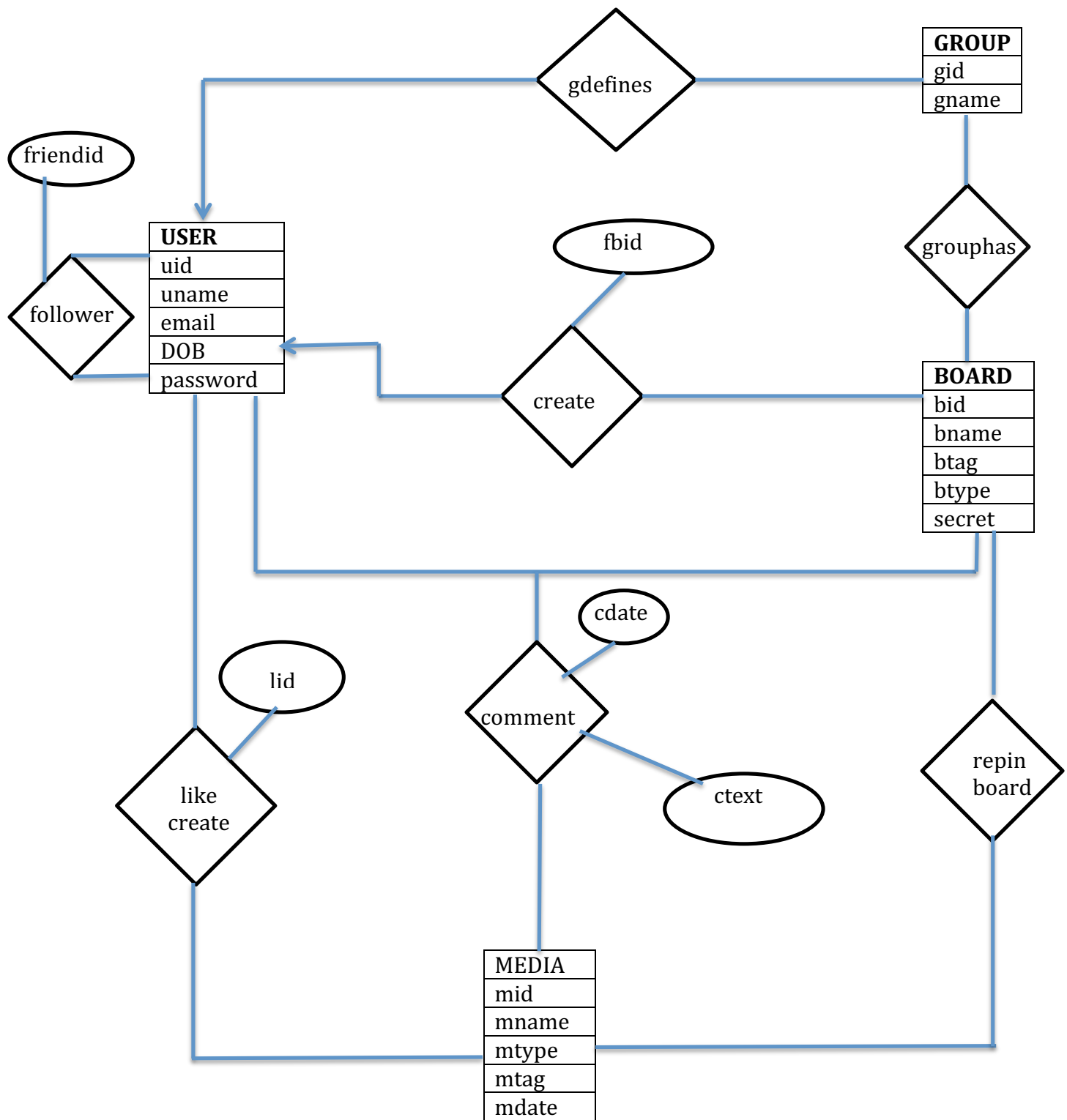


DATABASE PROJECT PART I

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ER Diagram

ER DIAGRAM DESCRIPTION

User:

New User sign-up by entering their Name, Email-id, Password, Date of Birth and with few other attributes which are not compulsion to be filled. Once created, its stored in database and user can search along their favorite media or any content, which they desire to seek. All user can follow/create boards, which they find interesting and they can pin several, images to the boards they themselves created/uploaded. They can also repin the images, which are uploaded by other user into their board.

