------+

3 rows in set (0.001 sec)

02...MariaDB[(stkdb)]>

select \* from stdtbl

inner join psttbl

using (pid);

+------+-------+------+-------+

| pid | pname | edu | prole |

+------+-------+------+-------+

| 1001 | x1 | UG | coach |

| 1002 | x2 | PG | HOD |

| 1005 | x5 | PG | coach |

| 1008 | x8 | PG | HOD |

+------+-------+------+-------+

4 rows in set (0.001 sec)

03.MariaDB[(stkdb)]>

select \* from stdtbl

inner join usttbl

using (pid)

inner join psttbl

using (pid);

+------+-------+------+-------+-------+

| pid | pname | edu | prole | prole |

+------+-------+------+-------+-------+

| 1001 | x1 | UG | Tutor | coach |

+------+-------+------+-------+-------+

How to develop inner join feature (way:02)?

01.MariaDB[(stkdb)]>

select \* from stdtbl s1

inner join usttbl u1

on s1.pid=u1.pid;

+------+-------+------+------+-------+

| pid | pname | edu | pid | prole |

+------+-------+------+------+-------+

| 1001 | x1 | UG | 1001 | Tutor |

| 1004 | x4 | UG | 1004 | HM |

| 1007 | x7 | UG | 1007 | Tutor |

+------+-------+------+------+-------+

3 rows in set (0.003 sec)

02.MariaDB[(stkdb)]>

select \* from stdtbl s1

inner join psttbl u1

on s1.pid=p1.pid;

03..MariaDB[(stkdb)]>

select \* from stdtbl

inner join usttbl u1

on s1.pid=u1.pid

inner join psttbl p1

on s1,pid=p1.pid;

How to develop inner join feature (way 03)?

01..MariaDB[(stkdb)]>

select \* from stdtbl

where exits

(

select 1 from usttbl

where stdtbl.pid=usttbl.pid

);

+------+-------+------+

| pid | pname | edu |

+------+-------+------+

| 1001 | x1 | UG |

| 1004 | x4 | UG |

| 1007 | x7 | UG |

+------+-------+------+

3 rows in set (0.100 sec)

02..MariaDB[(stkdb)]>

select \* from stdtbl

where exists

(

select 1 from psttbl

where stdtbl.pid=psstbl.pid

);

+------+-------+------+

| pid | pname | edu |

+------+-------+------+

| 1001 | x1 | UG |

| 1002 | x2 | PG |

| 1005 | x5 | PG |

| 1008 | x8 | PG |

+------+-------+------+

4 rows in set (0.001 sec)

03..MariaDB[(stkdb)]>

select \* from stdtbl

where exist

(

select 1 from usstbl

where stdtbl.pid=usttbl.pid

)and exist

(

select 1 from psttbl

where stdtbl.pid=pstttble.pid

);

+------+-------+------+

| pid | pname | edu |

+------+-------+------+

| 1001 | x1 | UG |

+------+-------+------+

1 row in set (0.001 sec)

How to develop Left join feature(way01)?

01..MariaDB[(stkdb)]>

select \* from stdtbl

left join usttbl

using(pid);

+------+-------+------+-------+

| pid | pname | edu | prole |

+------+-------+------+-------+

| 1001 | x1 | UG | Tutor |

| 1002 | x2 | PG | NULL |

| 1003 | x3 | - | NULL |

| 1004 | x4 | UG | HM |

| 1005 | x5 | PG | NULL |

| 1006 | x6 | - | NULL |

| 1007 | x7 | UG | Tutor |

| 1008 | x8 | PG | NULL |

| 1009 | x9 | - | NULL |

+------+-------+------+-------+

9 rows in set (0.003 sec)

02..MariaDB[(stkdb)]>

select \* from stdtbl

left join psttbl

using (pid);

+------+-------+------+-------+

| pid | pname | edu | prole |

+------+-------+------+-------+

| 1001 | x1 | UG | coach |

| 1002 | x2 | PG | HOD |

| 1003 | x3 | - | NULL |

| 1004 | x4 | UG | NULL |

| 1005 | x5 | PG | coach |

| 1006 | x6 | - | NULL |

| 1007 | x7 | UG | NULL |

| 1008 | x8 | PG | HOD |

| 1009 | x9 | - | NULL |

+------+-------+------+-------+

9 rows in set (0.001 sec)

03..MariaDB[(stkdb)]>

select \* from stdtbl

left join usttbl

using(pid)

left join psttbl

using(pid);

+------+-------+------+-------+-------+

| pid | pname | edu | prole | prole |

+------+-------+------+-------+-------+

| 1001 | x1 | UG | Tutor | coach |

| 1002 | x2 | PG | NULL | HOD |

| 1003 | x3 | - | NULL | NULL |

| 1004 | x4 | UG | HM | NULL |

| 1005 | x5 | PG | NULL | coach |

| 1006 | x6 | - | NULL | NULL |

| 1007 | x7 | UG | Tutor | NULL |

| 1008 | x8 | PG | NULL | HOD |

| 1009 | x9 | - | NULL | NULL |

+------+-------+------+-------+-------+

9 rows in set (0.001 sec)

How to develop left join feature(way02)?

