IMPRESSIONS

Project Part 1

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Introduction : *Impressions*

Impressions is a free web application that requires registration to use. Users can upload, save and manage images—known as pins through collections known as pinboards. Impressions acts as a personalized media platform. Users can browse the content of others on the main page. Users can then save individual pins to one of their own boards using the "Pin It" button, with Pinboards typically organized by a central topic or theme. Users can personalize their experience with Pinterest by pinning items, creating boards, and interacting with other members.

Content can also be found outside of Pinterest and similarly uploaded to a board via the "Pin It" button. An account can be created and accessed by providing username and email.

Quick links to Pinterest include the "pin it" button that can be added to the bookmark bar of a web browser, "Follow me" and "Pin it" buttons added to personal .Users should be aware of certain terms and functions when using Pinterest.

A "**pinboard**" is where the user's pins are located. Users can have several boards for various items such as quotes, travel or, most popularly, weddings.

A "**pin**" is an image that has either been uploaded or linked from a website. Once users create boards and add pins, other users can now *repin*, meaning they can *pin* one user's image to their board as well.Once the user has set up their account and boards, they can browse, comment, and like other*pins*. If a user wants to turn an image online into a "pin," there are a few simple steps to do so.

First, the user must select the image to pin.Then, the user enters an image URL into the link box. Next, the user selects the exact image they want to pin, and place it on the designated board.

Other users can now click on the pin to see which board the image is pinned in, who pinned the image previously, where the original pin is from, and who has liked, commented, or repinned the image.

Users should also keep in mind that Pinterest stores actual copies (not just thumbnails and links) of the images being pinned.

The images users pin, define their identities and boards they view. Pinterest then modifies a user's homepage to reflect toward his or her interest.

A basic summary of key features are :

Sign up: User can sign up by providing username and email, and set a password. He can then can login using the same.

Profile: User can create his profile and edit and update it.

Friends: user can send and receive friend requests which facilitates another level of privacy.
PinBoards: A board is where you collect your pins. For example, you can have a board named Food where you can pin all your food related pictures. By default a board is public.

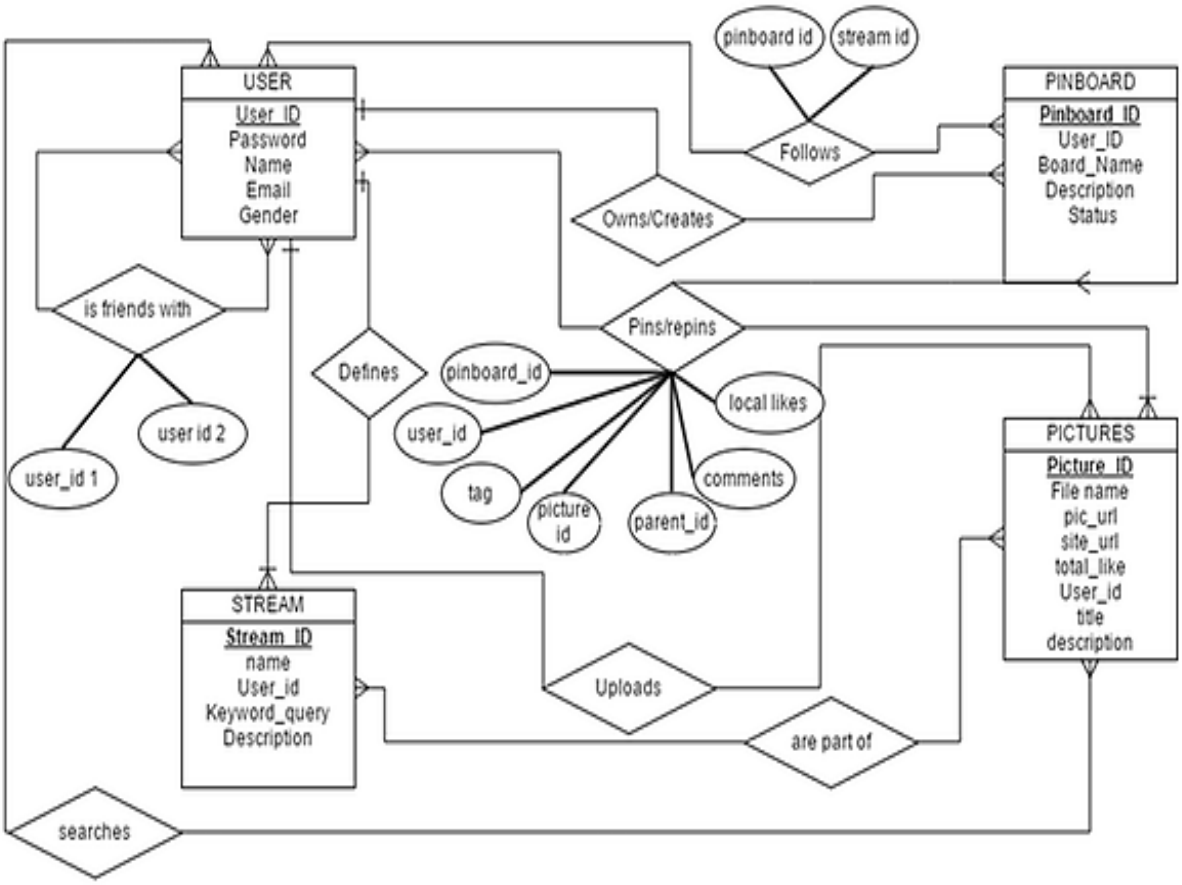
Tags: user can add tags or keywords to facilitate key word searching for his pins.

Follow: A user can follow another user or one or more of his boards.

Follow Stream: User can define one or more streams of his interest which will consolidate All the pictures that he chooses from the boards that he follows or pictures that the system will find him for his selected keywords.

Search: User can search for pins or boards or users by providing a keyword.