User can make friends and also share secret boards which only his friends can have an access for. Users can combine several boards to form a group. All the media is made available on that group corresponding to the boards being attached.

Create:

User can create several boards, which comprises of various media which may be uploaded or repined from other media uploaded by other users.

Likes:

User can like several pictures, which are pin on their board, or any other user board. Likes are added to the original media uploaded by a person.

Comment:

User can comment on any picture, which they wish over the board. The comment is reflected on the corresponding board and not on the board/media from where it was repined.

Follower:

User can have several followers while a single user can follow many people if he/she wishes to follow and have updates on their board.

Follow Board:

Users can follow several boards, which they are interested in and also receive updates from the board which they are following.

Boards:

Boards comprised of board-id, which comprises various media tagged, uploaded or repined by the user. Each board belongs to single person, however a single can be followed by several users.

RELATIONAL SCHEMAS

- board (bid, bname, btag, btype, secret)
- comment (cid, bid, mid, cdate, ctext)
- createboard (uid, fbid, bid)
- follower (uid, fid, friendid)
- gdefines (gid, uid)
- group (gid, gname)
- grouphas (gid, bid)
- likecreate (lid, mid, uid)
- media (mid, mname, mtag, mtype, mdate)
- repinboard (bid, mid)
- user (uid, uname, email, DOB, password)

TABLES

```
create table user
(
uid varchar(20) ,
uname varchar(30),
email varchar(30),
DOB date,
password varchar (30)
primary key (uid)
);
```

```
create table follower
(
uid varchar (20),
fid varchar (20),
friendid varchar (20),
primary key (uid, fid, friendid),
foreign key(uid) references user(uid)
);
```

```
create table board
(
bid varchar (20),
bname varchar (20),
btag varchar (100),
btype varchar (20),
secret bit,
primary key (bid)
);
```

```
create table group
(
gid varchar (20),
gname varchar (20),
primary key (gid)
);
```

```
create table gdefines
(
gid varchar (20),
uid varchar (20),
primary key (gid, uid),
foreign key (gid) references group(gid),
foreign key (uid) references user(uid),
);
```

```
create table grouphas
(
gid varchar (20),
bid varchar (20),
primary key (gid, bid),
foreign key (gid) references group(gid),
foreign key (bid) references user(bid),
);
```

```
create table media
(
mid varchar (20),
mname varchar (20),
mtag varchar (100),
mtype varchar (20),
mdate datetime,
primary key (mid),
);
```

```
create table repinboard
(
bid varchar (20),
mid varchar (20),
primary key (bid, mid),
foreign key (bid) references board(bid),
foreign key (mid) references media(mid),
);
```

```
create table createboard
(
uid varchar (20),
fbid varchar (20),
bid varchar (20),
primary key (uid, fbid, bid)
foreign key (uid) references user(uid),
foreign key (bid) references board (bid),
);
```

```
create table likecreate
(
lid varchar (20),
mid varchar (20),
uid varchar (20),
primary key (lid, mid, uid)
foreign key (uid) references user(uid),
foreign key (mid) references media(mid),
);
```

```
create table comment
(
cid varchar (20),
mid varchar (20),
bid varchar (20),
ctext varchar (50),
cdate datetime,
primary key (cid, mid, bid, cdate)
foreign key (mid) references media(mid),
foreign key (bid) references board (bid),
);
```


SQL Query and Screenshots:

- When user sign's up:
'uid' is a primary key:

Create:

```
INSERT INTO `pinterest`.`user` (`uid`, `uname`, `email`, `DOB`, `password`)  
VALUES  
('p6', 'alisha', 'alisha@nyu.edu', '1992-05-05', '6');
```