01..MariaDB[(stkdb)]>

select \* from stdtbl

left join usttbl

on stdtbl.pid=usttbl.pid;

+------+-------+------+------+-------+

| pid | pname | edu | pid | prole |

+------+-------+------+------+-------+

| 1001 | x1 | UG | 1001 | Tutor |

| 1002 | x2 | PG | NULL | NULL |

| 1003 | x3 | - | NULL | NULL |

| 1004 | x4 | UG | 1004 | HM |

| 1005 | x5 | PG | NULL | NULL |

| 1006 | x6 | - | NULL | NULL |

| 1007 | x7 | UG | 1007 | Tutor |

| 1008 | x8 | PG | NULL | NULL |

| 1009 | x9 | - | NULL | NULL |

+------+-------+------+------+-------+

02..MariaDB[(stkdb)]>

select \*from stdtbl

left join psttbl

on stdtbl.pid=psttbl.pid;

+------+-------+------+------+-------+

| pid | pname | edu | pid | prole |

+------+-------+------+------+-------+

| 1001 | x1 | UG | 1001 | coach |

| 1002 | x2 | PG | 1002 | HOD |

| 1003 | x3 | - | NULL | NULL |

| 1004 | x4 | UG | NULL | NULL |

| 1005 | x5 | PG | 1005 | coach |

| 1006 | x6 | - | NULL | NULL |

| 1007 | x7 | UG | NULL | NULL |

| 1008 | x8 | PG | 1008 | HOD |

| 1009 | x9 | - | NULL | NULL |

+------+-------+------+------+-------+

9 rows in set (0.001 sec)

03..MariaDB[stkdb]>

select\*from stdtbl

left join usttbl

on stdtbl.pid=usttbl.pid

left join psttbl

on stdtbl.pid=psttbl.pid;

+------+-------+------+------+-------+------+-------+

| pid | pname | edu | pid | prole | pid | prole |

+------+-------+------+------+-------+------+-------+

| 1001 | x1 | UG | 1001 | Tutor | 1001 | coach |

| 1002 | x2 | PG | NULL | NULL | 1002 | HOD |

| 1003 | x3 | - | NULL | NULL | NULL | NULL |

| 1004 | x4 | UG | 1004 | HM | NULL | NULL |

| 1005 | x5 | PG | NULL | NULL | 1005 | coach |

| 1006 | x6 | - | NULL | NULL | NULL | NULL |

| 1007 | x7 | UG | 1007 | Tutor | NULL | NULL |

| 1008 | x8 | PG | NULL | NULL | 1008 | HOD |

| 1009 | x9 | - | NULL | NULL | NULL | NULL |

+------+-------+------+------+-------+------+-------+

9 rows in set (0.001 sec)

how to develop left join exclusion feature (way:01)?

01. MariaDB[stkdb]

select \*from stdtbl

left join usttbl

using(pid)

where prole is null;

+------+-------+------+-------+

| pid | pname | edu | prole |

+------+-------+------+-------+

| 1002 | x2 | PG | NULL |

| 1003 | x3 | - | NULL |

| 1005 | x5 | PG | NULL |

| 1006 | x6 | - | NULL |

| 1008 | x8 | PG | NULL |

| 1009 | x9 | - | NULL |

+------+-------+------+-------+

6 rows in set (0.001 sec)

02. MariaDB[stkdb]

select \*from stdtbl

left join psttbl

using(pid)

where prole is null;

+------+-------+------+-------+

| pid | pname | edu | prole |

+------+-------+------+-------+

| 1003 | x3 | - | NULL |

| 1004 | x4 | UG | NULL |

| 1006 | x6 | - | NULL |

| 1007 | x7 | UG | NULL |

| 1009 | x9 | - | NULL |

+------+-------+------+-------+

03.MariaDB[stkdb]

select \*from stdtbl

left join usttbl

using(pid)

left join psttbl

using(pid)

where usttbl.prole is null and psttbl.prole is null;

+------+-------+------+-------+-------+

| pid | pname | edu | prole | prole |

+------+-------+------+-------+-------+

| 1003 | x3 | - | NULL | NULL |

| 1006 | x6 | - | NULL | NULL |

| 1009 | x9 | - | NULL | NULL |

+------+-------+------+-------+-------+

3 rows in set (0.001 sec)

04.MariaDB[stkdb]

select stdtbl.pid,pname,edu from stdtbl

left join usttbl

using(pid)

left join psttbl

using(pid)

where usttbl.prole is null and psttbl.prole is null;

+------+-------+------+

| pid | pname | edu |

+------+-------+------+

| 1003 | x3 | - |

| 1006 | x6 | - |

| 1009 | x9 | - |

+------+-------+------+

3 rows in set (0.001 sec)

how to develop left join exclusion feature (way:02)?