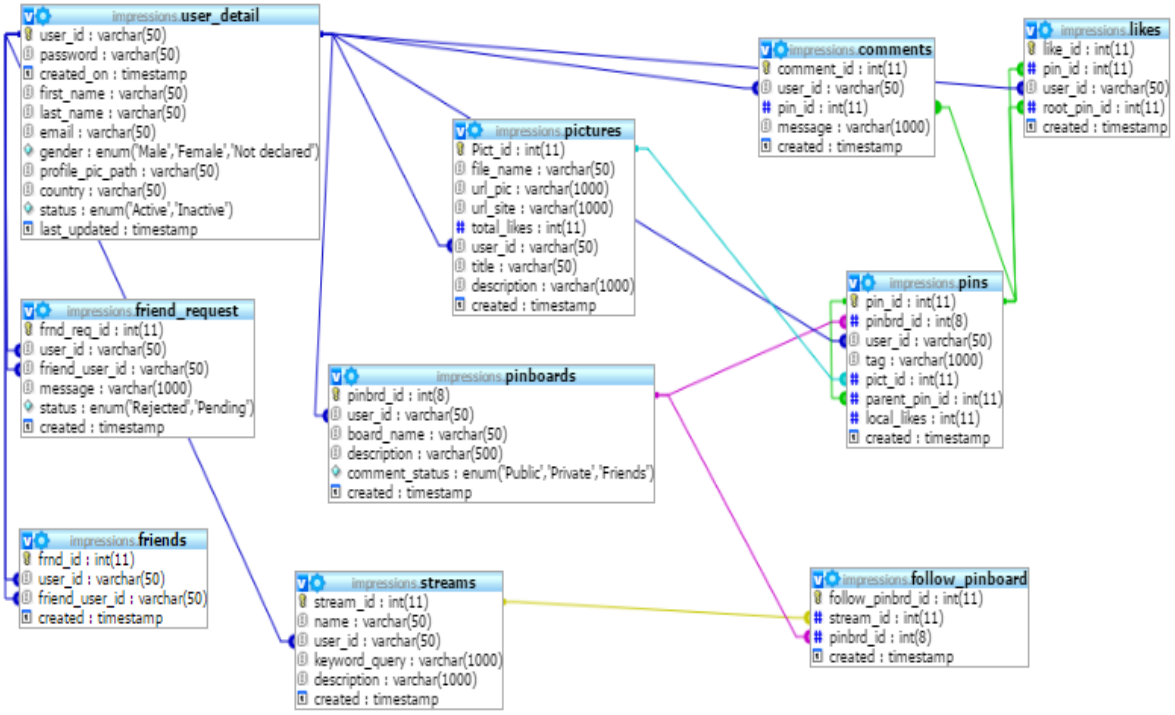
ER Diagram :



Assumptions :

- Two users are friends only when one user accepts to be friends with the other user .
- A stream can be defined by only one user whereas one user can define multiple streams.
- The concept of tags is implemented via the description field as well as tag field .

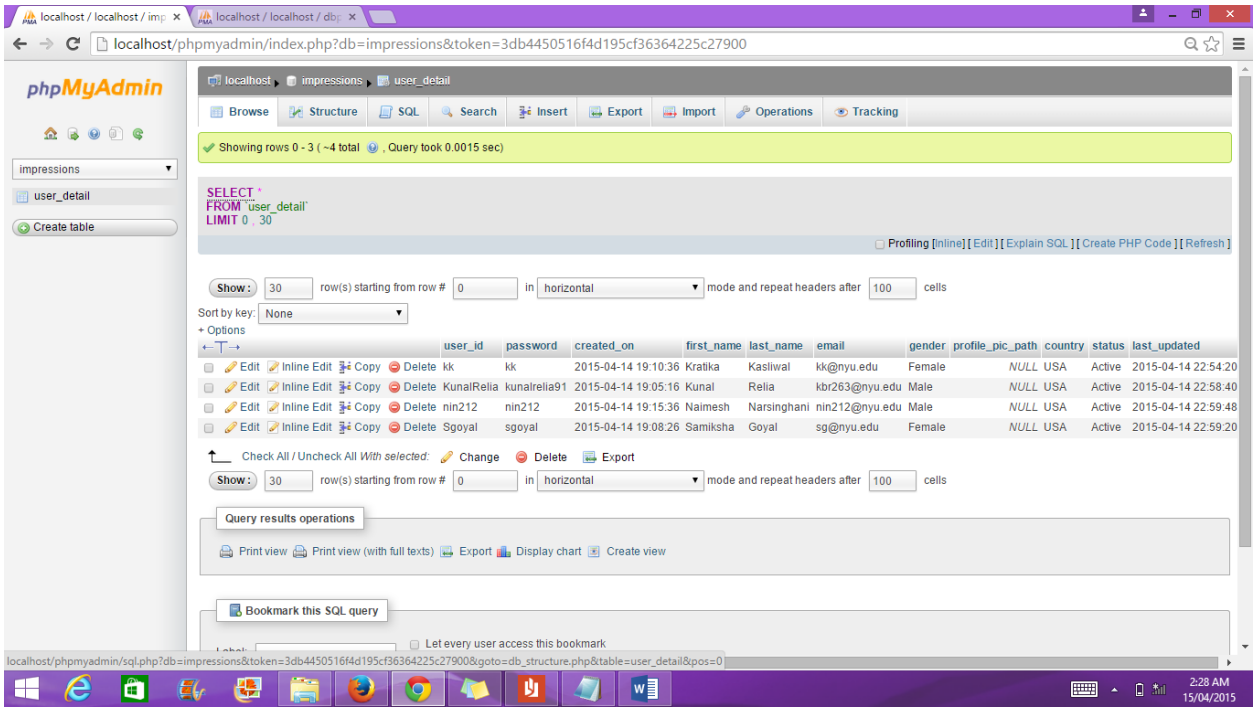
Relational Schema :



SQL Queries :