- When user Edit the profile:
'uid' is a primary key:

Edit:

```
UPDATE `pinterest`.`user` SET `uname` = 'alishaa', `email` = 'alishaa@nyu.e  
du', `DOB` = '1992-05-04' WHERE `user`.`uid` = 'p6';
```

- User friend Accept/ User follow:

Follower/ Friend:

```
INSERT INTO `pinterest`.`follower` (`uid`, `fid`, `friendid`) VALUES ('p6', 'p3',  
'p3');
```

- User Board follow:

Board Follow:

```
INSERT INTO `pinterest`.`createboard` (`uid`, `fbid`, `bid`) VALUES ('p3', 'p6',  
'b4');
```

➤ Creating Board:

'bid' is a primary key:

Create Board:

```
INSERT INTO `pinterest`.`board` (`bid`, `bname`, `tag`, `type`, `secret`) VALUES ('b10', 'Love', 'SRK', 'Romance', 'N')
```

➤ Adding Media:

'mid' is a primary key:

Upload Media:

```
INSERT INTO `pinterest`.`media` (`mid`, `mname`, `mtag`, `mtype`, `mdate`) VALUES ('m18', 'SRK', 'Wow,HAndsome', 'movies', '2010-09-15');
```

➤ Attaching media to Board (Pin):

'bid', 'mid' is a primary key:

```
INSERT INTO `pinterest`.`repinboard` (`bid`, `mid`) VALUES ('b10', 'm18');
```

➤ Attaching media from one Board to other (RePin):

'bid', 'mid' is a primary key:

Repin:

```
INSERT INTO `pinterest`.`repinboard` (`bid`, `mid`) VALUES ('b4', 'm18');
```

➤ Like Particular media(Pin):

'lid', 'uid', 'mid' is a primary key:

Like:

```
INSERT INTO `pinterest`.`likcomm` (`lid`, `mid`, `uid`) VALUES ('p3', 'm18', 'p6');
```

- Comment on Particular Media on corresponding Board:
'bid', 'cid', 'mid' is a primary key:

Comment:

```
INSERT INTO `pinterest`.`comment` (`cid`, `bid`, `mid`, `ctext`) VALUES ('p3', 'b10', 'm18', 'Cute pic!!');
```

Comment on Different board:

```
INSERT INTO `pinterest`.`comment` (`cid`, `bid`, `mid`, `ctext`) VALUES ('p2', 'b3', 'm18', 'Nonesense !!');
```

- Create group with User who made it:
'gid' is a primary key:

Create Group:

```
INSERT INTO `pinterest`.`group` (`gid`, `gname`) VALUES ('g3', 'Home');  
INSERT INTO `pinterest`.`gdefines` (`gid`, `uid`) VALUES ('g3', 'p3');
```

- Attaching Board to Group:

Add board to Group:

```
INSERT INTO `pinterest`.`grouphas` (`gid`, `bid`) VALUES ('g3', 'b3'), ('g3', 'b4'), ('', '');
```

Queries Displaying Output:

- Show number of board particularly User Created:

SELECT count(distinct bid) FROM `createboard` WHERE `uid`='p1'

The screenshot shows the phpMyAdmin interface with the 'createboard' table selected in the 'pinterest' database. The SQL query `SELECT count(distinct bid) FROM `createboard` WHERE `uid`='p1'` has been executed successfully. The result shows a count of 2. The interface includes a sidebar with a database structure tree, a top navigation bar, and a bottom status bar showing the time as 2:42 AM on 4/12/2015.