01. MariaDB[stkdb]

select \*from stdtbl

left join usttbl

on stdtbl.pid=usttbl.pid

where prole is null;

+------+-------+------+------+-------+

| pid | pname | edu | pid | prole |

+------+-------+------+------+-------+

| 1002 | x2 | PG | NULL | NULL |

| 1003 | x3 | - | NULL | NULL |

| 1005 | x5 | PG | NULL | NULL |

| 1006 | x6 | - | NULL | NULL |

| 1008 | x8 | PG | NULL | NULL |

| 1009 | x9 | - | NULL | NULL |

+------+-------+------+------+-------+

02. MariaDB[stkdb]

select \*from stdtbl

left join psttbl

on stdtbl.pid=psttbl.pid

where prole is null;

+------+-------+------+------+-------+

| pid | pname | edu | pid | prole |

+------+-------+------+------+-------+

| 1003 | x3 | - | NULL | NULL |

| 1004 | x4 | UG | NULL | NULL |

| 1006 | x6 | - | NULL | NULL |

| 1007 | x7 | UG | NULL | NULL |

| 1009 | x9 | - | NULL | NULL |

+------+-------+------+------+-------+

5 rows in set (0.001 sec)

03.MariaDB[stkdb]

select \*from stdtbl

left join usttbl

on stdtbl.pid=usttbl.pid

left join psttbl

on stdtbl.pid=psttbl.pid

where usttbl.prole is null and psttbl.prole is null;

+------+-------+------+------+-------+------+-------+

| pid | pname | edu | pid | prole | pid | prole |

+------+-------+------+------+-------+------+-------+

| 1003 | x3 | - | NULL | NULL | NULL | NULL |

| 1006 | x6 | - | NULL | NULL | NULL | NULL |

| 1009 | x9 | - | NULL | NULL | NULL | NULL |

+------+-------+------+------+-------+------+-------+

3 rows in set (0.001 sec)

04.MariaDB[stkdb]

select \* from stdtbl.pid,pname,edu from stdtbl

left join usttbl

on stdtbl.pid=usttbl.pid

left join psttbl

on stdtbl.pid=psttbl.pid

where usttbl.prole is null and psttbl.prole is null;

How to develop left join exclusion feature (way:03)?

01. MariaDB[stkdb]

select \*from stdtbl

where not exists

(

select 1 from usttbl

where stdbl.pid=usttbl.pid

);

+------+-------+------+

| pid | pname | edu |

+------+-------+------+

| 1002 | x2 | PG |

| 1003 | x3 | - |

| 1005 | x5 | PG |

| 1006 | x6 | - |

| 1008 | x8 | PG |

| 1009 | x9 | - |

+------+-------+------+

6 rows in set (0.001 sec)

02. MariaDB[stkdb]

select \*from stdtbl

where not exists

(

select 1 from psttbl

where stdtbl.pid=psttbl.pid

);

+------+-------+------+

| pid | pname | edu |

+------+-------+------+

| 1003 | x3 | - |

| 1004 | x4 | UG |

| 1006 | x6 | - |

| 1007 | x7 | UG |

| 1009 | x9 | - |

+------+-------+------+

5 rows in set (0.001 sec)

03. MariaDB[stkdb]>

select \*from stdtbl

where not exists

(

select 1 from usttbl

where stdtbl.pid=usttbl.pid

)

and not exists

(

select 1 from psttbl

where stdtbl.pid=psttbl.pid

);

+------+-------+------+

| pid | pname | edu |

+------+-------+------+

| 1003 | x3 | - |

| 1006 | x6 | - |

| 1009 | x9 | - |

+------+-------+------+

3 rows in set (0.002 sec)

How to develop Right join feature(way01)?

01.MariaDB[(stkdb)]>

select \* from stdtbl

right join usttbl

using(pid);

+------+-------+-------+------+

| pid | prole | pname | edu |

+------+-------+-------+------+

| 1001 | Tutor | x1 | UG |

| 1004 | HM | x4 | UG |

| 1007 | Tutor | x7 | UG |

+------+-------+-------+------+

3 rows in set (0.001 sec)

02.MariaDB[(stkdb)]>

select \* from stdtbl

right join psttbl

using (pid);

+------+-------+-------+------+

| pid | prole | pname | edu |

+------+-------+-------+------+

| 1001 | coach | x1 | UG |

| 1002 | HOD | x2 | PG |

| 1005 | coach | x5 | PG |

| 1008 | HOD | x8 | PG |

+------+-------+-------+------+

4 rows in set (0.001 sec)

03.MariaDB[(stkdb)]>

select \* from stdtbl

right join usttbl

using(pid)

right join psttbl

using(pid);

+------+-------+-------+-------+------+

| pid | prole | prole | pname | edu |

+------+-------+-------+-------+------+

| 1001 | coach | Tutor | x1 | UG |

| 1002 | HOD | NULL | NULL | NULL |

| 1005 | coach | NULL | NULL | NULL |

| 1008 | HOD | NULL | NULL | NULL |

+------+-------+-------+-------+------+

4 rows in set (0.001 sec)

How to develop Right join feature(way02)?