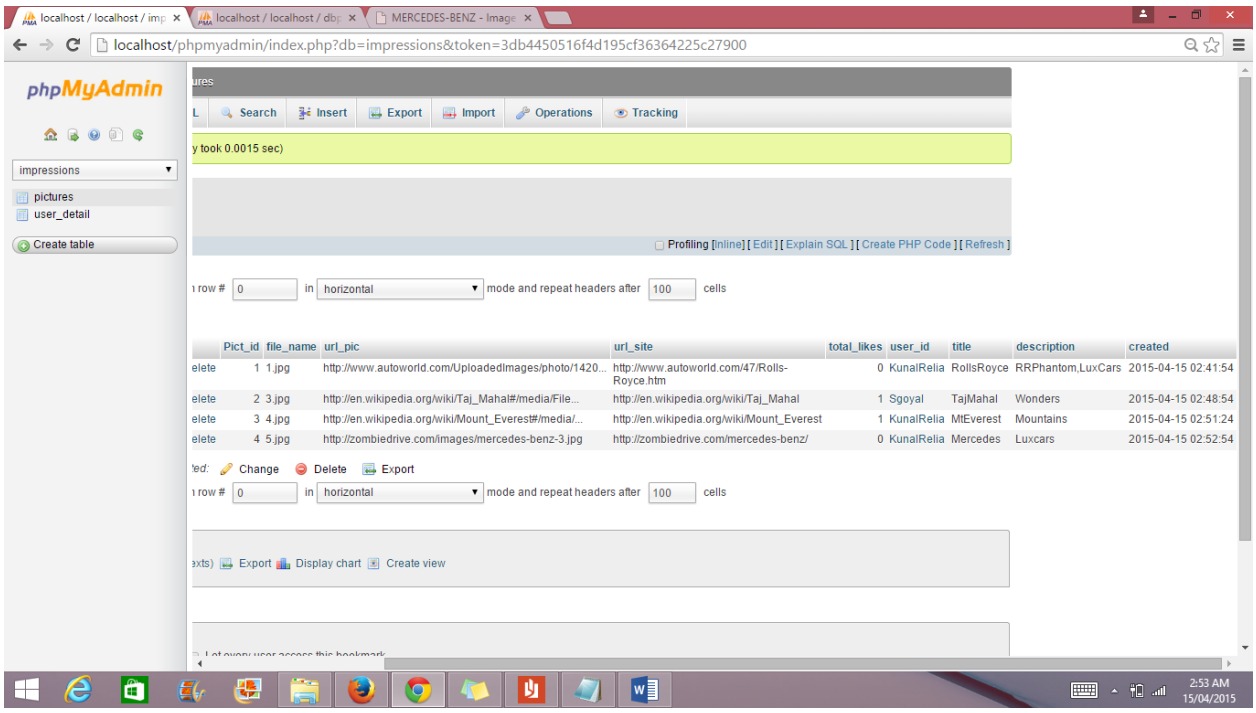
```
CREATE TABLE `user_detail` (
  `user_id` varchar(50) NOT NULL,
  `password` varchar(50) DEFAULT NULL,
  `created_on` timestamp NULL DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
  `first_name` varchar(50) DEFAULT NULL,
  `last_name` varchar(50) DEFAULT NULL,
  `email` varchar(50) DEFAULT NULL,
  `gender` enum('Male','Female','Not declared') DEFAULT NULL,
  `profile_pic_path` varchar(50) DEFAULT NULL,
  `country` varchar(50) DEFAULT NULL,
  `status` enum('Active','Inactive') DEFAULT NULL,
  `last_updated` timestamp NULL,
   PRIMARY KEY (`user_id`)
)
```

```
insert  into
`user_detail`(`user_id`,`password`,`created_on`,`first_name`,`last_name`,`email`,`gender`,`profile_pic_path
`,`country`,`status`,`last_updated`) values ('KunalRelia', 'kunalrelia91','2015-04-14
19:05:16','Kunal','Relia','kbr263@nyu.edu','Male',NULL, 'USA','Active', '2015-04-14 22:58:40');
```



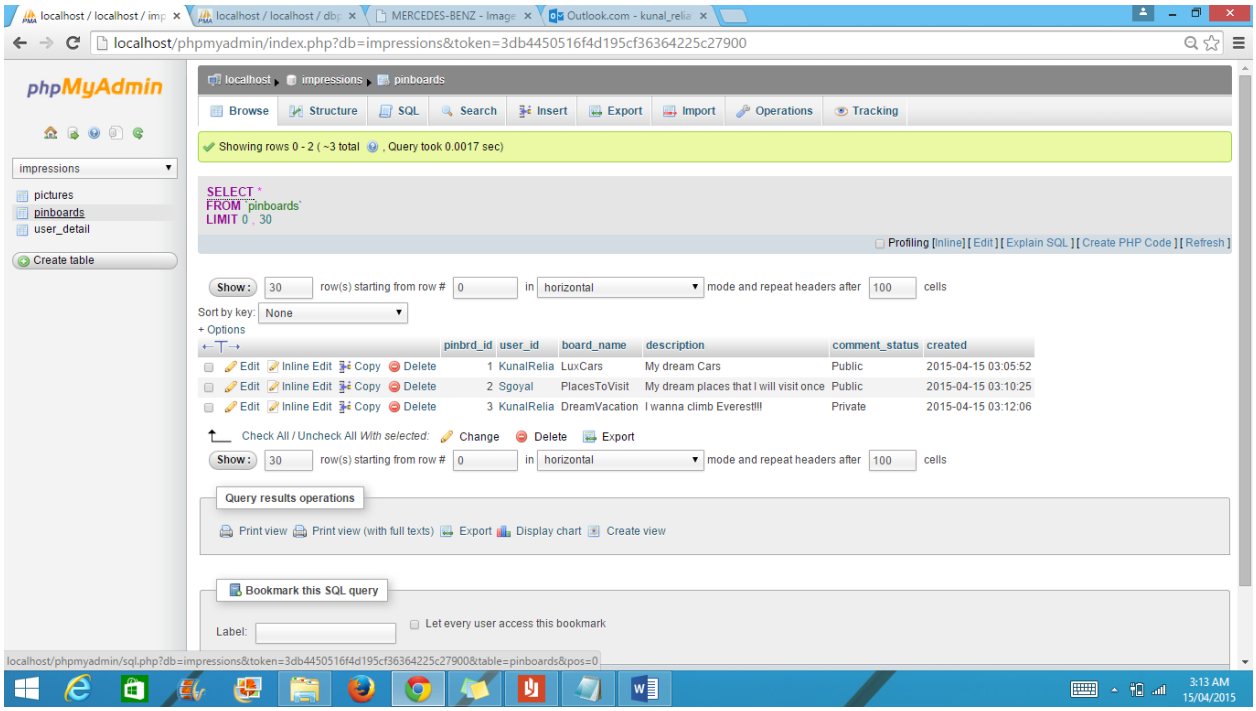
```
CREATE TABLE `pictures` (
  `Pict_id` int(11) NOT NULL AUTO_INCREMENT,
  `file_name` varchar(50) DEFAULT NULL,
  `url_pic` varchar(1000) DEFAULT NULL,
  `url_site` varchar(1000) DEFAULT NULL,
  `total_likes` int(11) DEFAULT '0',
  `user_id` varchar(50) DEFAULT NULL,
  `title` varchar(50) DEFAULT NULL,
  `description` varchar(1000) DEFAULT NULL,
  `created` timestamp NOT NULL DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
PRIMARY KEY (`pict_id`),
  KEY `user_id` (`user_id`),
  CONSTRAINT `pic_fk_1` FOREIGN KEY (`user_id`) REFERENCES `user_detail` (`user_id`) ON UPDATE
CASCADE
)
```

```
insert  into
`pictures`(`pict_id`,`file_name`,`url_pic`,`url_site`,`total_likes`,`user_id`,`title`,`description`,`created`) values
(1,'1.jpg','http://www.autoworld.com/UploadedImages/photo/1420639359.jpg','http://www.autoworld.co
m/47/Rolls-Royce.htm',0,'KunalRelia','RollsRoyce','RRPhantom,LuxCars','2015-04-15 02:41:54');
```