Query results operations:

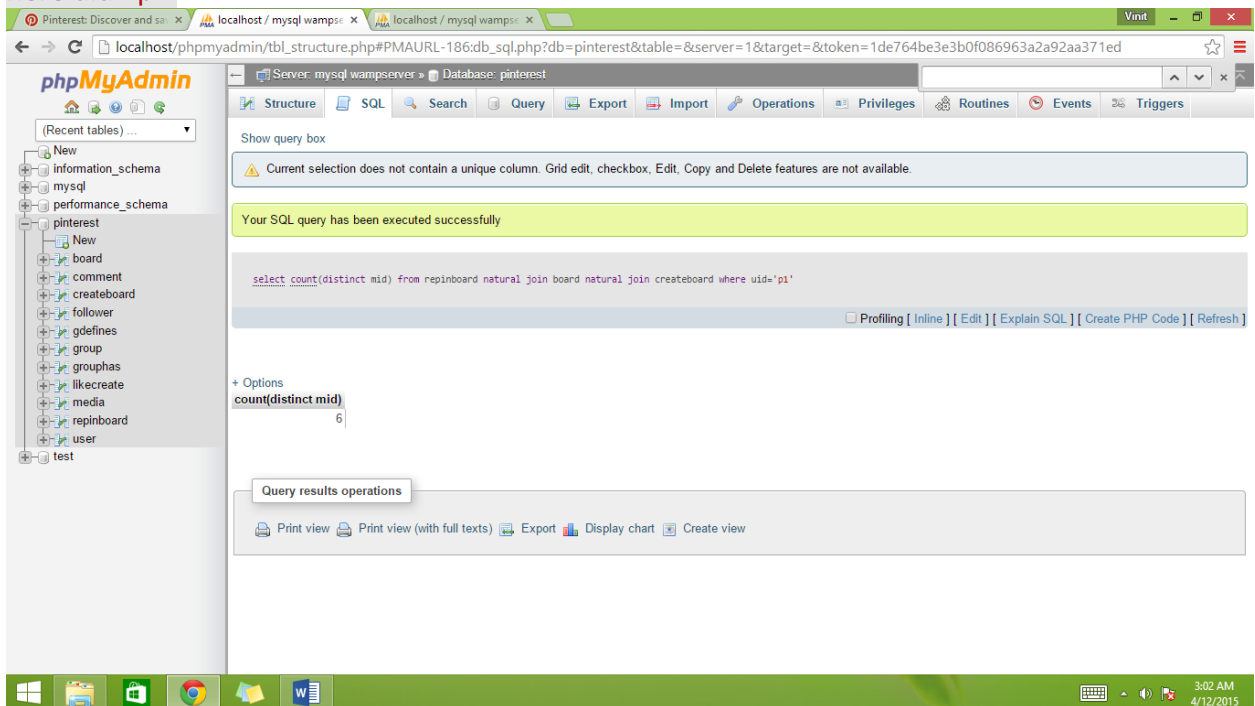
- Print view
- Print view (with full texts)
- Export
- Display chart
- Create view

Table of Board Creator: We can see below number of boards created by p1 are 2 (b1,b6)

The screenshot shows the phpMyAdmin interface displaying the data in the 'createboard' table. The query `SELECT * FROM `createboard`` has been executed, showing 20 rows. The table has columns 'uid', 'fbid', and 'bid'. The data shows that user 'p1' has created two boards, 'b1' and 'b6', each with multiple 'fbid' values.