01..MariaDB[(stkdb)]>

select \* from stdtbl

right join usttbl

on stdtbl.pid=usttbl.pid;

+------+-------+------+------+-------+

| pid | pname | edu | pid | prole |

+------+-------+------+------+-------+

| 1001 | x1 | UG | 1001 | Tutor |

| 1004 | x4 | UG | 1004 | HM |

| 1007 | x7 | UG | 1007 | Tutor |

+------+-------+------+------+-------+

3 rows in set (0.001 sec)

02..MariaDB[(stkdb)]>

select \*from stdtbl

right join psttbl

on stdtbl.pid=psttbl.pid;

+------+-------+------+------+-------+

| pid | pname | edu | pid | prole |

+------+-------+------+------+-------+

| 1001 | x1 | UG | 1001 | coach |

| 1002 | x2 | PG | 1002 | HOD |

| 1005 | x5 | PG | 1005 | coach |

| 1008 | x8 | PG | 1008 | HOD |

+------+-------+------+------+-------+

4 rows in set (0.001 sec)

03..MariaDB[stkdb]>

select\*from stdtbl

right join usttbl

on stdtbl.pid=usttbl.pid

right join psttbl

on stdtbl.pid=psttbl.pid;

+------+-------+------+------+-------+------+-------+

| pid | pname | edu | pid | prole | pid | prole |

+------+-------+------+------+-------+------+-------+

| 1001 | x1 | UG | 1001 | Tutor | 1001 | coach |

| NULL | NULL | NULL | NULL | NULL | 1002 | HOD |

| NULL | NULL | NULL | NULL | NULL | 1005 | coach |

| NULL | NULL | NULL | NULL | NULL | 1008 | HOD |

+------+-------+------+------+-------+------+-------+

4 rows in set (0.001 sec)

how to develop Right join exclusion feature (way:01)?

01. MariaDB[stkdb]

select \*from stdtbl

right join usttbl

using(pid)

where prole is null;

Empty set (0.001 sec)

02. MariaDB[stkdb]

select \*from stdtbl

right join psttbl

using(pid)

where prole is null;

Empty set (0.001 sec)

03.MariaDB[stkdb]

select \*from stdtbl

right join usttbl

using(pid)

right join psttbl

using(pid)

where usttbl.prole is null and psttbl.prole is null;

Empty set (0.001 sec)

04.MariaDB[stkdb]

select stdtbl.pid,pname,edu from stdtbl

right join usttbl

using(pid)

right join psttbl

using(pid)

where usttbl.prole is null and psttbl.prole is null;

Empty set (0.001 sec)

05.MariaDB[stkdb]

select stdtbl.pid,pname,edu from stdtbl

right join usttbl

using(pid)

right join psttbl

using(pid)

where usttbl.prole is not null and psttbl.prole is not null;

+------+-------+------+

| pid | pname | edu |

+------+-------+------+

| 1001 | x1 | UG |

+------+-------+------+

1 row in set (0.001 sec)

how to develop Right join exclusion feature (way:02)?

01. MariaDB[stkdb]

select \*from stdtbl

right join usttbl

on stdtbl.pid=usttbl.pid

where prole is null;

Empty set (0.001 sec)

02. MariaDB[stkdb]

select \*from stdtbl

right join psttbl

on stdtbl.pid=psttbl.pid

where prole is null;

Empty set (0.001 sec)

03.MariaDB[stkdb]

select \*from stdtbl

right join usttbl

on stdtbl.pid=usttbl.pid

right join psttbl

on stdtbl.pid=psttbl.pid

where usttbl.prole is null and psttbl.prole is null;

Empty set (0.001 sec)

04.MariaDB[stkdb]

select stdtbl.pid,pname,edu from stdtbl

right join usttbl

on stdtbl.pid=usttbl.pid

right join psttbl

on stdtbl.pid=psttbl.pid

where usttbl.prole is null and psttbl.prole is null;

Empty set (0.001 sec)

05.MariaDB[stkdb]

select stdtbl.pid,pname,edu from stdtbl

right join usttbl

using(pid)

right join psttbl

using(pid)

where usttbl.prole is not null and psttbl.prole is not null;

+------+-------+------+

| pid | pname | edu |

+------+-------+------+

| 1001 | x1 | UG |

+------+-------+------+

1 row in set (0.001 sec)

How to develop Full join feature ?