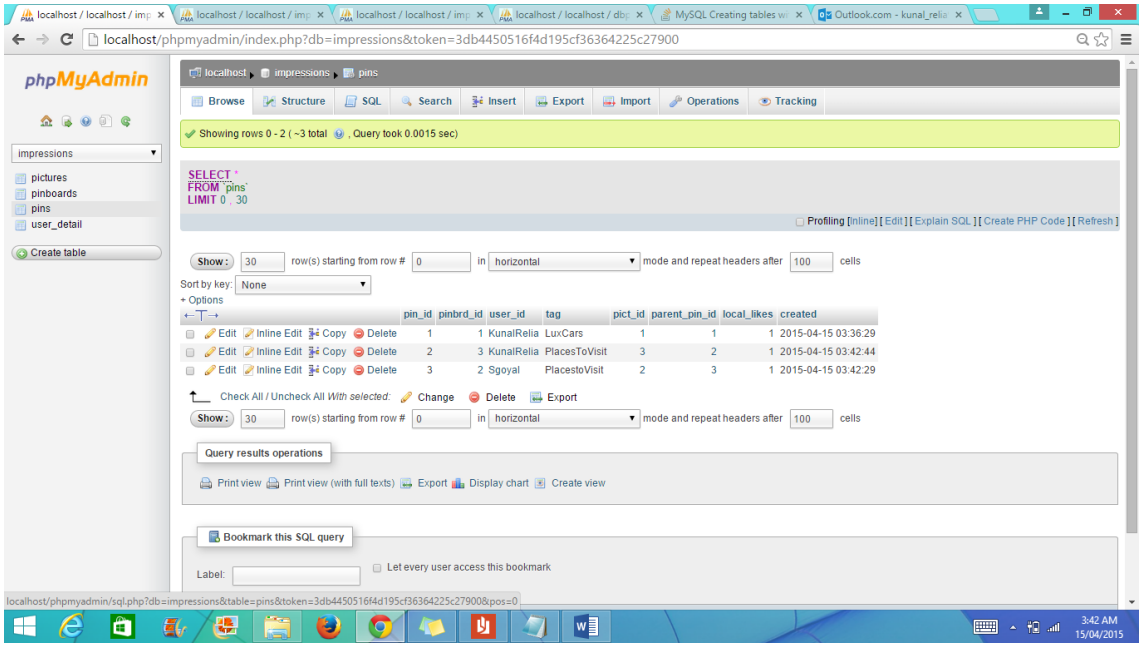
```
CREATE TABLE `pinboards` (
  `pinbrd_id` int(8) NOT NULL AUTO_INCREMENT,
  `user_id` varchar(50) DEFAULT NULL,
  `board_name` varchar(50) DEFAULT NULL,
  `description` varchar(500) DEFAULT NULL,
  `comment_status` enum('Public','Private', 'Friends') NOT NULL,
  `created` timestamp NOT NULL DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
PRIMARY KEY (`pinbrd_id`),
  KEY `user_id` (`user_id`),
  CONSTRAINT `pinbrd_fk_1` FOREIGN KEY (`user_id`) REFERENCES `user_detail` (`user_id`) ON UPDATE
CASCADE
)

insert  into `pinboards`(`pinbrd_id`,`user_id`,`board_name`,`description`,`comment_status`,`created`)
values (1,'KunalRelia','LuxCars','My dream Cars','Public','2015-04-15 03:05:52');
```



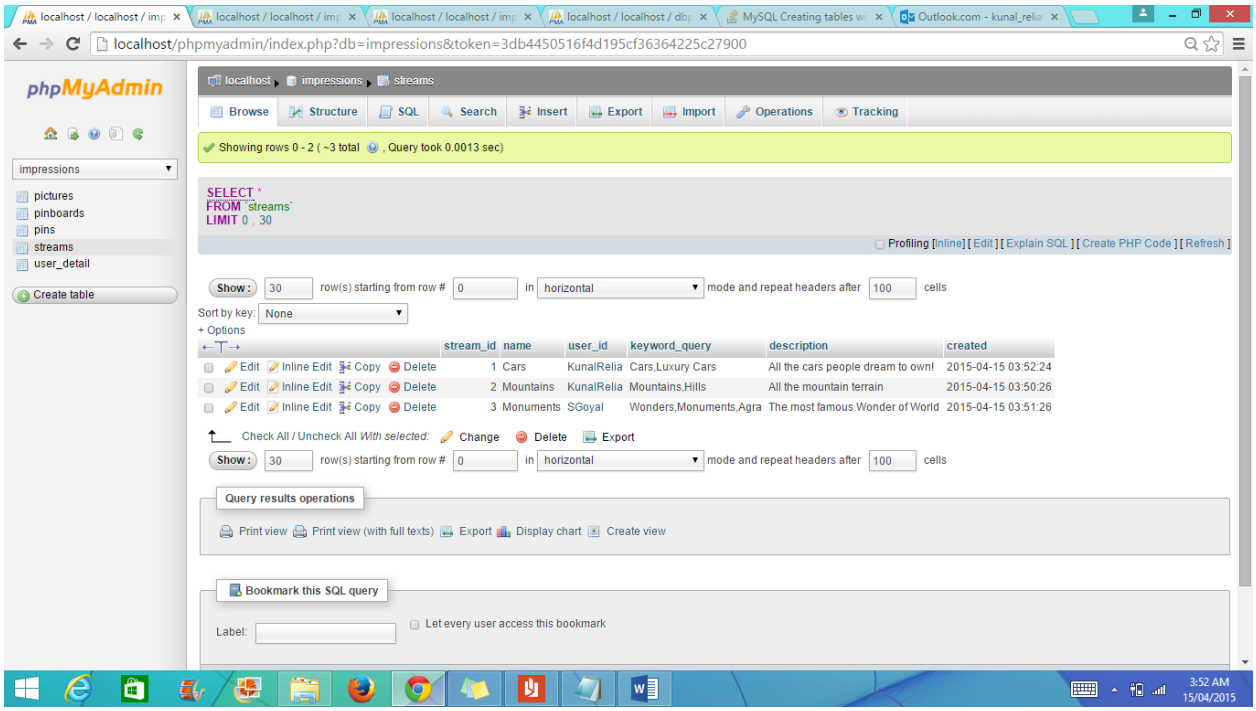
```
CREATE TABLE `pins` (
 `pin_id` int(11) NOT NULL AUTO_INCREMENT,
 `pinbrd_id` int(8) DEFAULT NULL,
 `user_id` varchar(50) DEFAULT NULL,
 `tag` varchar(1000) DEFAULT NULL,
 `pict_id` int(11) DEFAULT NULL,
 `parent_pin_id` int(11) DEFAULT NULL,
 `local_likes` int(11) DEFAULT '0',
 `created` timestamp NOT NULL DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
 PRIMARY KEY (`pin_id`),
 KEY `user_id` (`user_id`),
 KEY `pins_fk_1` (`pict_id`),
 KEY `pins_fk_2` (`pinbrd_id`),
 KEY `pins_fk_3` (`parent_pin_id`),
 CONSTRAINT `pins_fk_2` FOREIGN KEY (`pinbrd_id`) REFERENCES `pinboards` (`pinbrd_id`) ON DELETE CASCADE,
 CONSTRAINT `user_id` FOREIGN KEY (`user_id`) REFERENCES `user_detail` (`user_id`) ON UPDATE CASCADE,
 CONSTRAINT `pins_fk_3` FOREIGN KEY (`parent_pin_id`) REFERENCES `pins` (`pin_id`) ON DELETE CASCADE,
 CONSTRAINT `pins_fk_1` FOREIGN KEY (`pict_id`) REFERENCES `pictures` (`Pict_id`) ON DELETE CASCADE
)
```

```
insert  into `pins`(`pin_id`,`pinbrd_id`,`user_id`,`tag`,`pict_id`,`parent_pin_id`,`local_likes`,`created`) values (1,1,'KunalRelia','LuxCars',1,1,1,'2015-04-15 03:36:29');
```