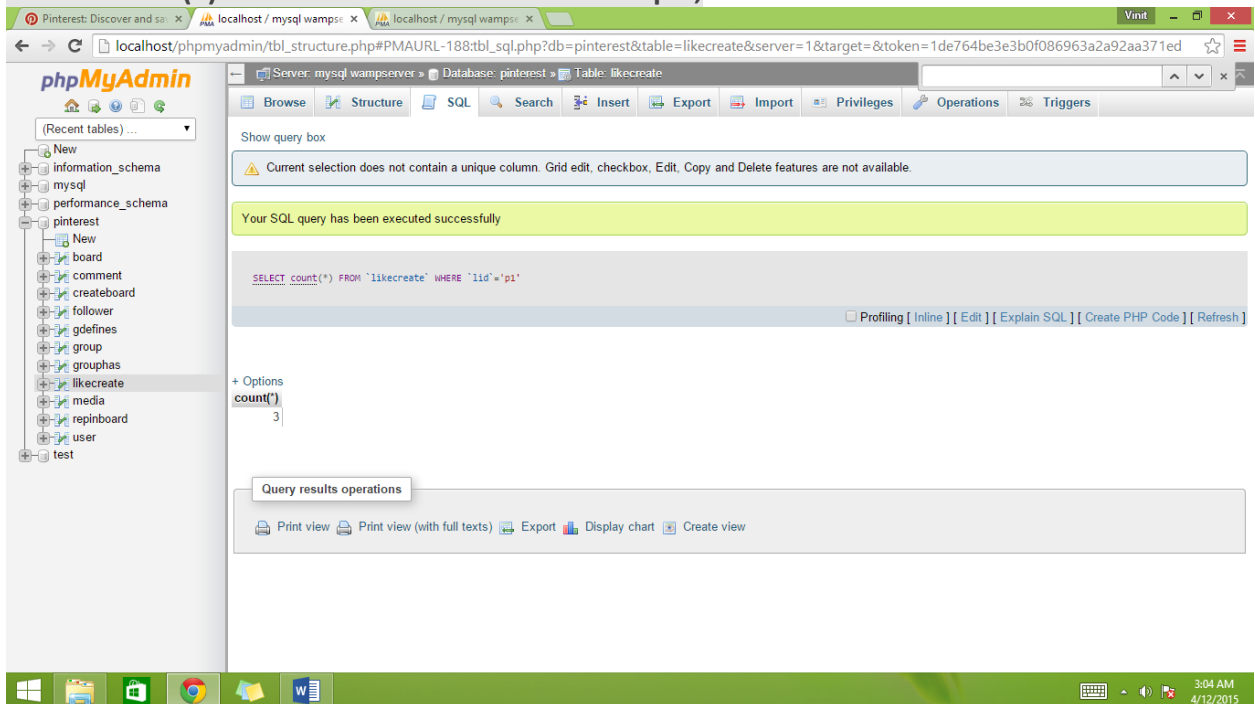
uid	fbid	bid
p1	p2	b1
p1	p2	b6
p1	p4	b1
p1	p5	b6
p2	p1	b2
p2	p3	b2
p2	p4	b5
p2	p5	b2
p3	p1	b4
p3	p2	b4
p3	p5	b3
p3	p6	b4
p4	p1	b8
p4	p2	b8

- Count of media uploaded and repinned on different board by user p1:
`select count(distinct mid) from repinboard natural join board natural join createboard where uid='p1'`



The screenshot shows the phpMyAdmin interface with the 'Database: pinterest' selected. The 'Query' tab is active, and the SQL query `select count(distinct mid) from repinboard natural join board natural join createboard where uid='p1'` has been executed successfully. The result is displayed as `count(distinct mid)` with a value of 6. The left sidebar shows the database structure, including tables like board, comment, follower, gdefines, group, grouphas, likecreate, media, repinboard, and user. The bottom status bar indicates the time is 3:02 AM on 4/12/2015.

- Number of likes user liked:
`SELECT count(*) FROM `likecreate` WHERE `lid`='p1';`



The screenshot shows the phpMyAdmin interface with the 'Database: pinterest' selected. The 'Query' tab is active, and the SQL query `SELECT count(*) FROM `likecreate` WHERE `lid`='p1';` has been executed successfully. The result is displayed as `count(*)` with a value of 3. The left sidebar shows the database structure, including tables like board, comment, follower, gdefines, group, grouphas, likecreate, media, repinboard, and user. The bottom status bar indicates the time is 3:04 AM on 4/12/2015.

- Number of likes on particular media:

SELECT count(*) FROM `likecreate` WHERE `mid`='m1'

The screenshot shows the phpMyAdmin interface with the 'likecreate' table selected in the 'pinterest' database. The SQL query `SELECT count(*) FROM `likecreate` WHERE `mid`='m1'` has been executed successfully, resulting in a count of 2. The interface includes a sidebar with a tree view of databases and tables, a top navigation bar with tabs for Browse, Structure, SQL, Search, Insert, Export, Import, Privileges, Operations, and Triggers, and a bottom status bar showing the time as 3:06 AM on 4/12/2015.