01. MariaDB[stkdb]

select \*from stdtbl

full join usttbl;

+------+-------+------+------+-------+

| pid | pname | edu | pid | prole |

+------+-------+------+------+-------+

| 1001 | x1 | UG | 1001 | Tutor |

| 1001 | x1 | UG | 1004 | HM |

| 1001 | x1 | UG | 1007 | Tutor |

| 1002 | x2 | PG | 1001 | Tutor |

| 1002 | x2 | PG | 1004 | HM |

| 1002 | x2 | PG | 1007 | Tutor |

| 1003 | x3 | - | 1001 | Tutor |

| 1003 | x3 | - | 1004 | HM |

| 1003 | x3 | - | 1007 | Tutor |

| 1004 | x4 | UG | 1001 | Tutor |

| 1004 | x4 | UG | 1004 | HM |

| 1004 | x4 | UG | 1007 | Tutor |

| 1005 | x5 | PG | 1001 | Tutor |

| 1005 | x5 | PG | 1004 | HM |

| 1005 | x5 | PG | 1007 | Tutor |

| 1006 | x6 | - | 1001 | Tutor |

| 1006 | x6 | - | 1004 | HM |

| 1006 | x6 | - | 1007 | Tutor |

| 1007 | x7 | UG | 1001 | Tutor |

| 1007 | x7 | UG | 1004 | HM |

| 1007 | x7 | UG | 1007 | Tutor |

| 1008 | x8 | PG | 1001 | Tutor |

| 1008 | x8 | PG | 1004 | HM |

| 1008 | x8 | PG | 1007 | Tutor |

| 1009 | x9 | - | 1001 | Tutor |

| 1009 | x9 | - | 1004 | HM |

| 1009 | x9 | - | 1007 | Tutor |

+------+-------+------+------+-------+

27 rows in set (0.001 sec)

02. MariaDB[stkdb]

select \*from stdtbl

full join psttbl;

+------+-------+------+------+-------+

| pid | pname | edu | pid | prole |

+------+-------+------+------+-------+

| 1001 | x1 | UG | 1001 | coach |

| 1001 | x1 | UG | 1002 | HOD |

| 1001 | x1 | UG | 1005 | coach |

| 1001 | x1 | UG | 1008 | HOD |

| 1002 | x2 | PG | 1001 | coach |

| 1002 | x2 | PG | 1002 | HOD |

| 1002 | x2 | PG | 1005 | coach |

| 1002 | x2 | PG | 1008 | HOD |

| 1003 | x3 | - | 1001 | coach |

| 1003 | x3 | - | 1002 | HOD |

| 1003 | x3 | - | 1005 | coach |

| 1003 | x3 | - | 1008 | HOD |

| 1004 | x4 | UG | 1001 | coach |

| 1004 | x4 | UG | 1002 | HOD |

| 1004 | x4 | UG | 1005 | coach |

| 1004 | x4 | UG | 1008 | HOD |

| 1005 | x5 | PG | 1001 | coach |

| 1005 | x5 | PG | 1002 | HOD |

| 1005 | x5 | PG | 1005 | coach |

| 1005 | x5 | PG | 1008 | HOD |

| 1006 | x6 | - | 1001 | coach |

| 1006 | x6 | - | 1002 | HOD |

| 1006 | x6 | - | 1005 | coach |

| 1006 | x6 | - | 1008 | HOD |

| 1007 | x7 | UG | 1001 | coach |

| 1007 | x7 | UG | 1002 | HOD |

| 1007 | x7 | UG | 1005 | coach |

| 1007 | x7 | UG | 1008 | HOD |

| 1008 | x8 | PG | 1001 | coach |

| 1008 | x8 | PG | 1002 | HOD |

| 1008 | x8 | PG | 1005 | coach |

| 1008 | x8 | PG | 1008 | HOD |

| 1009 | x9 | - | 1001 | coach |

| 1009 | x9 | - | 1002 | HOD |

| 1009 | x9 | - | 1005 | coach |

| 1009 | x9 | - | 1008 | HOD |

+------+-------+------+------+-------+

36 rows in set (0.001 sec)

How to develop Full join exclusion feature ?

01. MariaDB[stkdb]

select stdtbl.\*,prole from stdtbl

left join usttbl

on stdtbl.pid=usttbl.pid;

+------+-------+------+-------+

| pid | pname | edu | prole |

+------+-------+------+-------+

| 1001 | x1 | UG | Tutor |

| 1002 | x2 | PG | NULL |

| 1003 | x3 | - | NULL |

| 1004 | x4 | UG | HM |

| 1005 | x5 | PG | NULL |

| 1006 | x6 | - | NULL |

| 1007 | x7 | UG | Tutor |

| 1008 | x8 | PG | NULL |

| 1009 | x9 | - | NULL |

+------+-------+------+-------+

9 rows in set (0.001 sec)02. MariaDB[stkdb]

select stdtbl.\*,prole from stdtbl

right join usttbl

on stdtbl.pid=usttbl.pid;

+------+-------+------+-------+

| pid | pname | edu | prole |

+------+-------+------+-------+

| 1001 | x1 | UG | Tutor |

| 1004 | x4 | UG | HM |

| 1007 | x7 | UG | Tutor |

+------+-------+------+-------+

3 rows in set (0.001 sec)

03. MariaDB[stkdb]

select stdtbl.\*,prole from stdtbl

left join usttbl

on stdtbl.pid=usttbl.pid;

union

select stdtbl.\*,prole from stdtbl

right join usttbl

on stdtbl.pid=usttbl.pid;