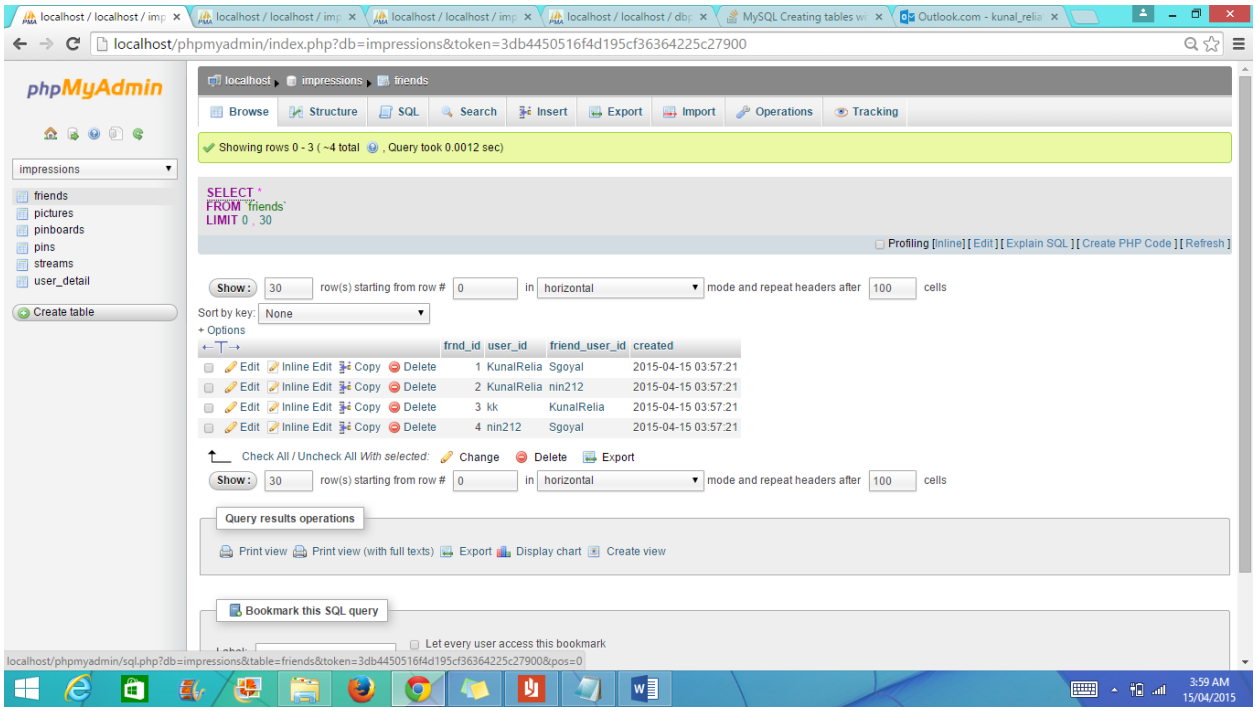
```
CREATE TABLE `streams` (
  `stream_id` int(11) NOT NULL AUTO_INCREMENT,
  `name` varchar(50) DEFAULT NULL,
  `user_id` varchar(50) DEFAULT NULL,
  `keyword_query` varchar(1000) DEFAULT NULL,
  `description` varchar(1000) DEFAULT NULL,
  `created` timestamp NOT NULL DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
PRIMARY KEY (`stream_id`),
  KEY `user_id` (`user_id`),
  CONSTRAINT `streams_fk_1` FOREIGN KEY (`user_id`) REFERENCES `user_detail` (`user_id`) ON UPDATE
CASCADE
)
```

```
insert  into `streams`(`stream_id`,`name`,`user_id`,`keyword_query`,`description`,`created`) values
(1,'Cars','KunalRelia', 'Cars,Luxury Cars',' All the cars people dream to own!','2015-04-15 03:47:26');
```