Server: mysql wampserver » Database: pinterest » Table: likecreate

Show query box

⚠ Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Your SQL query has been executed successfully

`SELECT count(*) FROM `likecreate` WHERE `mid`='m1'`

Options
count(*)
2

Query results operations

Print view Print view (with full texts) Export Display chart Create view

- Number of followers for particular user:

SELECT count('fid') FROM `follower` WHERE uid='p1';

The screenshot shows the phpMyAdmin interface with the 'follower' table selected in the 'pinterest' database. The SQL query `SELECT count('fid') FROM `follower` WHERE uid='p1'` has been executed successfully, resulting in a count of 4. The interface includes a sidebar with a tree view of databases and tables, a top navigation bar with tabs for Browse, Structure, SQL, Search, Insert, Export, Import, Privileges, Operations, and Triggers, and a bottom status bar showing the time as 3:10 AM on 4/12/2015.

Server: mysql wampserver » Database: pinterest » Table: follower

Show query box

⚠ Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Your SQL query has been executed successfully

`SELECT count('fid') FROM `follower` WHERE uid='p1'`

Options
count('fid')
4

Query results operations

Print view Print view (with full texts) Export Display chart Create view

- Number of people an user p1 follow:

`SELECT count(*) FROM `follower` WHERE fid='p1'`

The screenshot shows the phpMyAdmin web interface in a browser. The left sidebar displays a database structure tree with the 'follower' table selected under the 'pinterest' database. The main panel shows the SQL tab with the query `SELECT count(*) FROM `follower` WHERE fid='p1'` entered. A green message bar indicates the query was executed successfully. Below the query box, the 'Options' section shows the result of the `count(*)` query as '2'. At the bottom, a 'Query results operations' bar provides links for 'Print view', 'Print view (with full texts)', 'Export', 'Display chart', and 'Create view'. The browser's address bar shows the phpMyAdmin URL, and the Windows taskbar at the bottom indicates the time is 3:11 AM on 4/12/2015.

➤ Entire Repin Process:

PART 1:

Resname-> **SELECT bname FROM createboard natural join board WHERE uid='p1';**

The screenshot shows the phpMyAdmin interface with the 'pinterest' database selected. The 'Structure' tab is active, and the 'board' table is selected. The SQL query editor contains the following query:

```
SELECT distinct bname FROM createboard natural join board WHERE uid='p1'
```

The query results show 0 rows (2 total, Query took 0.0012 sec). The 'Options' section shows the 'bname' column selected. The 'Query results operations' section includes links for 'Print view', 'Print view (with full texts)', 'Export', 'Display chart', and 'Create view'.

Part2:

Result->**SELECT bid FROM board WHERE bname='resname';**

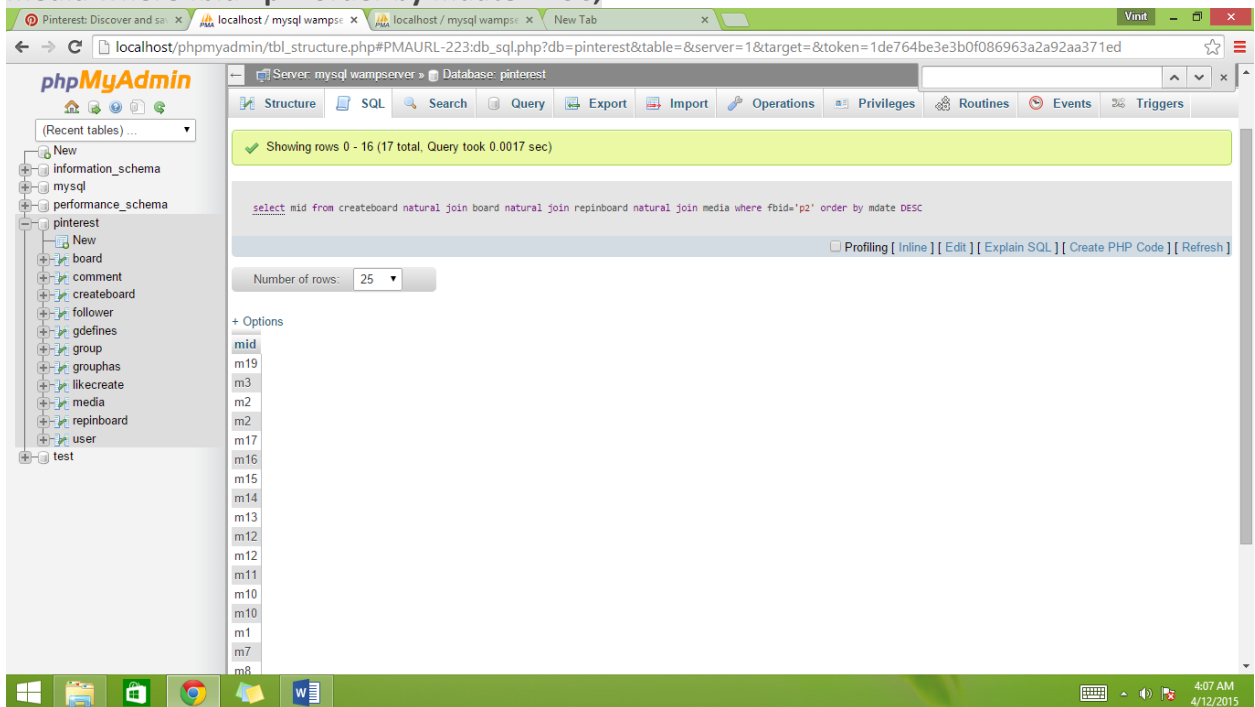
INSERT INTO `pinterest`.`repinboard` (`bid`, `mid`) VALUES (result, 'm19')

The screenshot shows the phpMyAdmin interface with the 'pinterest' database selected. The 'Structure' tab is active, and the 'repinboard' table is selected. The SQL query editor contains the following query:

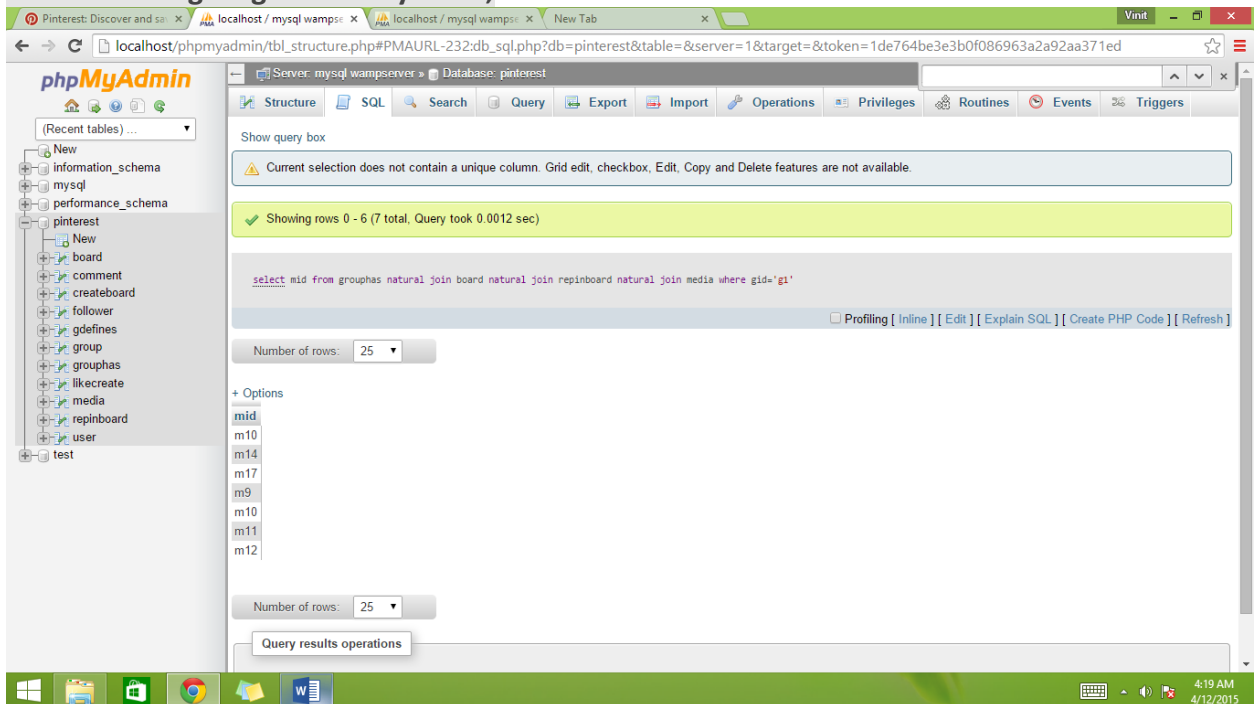
```
INSERT INTO `pinterest`.`repinboard` (`bid`, `mid`) VALUES ('b6', 'm19')
```