04.MariaDB[stkdb]> drop temporary table if exists stdusttbl;

Query OK, 0 rows affected, 1 warning (0.000 sec)

05. MariaDB[stkdb]>

create temporary table if not exists stdusttbl

as

select stdtbl.\*,prole from stdtbl

left join usttbl

on stdtbl.pid=usttbl.pid

where prole is null

union

select stdtbl.\*,prole from stdtbl;

right join usttbl

on stdtbl.pid=usttbl.pid

where prole is null;

06. MariaDB[stkdb]>

select \* from stdusttbl;

07. MariaDB[stkdb]>

select stdusttbl.pid,pname,edu from stdusttbl

left join usttbl

using(pid)

where psttbl.prole is null;

How to develop cross join feature?

01. MariaDB[stkdb]>

select \*from stdtbl

cross join usttbl;

+------+-------+------+------+-------+

| pid | pname | edu | pid | prole |

+------+-------+------+------+-------+

| 1001 | x1 | UG | 1001 | Tutor |

| 1001 | x1 | UG | 1004 | HM |

| 1001 | x1 | UG | 1007 | Tutor |

| 1002 | x2 | PG | 1001 | Tutor |

| 1002 | x2 | PG | 1004 | HM |

| 1002 | x2 | PG | 1007 | Tutor |

| 1003 | x3 | - | 1001 | Tutor |

| 1003 | x3 | - | 1004 | HM |

| 1003 | x3 | - | 1007 | Tutor |

| 1004 | x4 | UG | 1001 | Tutor |

| 1004 | x4 | UG | 1004 | HM |

| 1004 | x4 | UG | 1007 | Tutor |

| 1005 | x5 | PG | 1001 | Tutor |

| 1005 | x5 | PG | 1004 | HM |

| 1005 | x5 | PG | 1007 | Tutor |

| 1006 | x6 | - | 1001 | Tutor |

| 1006 | x6 | - | 1004 | HM |

| 1006 | x6 | - | 1007 | Tutor |

| 1007 | x7 | UG | 1001 | Tutor |

| 1007 | x7 | UG | 1004 | HM |

| 1007 | x7 | UG | 1007 | Tutor |

| 1008 | x8 | PG | 1001 | Tutor |

| 1008 | x8 | PG | 1004 | HM |

| 1008 | x8 | PG | 1007 | Tutor |

| 1009 | x9 | - | 1001 | Tutor |

| 1009 | x9 | - | 1004 | HM |

| 1009 | x9 | - | 1007 | Tutor |

+------+-------+------+------+-------+

27 rows in set (0.001 sec)

02. MariaDB[stkdb]>

select \*from stdtbl

cross join psttbl;

+------+-------+------+------+-------+

| pid | pname | edu | pid | prole |

+------+-------+------+------+-------+

| 1001 | x1 | UG | 1001 | coach |

| 1001 | x1 | UG | 1002 | HOD |

| 1001 | x1 | UG | 1005 | coach |

| 1001 | x1 | UG | 1008 | HOD |

| 1002 | x2 | PG | 1001 | coach |

| 1002 | x2 | PG | 1002 | HOD |

| 1002 | x2 | PG | 1005 | coach |

| 1002 | x2 | PG | 1008 | HOD |

| 1003 | x3 | - | 1001 | coach |

| 1003 | x3 | - | 1002 | HOD |

| 1003 | x3 | - | 1005 | coach |

| 1003 | x3 | - | 1008 | HOD |

| 1004 | x4 | UG | 1001 | coach |

| 1004 | x4 | UG | 1002 | HOD |

| 1004 | x4 | UG | 1005 | coach |

| 1004 | x4 | UG | 1008 | HOD |

| 1005 | x5 | PG | 1001 | coach |

| 1005 | x5 | PG | 1002 | HOD |

| 1005 | x5 | PG | 1005 | coach |

| 1005 | x5 | PG | 1008 | HOD |

| 1006 | x6 | - | 1001 | coach |

| 1006 | x6 | - | 1002 | HOD |

| 1006 | x6 | - | 1005 | coach |

| 1006 | x6 | - | 1008 | HOD |

| 1007 | x7 | UG | 1001 | coach |

| 1007 | x7 | UG | 1002 | HOD |

| 1007 | x7 | UG | 1005 | coach |

| 1007 | x7 | UG | 1008 | HOD |

| 1008 | x8 | PG | 1001 | coach |

| 1008 | x8 | PG | 1002 | HOD |

| 1008 | x8 | PG | 1005 | coach |

| 1008 | x8 | PG | 1008 | HOD |

| 1009 | x9 | - | 1001 | coach |

| 1009 | x9 | - | 1002 | HOD |

| 1009 | x9 | - | 1005 | coach |

| 1009 | x9 | - | 1008 | HOD |

+------+-------+------+------+-------+

36 rows in set (0.001 sec)

How to develop table object for enhance self join feature example01:

1. MariaDB[stkdb]>select database();

+------------+

| database() |

+------------+

| stkdb |

+------------+

1 row in set (0.000 sec)