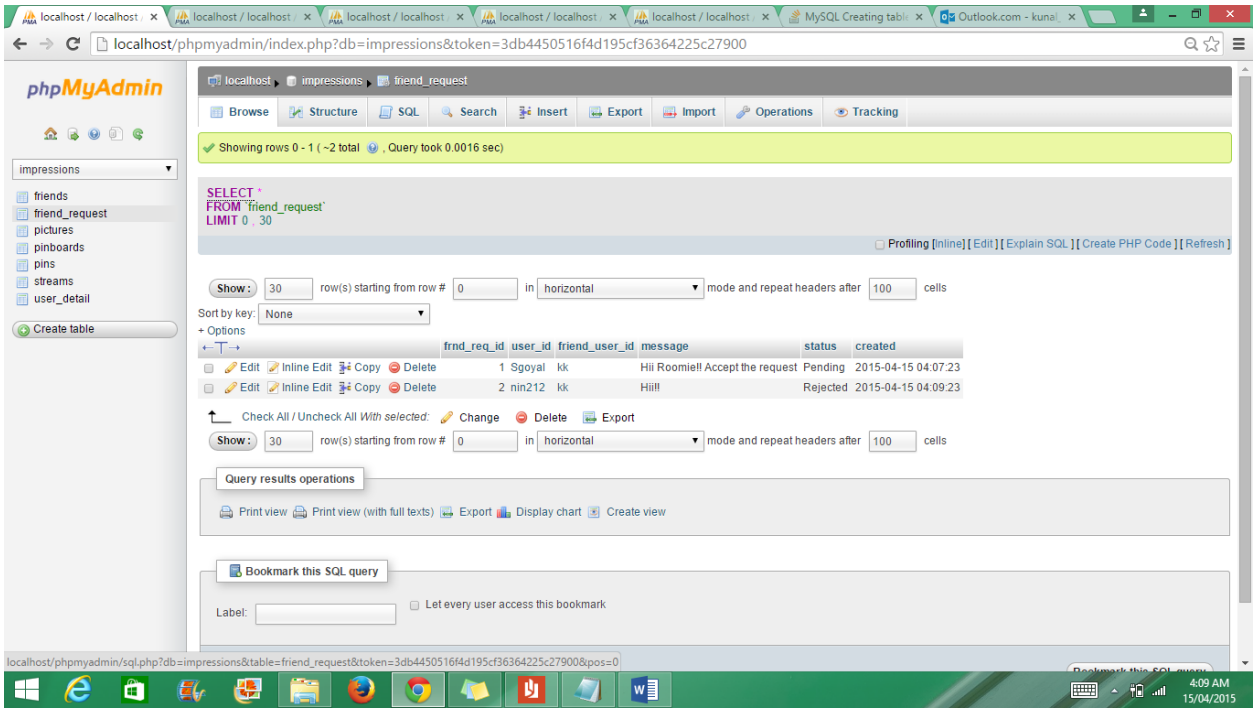
```
CREATE TABLE `friends` (
  `frnd_id` int(11) NOT NULL AUTO_INCREMENT,
  `user_id` varchar(50) DEFAULT NULL,
  `friend_user_id` varchar(50) DEFAULT NULL,
  `created` timestamp NOT NULL DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
  PRIMARY KEY (`frnd_id`),
  KEY `user_id` (`user_id`),
  KEY `friend_user_id` (`friend_user_id`),
  CONSTRAINT `friends_fk_1` FOREIGN KEY (`user_id`) REFERENCES `user_detail` (`user_id`) ON UPDATE
CASCADE,
  CONSTRAINT `friends_fk_2` FOREIGN KEY (`friend_user_id`) REFERENCES `user_detail` (`user_id`) ON
UPDATE CASCADE
)
```

```
insert  into `friends`(`frnd_id`,`user_id`,`friend_user_id`,`created`) values (1,'KunalRelia','Sgoyal','2015-04-
15 03:57:21');
```



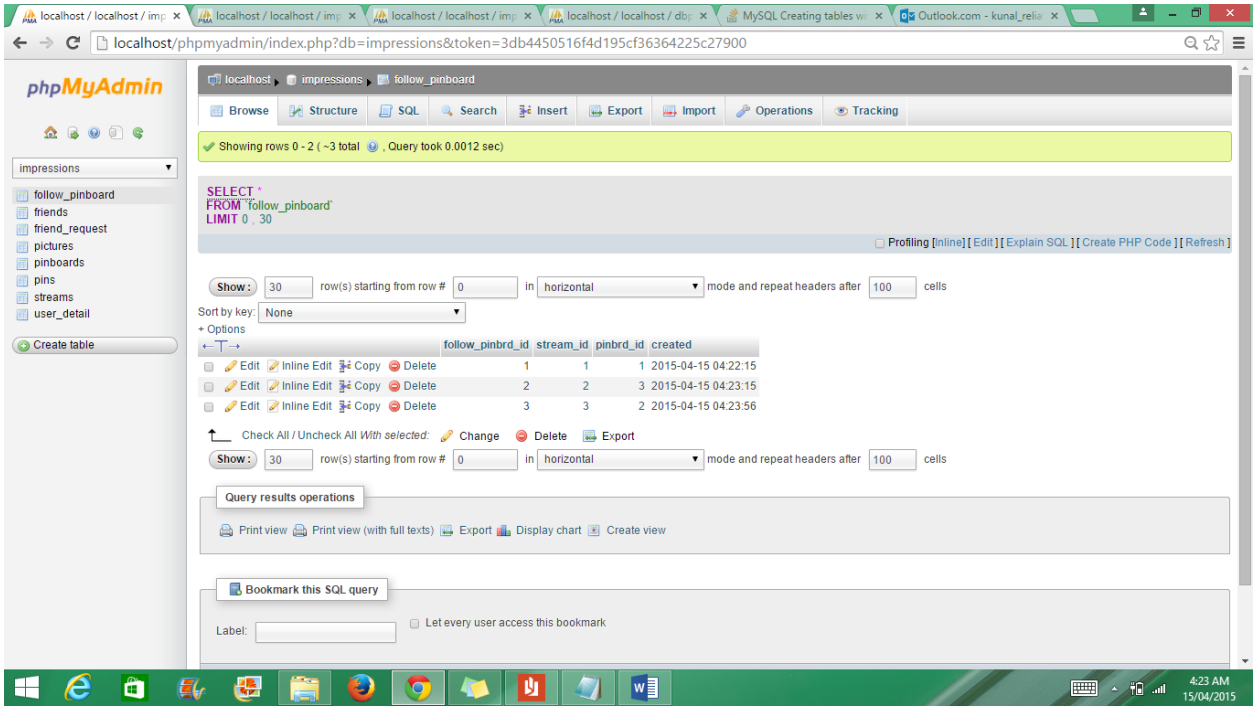
```
CREATE TABLE `friend_request` (
 `frnd_req_id` int(11) NOT NULL AUTO_INCREMENT,
 `user_id` varchar(50) DEFAULT NULL,
 `friend_user_id` varchar(50) DEFAULT NULL,
 `message` varchar(1000) DEFAULT NULL,
 `status` enum('Rejected','Pending') DEFAULT 'Pending',
 `created` timestamp NOT NULL DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
 PRIMARY KEY (`frnd_req_id`),
 KEY `user_id` (`user_id`),
 KEY `friend_user_id` (`friend_user_id`),
 CONSTRAINT `friend_request_fk_1` FOREIGN KEY (`user_id`) REFERENCES `user_detail` (`user_id`) ON
UPDATE CASCADE,
 CONSTRAINT `friend_request_fk_2` FOREIGN KEY (`friend_user_id`) REFERENCES `user_detail` (`user_id`)
ON UPDATE CASCADE
)
```

```
insert  into `friend_request`(`frnd_req_id`,`user_id`,`friend_user_id`,`message`,`status`,`created`) values (1
,'Sgoyal','kk','Hii Roomie!! Accept the request','Pending', '2015-04-15 04:07:23');
```