The query results show 'MySQL returned an empty result set (i.e. zero rows). (Query took 0.0670 sec)'. The 'Options' section shows the 'bid' and 'mid' columns selected. The 'Query results operations' section includes links for 'Print view', 'Print view (with full texts)', 'Export', 'Display chart', and 'Create view'.

- Recommendation provided to user when logged in: Sort By time
select mid from createboard natural join board natural join repinboard natural join media where fbid='p2' order by mdate DESC;



- Media on Particular Group ie g1:
select mid from grouphas natural join board natural join repinboard natural join media where gid='g1' order by DESC;



- Number of friends particular user has:

Select friendid from follower where uid='p1'

The screenshot shows the phpMyAdmin interface with the 'pinterest' database selected. The 'follower' table is chosen from the left sidebar. The SQL query 'Select friendid from follower where uid='p1'' is entered in the query box. The results show 3 rows (0-3) with the following friendid values: p2 and p5. The interface includes a top navigation bar, a left sidebar with a tree view of databases and tables, and a main content area with a query editor and results display.

- Perfect Friend Running Query – Showing Secret Boards only to friends :

select distinct bname from board where bid in (select bid from createboard natural join board where uid ='p1' and secret='Y' and 'p2' in (select friendid from follower where uid='p1'))

The screenshot shows the phpMyAdmin interface with the 'pinterest' database selected. A complex SQL query is entered in the query box: 'select distinct bname from board where bid in (select bid from createboard natural join board where uid='p1' and secret='Y' and 'p2' in (select friendid from follower where uid='p1'))'. The results show 2 rows (0-1) with the following bname values: cricket and hershey. The interface includes a top navigation bar, a left sidebar with a tree view of databases and tables, and a main content area with a query editor and results display.

- Searching with keyword :

Select * from media where btype='%keyword%';

- Exact & Accurate Search:

Select * from media where Match(mtype) Against ('keyword1','keyword%', '%keyword%');

- Search by likes

select distinct mid,mtag,mtype,count(lid)-1 from likecreate natural join media where mtype='sports' group by mid order by count(lid)-1 DESC;

The screenshot shows the phpMyAdmin web interface. The left sidebar displays a database structure tree with the 'pinterest' database selected. The main panel shows a SQL query: `select distinct mid,mtag,mtype,count(lid)-1 from likecreate natural join media where mtype='sports' group by mid order by count(lid)-1 DESC`. The query results are displayed in a table with 5 rows. The table has columns: mid, mtag, mtype, and count(lid)-1. The results are as follows:

mid	mtag	mtype	count(lid)-1
m1	god	sports	2
m10	event	sports	2
m9	inspiration	sports	1
m3	highest wicket taker	sports	0
m2	banned	sports	0

The interface also includes a 'Query results operations' section at the bottom with options like 'Print view', 'Print view (with full texts)', 'Export', 'Display chart', and 'Create view'.