* Epttbl stands for each person task table
* Sfid stands for staff id

1. MariaDB[stkdb]>

create or replace table epttbl

(

sfid int not null,

stid int not null check(sfid !=stid),

teach varchar(5) not null

);

Query OK, 0 rows affected (0.207 sec)

1. MariaDB[stkdb]>show tables;

+-----------------+

| Tables\_in\_stkdb |

+-----------------+

| epptbl |

| psttbl |

| stdtbl |

| usttbl |

+-----------------+

4 rows in set (0.001 sec)

1. MariaDB[stkdb]>select \* from epttbl;

Empty set (0.002 sec)

1. MariaDB[stkdb]>insert into epttbl

values

(11,99,’c’)

(33,77,’c++’)

(55,22,’java’)

(77,55,’c’)

(99,33,’c++’)

(11,44,’java’)

(33,11,’html’)

(55,33,’css’)

(77,55,’js’);

Query OK, 9 rows affected (0.106 sec)

Records: 9 Duplicates: 0 Warnings: 0

1. MariaDB[stkdb]>select \* from epttbl;

+------+------+-------+

| sfid | stid | teach |

+------+------+-------+

| 11 | 99 | c |

| 33 | 77 | c++ |

| 55 | 22 | java |

| 77 | 55 | c |

| 99 | 33 | c++ |

| 11 | 44 | java |

| 33 | 11 | html |

| 55 | 33 | css |

| 77 | 55 | js |

+------+------+-------+

9 rows in set (0.000 sec)

How to develop self join feature way01?

1. MariaDB[stkdb]>select \* from epttbl

order by sfid,stid;

+------+------+-------+

| sfid | stid | teach |

+------+------+-------+

| 11 | 44 | java |

| 11 | 99 | c |

| 33 | 11 | html |

| 33 | 77 | c++ |

| 55 | 22 | java |

| 55 | 33 | css |

| 77 | 55 | c |

| 77 | 55 | js |

| 99 | 33 | c++ |

+------+------+-------+

9 rows in set (0.001 sec)

02.MariaDB[stkdb]>select distinct e1.stid,e1.sfid,e1.teach

from epttbl e1,epttbl e2

where e1.stid=e2.sfid

order by e1.stid,e1.sfid;

+------+------+-------+

| stid | sfid | teach |

+------+------+-------+

| 11 | 33 | html |

| 33 | 55 | css |

| 33 | 99 | c++ |

| 55 | 77 | c |

| 55 | 77 | js |

| 77 | 33 | c++ |

| 99 | 11 | c |

+------+------+-------+

7 rows in set (0.001 sec)

How to develop self join feature way01?

1. MariaDB[stkdb]> select \* from epttbl

order by sfid,stid;

+------+------+-------+

| sfid | stid | teach |

+------+------+-------+

| 11 | 44 | java |

| 11 | 99 | c |

| 33 | 11 | html |

| 33 | 77 | c++ |

| 55 | 22 | java |

| 55 | 33 | css |

| 77 | 55 | c |

| 77 | 55 | js |

| 99 | 33 | c++ |

+------+------+-------+

9 rows in set (0.001 sec)

MariaDB [stkdb]>

1. MariaDB[stkdb]>select sfid,stid,teach

from epttbl

where stid in(select stid from epttbl)

order by stid,sfid;

+------+------+-------+

| sfid | stid | teach |

+------+------+-------+

| 33 | 11 | html |

| 55 | 22 | java |

| 55 | 33 | css |

| 99 | 33 | c++ |

| 11 | 44 | java |

| 77 | 55 | c |

| 77 | 55 | js |

| 33 | 77 | c++ |

| 11 | 99 | c |

+------+------+-------+

9 rows in set (0.001 sec)

1. MariaDB[stkdb]>select sfid,stid,teach

from epttbl

where stid not in(select stid from epttbl)

order by stid,sfid;

Empty set (0.001 sec)

How to develop table object for enhance self join feature(example 2)?

1. MariaDB[stkdb]>select database();

+------------+

| database() |

+------------+

| stkdb |

+------------+

1 row in set (0.000 sec)

1. MariaDB[stkdb]>create or replace table esitbl

(

eid int unique not null,

sal numeric(10,2) not null

);

Query OK, 0 rows affected (0.220 sec)

1. MariaDB[stkdb]>show tables;

| Tables\_in\_stkdb |

+-----------------+

| epptbl |

| epttbl |

| esitbl |

| psttbl |

| stdtbl |

| usttbl |

+-----------------+

6 rows in set (0.001 sec)

1. MariaDB[stkdb]>select \* from esitbl;

Empty set (0.005 sec)

1. MariaDB[stkdb]>insert into esitbl

values

(1001,100000),

(1002,200000),

(1003,100000),

(1004,300000),

(1005,100000);

Query OK, 5 rows affected (0.039 sec)

Records: 5 Duplicates: 0 Warnings: 0

1. MariaDB[stkdb]>select \* from esitbl;

+------+-----------+

| eid | sal |

+------+-----------+

| 1001 | 100000.00 |

| 1002 | 200000.00 |

| 1003 | 100000.00 |

| 1004 | 300000.00 |

| 1005 | 100000.00 |

+------+-----------+

5 rows in set (0.000 sec)

How to develop group by feature for perquisite of self join feature(example02)?