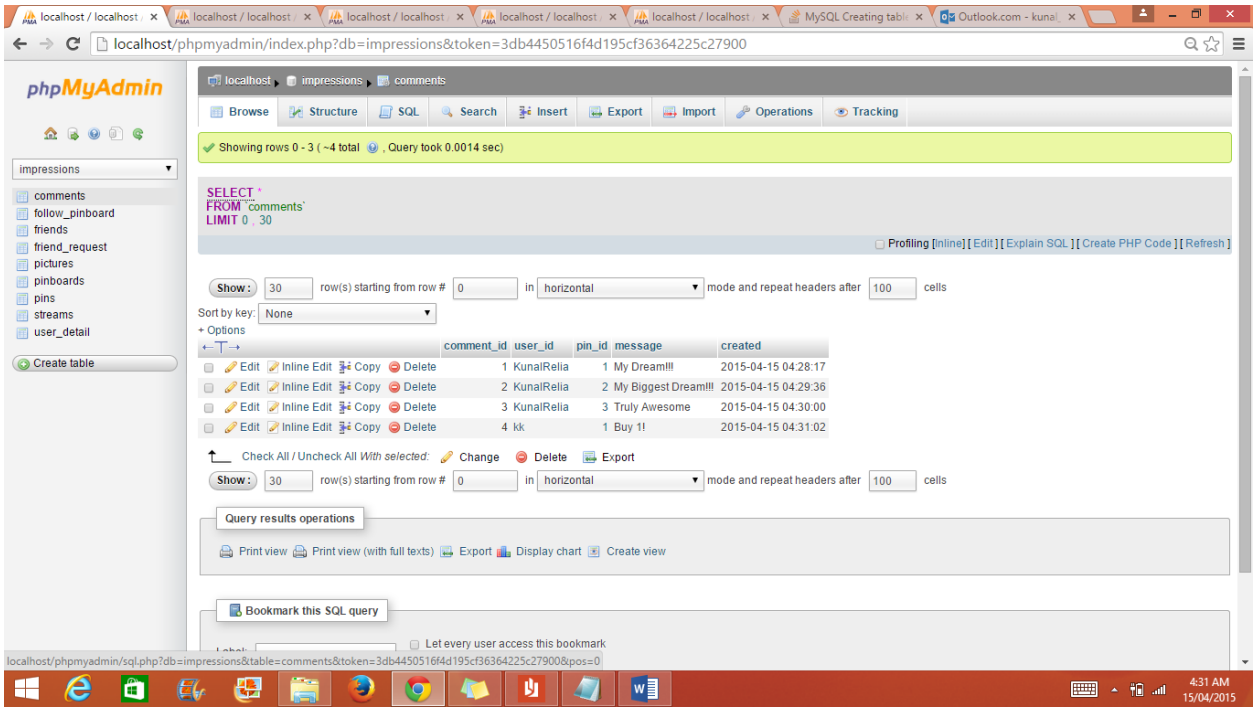
```
CREATE TABLE `follow_pinboard` (
  `follow_pinbrd_id` int(11) NOT NULL AUTO_INCREMENT,
  `stream_id` int(11) DEFAULT NULL,
  `pinbrd_id` int(8) DEFAULT NULL,
  `created` timestamp NOT NULL DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
  PRIMARY KEY (`follow_pinbrd_id`),
  KEY `follow_pinboard_fk_2` (`stream_id`),
  KEY `follow_pinboard_fk_3` (`pinbrd_id`),
  CONSTRAINT `follow_pinboard_fk_2` FOREIGN KEY (`stream_id`) REFERENCES `streams` (`stream_id`) ON
DELETE CASCADE,
  CONSTRAINT `follow_pinboard_fk_3` FOREIGN KEY (`pinbrd_id`) REFERENCES `pinboards` (`pinbrd_id`) ON
DELETE CASCADE
)

insert  into `follow_pinboard`(`follow_pinbrd_id`,`stream_id`,`pinbrd_id`,`created`) values (1,1,1,'2015-04-
15 04:22:15');
```