1. MariaDB[stkdb]>select sal,count(sal) from esitbl group by sal;

+-----------+------------+

| sal | count(sal) |

+-----------+------------+

| 100000.00 | 3 |

| 200000.00 | 1 |

| 300000.00 | 1 |

+-----------+------------+

3 rows in set (0.000 sec)

1. MariaDB[stkdb]>select sal from esitbl group by sal having count(sal)>1;

+-----------+

| sal |

+-----------+

| 100000.00 |

+-----------+

1 row in set (0.001 sec)

1. MariaDB[stkdb]>select sal from esitbl group by sal having count(sal)=1;

| sal |

+-----------+

| 200000.00 |

| 300000.00 |

+-----------+

2 rows in set (0.000 sec)

1. MariaDB[stkdb]>select eid,sal from esitbl group by sal having count(sal)=1;

+------+-----------+

| eid | sal |

+------+-----------+

| 1002 | 200000.00 |

| 1004 | 300000.00 |

+------+-----------+

2 rows in set (0.000 sec)

How to develop self join feature (example2)?

1. MariaDB[stkdb]>select \* from esitbl

Where sal in (select sal from esitbl group by sal having count(sal)>1);

+------+-----------+

| eid | sal |

+------+-----------+

| 1001 | 100000.00 |

| 1003 | 100000.00 |

| 1005 | 100000.00 |

+------+-----------+

3 rows in set (0.002 sec)

1. MariaDB[stkdb]> select \* from esitbl

Where sal in (select sal from esitbl group by sal having count(sal)=1);

+------+-----------+

| eid | sal |

+------+-----------+

| 1002 | 200000.00 |

| 1004 | 300000.00 |

+------+-----------+

2 rows in set (0.002 sec)

How to develop table object for enhance natural join feature?

1. MariaDB[stkdb]>select database();

+------------+

| database() |

+------------+

| stkdb |

+------------+

1 row in set (0.000 sec)

1. MariaDB[stkdb]>create or replace table pfntbl

(

rno int primary key,

fname varchar(2) not null

);

Query OK, 0 rows affected (0.239 sec)

1. MariaDB[stkdb]>create or replace table plntbl

(

rno int primary key references plntbl.rno,

lname varchar(2) not null

);

Query OK, 0 rows affected (0.504 sec)

1. MariaDB[stkdb]>show tables;

+-----------------+

| Tables\_in\_stkdb |

+-----------------+

| epptbl |

| epttbl |

| esitbl |

| pfntbl |

| psttbl |

| stdtbl |

| usttbl |

+-----------------+

7 rows in set (0.001 sec)

1. MariaDB[stkdb]>select \* from pfntbl;

Empty set (0.002 sec)

1. MariaDB[stkdb]>select \* from plntbl;

Empty set (0.001 sec)

1. MariaDB[stkdb]>insert into pfntbl

values

(1001,’aa’),

(1002,’bb’)

(1003,’cc),

(1004,’dd’),

(1005,’ee’);

Query OK, 5 rows affected (0.103 sec)

Records: 5 Duplicates: 0 Warnings: 0

1. MariaDB[stkdb]>insert into plntbl

values

(1001,’x1’),

(1002,’x2’)

(1003,’x3’),

(1004,’x4’),

(1005,’x5’);

Query OK, 5 rows affected (0.110 sec)

Records: 5 Duplicates: 0 Warnings: 0

1. MariaDB[stkdb]>select \* from pfntbl;

+------+-------+

| rno | fname |

+------+-------+

| 1001 | aa |

| 1002 | bb |

| 1003 | cc |

| 1004 | dd |

| 1005 | ee |

+------+-------+

5 rows in set (0.000 sec)

1. MariaDB[stkdb]>select \* from plntbl;

+------+-------+

| rno | lname |

+------+-------+

| 1001 | x1 |

| 1002 | x2 |

| 1003 | x3 |

| 1004 | x4 |

| 1005 | x5 |

+------+-------+

5 rows in set (0.000 sec)

How to develop natural join feature(way01)?

1. MariaDB[stkdb]>select rno,fname,lname from pfntbl

natural join plntbl;

1. MariaDB[stkdb]>select pfntbl.rno,fname,lname,concat(fname,’’,’lname)’name’

From pfntbl,plntbl where pfntbl.rno=plntbl.rno;

+------+-------+-------+

| rno | fname | lname |

+------+-------+-------+

| 1001 | aa | x1 |

| 1002 | bb | x2 |

| 1003 | cc | x3 |

| 1004 | dd | x4 |

| 1005 | ee | x5 |

+------+-------+-------+

5 rows in set (0.000 sec)