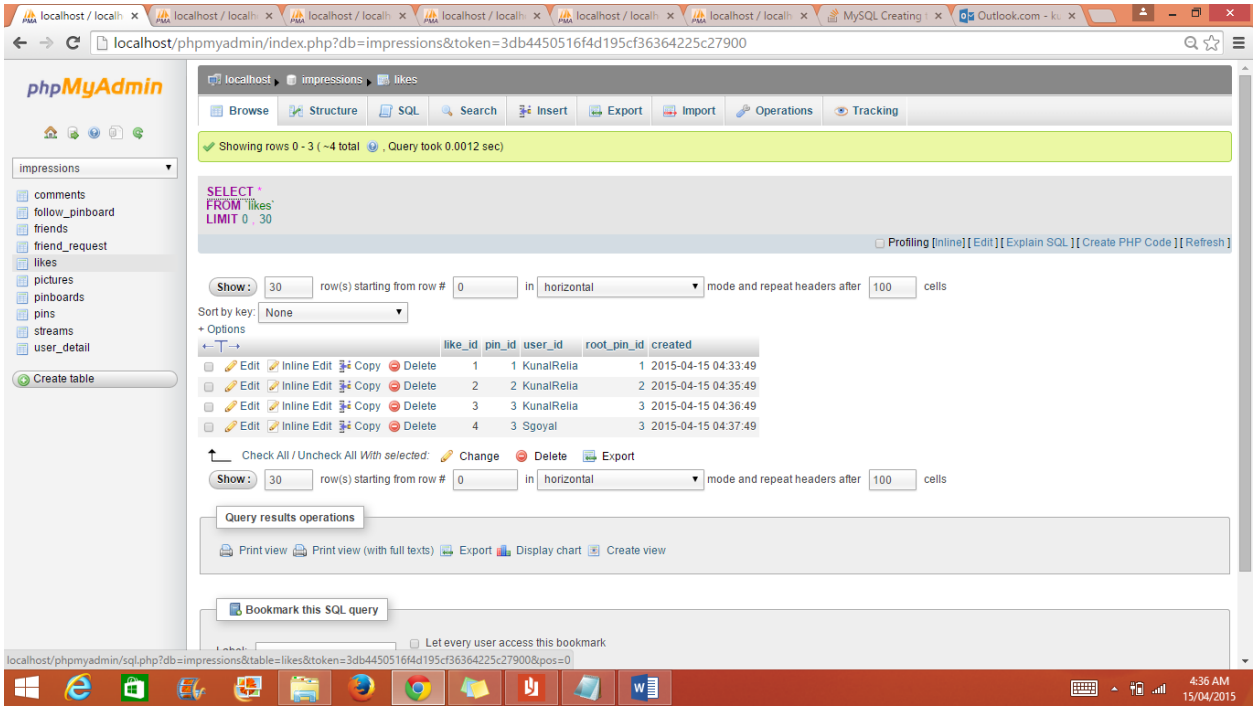
```
CREATE TABLE `comments` (
  `comment_id` int(11) NOT NULL AUTO_INCREMENT,
  `user_id` varchar(50) DEFAULT NULL,
  `pin_id` int(11) DEFAULT NULL,
  `message` varchar(1000) DEFAULT NULL,
  `created` timestamp NOT NULL DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
  PRIMARY KEY (`comment_id`),
  KEY `user_id` (`user_id`),
  KEY `comments_fk_2` (`pin_id`),
  CONSTRAINT `comments_fk_2` FOREIGN KEY (`pin_id`) REFERENCES `pins` (`pin_id`) ON DELETE CASCADE,
  CONSTRAINT `comments_fk_3` FOREIGN KEY (`user_id`) REFERENCES `user_detail` (`user_id`) ON UPDATE
CASCADE
)
```

```
INSERT INTO `impressions`.`comments` (`comment_id`, `user_id`, `pin_id`, `message`, `created`) VALUES
('1', 'KunalRelia', '1', 'My Dream!!!',  '2015-04-15 04:28:17');
```



```
CREATE TABLE `likes` (
  `like_id` int(11) NOT NULL AUTO_INCREMENT,
  `pin_id` int(11) DEFAULT NULL,
  `user_id` varchar(50) DEFAULT NULL,
  `root_pin_id` int(11) DEFAULT NULL,
  `created` timestamp NOT NULL DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
  PRIMARY KEY (`like_id`),
  KEY `user_id` (`user_id`),
  KEY `likes_fk_3` (`pin_id`),
  KEY `likes_fk_5` (`root_pin_id`),
  CONSTRAINT `likes_fk_3` FOREIGN KEY (`pin_id`) REFERENCES `pins` (`pin_id`) ON DELETE CASCADE,
  CONSTRAINT `likes_fk_4` FOREIGN KEY (`user_id`) REFERENCES `user_detail` (`user_id`) ON UPDATE
CASCADE,
  CONSTRAINT `likes_fk_5` FOREIGN KEY (`root_pin_id`) REFERENCES `pins` (`pin_id`) ON DELETE CASCADE
)
```

```
insert  into `likes`(`like_id`,`pin_id`,`user_id`,`root_pin_id`,`created`) values (1,1,'KunalRelia',1,'2015-04-15
04:33:49');
```

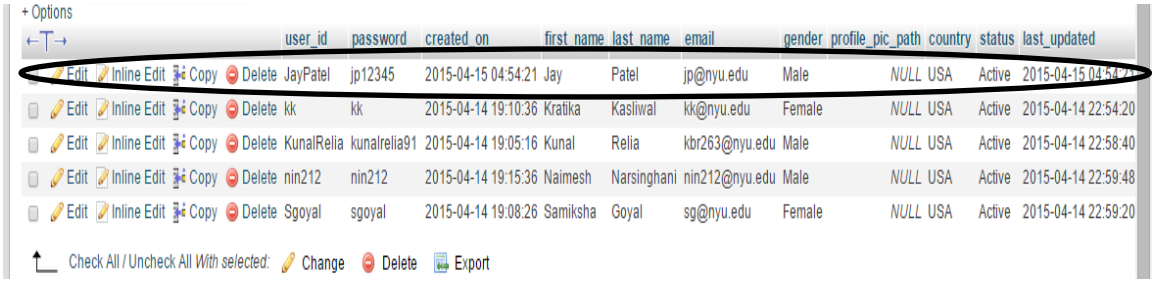


Few Other Queries :

1) **Signing up**

Here, the user is expected to fill out few of the details like Username, Password, Name, E-Mail ID, Country, etc. Once, the correct details are filled out, the user will be entered into the database using the below given query.

```
insert  into user_detail
(`user_id`,`password`,`created_on`,`first_name`,`last_name`,`email`,`gender`,`profile_pic_path`,`co
untry`,`status`,`last_updated`) values ('JayPatel', 'jp12345','2015-04-15
04:54:21','Jay','Patel','jp@nyu.edu','Male',NULL, 'USA','Active', '2015-04-15 04:54:21');
```



+ Options

	user_id	password	created_on	first_name	last_name	email	gender	profile_pic_path	country	status	last_updated
Edit Inline Edit Copy Delete	JayPatel	jp12345	2015-04-15 04:54:21	Jay	Patel	jp@nyu.edu	Male	NULL	USA	Active	2015-04-15 04:54:21
Edit Inline Edit Copy Delete	kk	kk	2015-04-14 19:10:36	Kratika	Kasliwal	kk@nyu.edu	Female	NULL	USA	Active	2015-04-14 22:54:20
Edit Inline Edit Copy Delete	KunalRelia	kunalrelia91	2015-04-14 19:05:16	Kunal	Relia	kbr263@nyu.edu	Male	NULL	USA	Active	2015-04-14 22:58:40
Edit Inline Edit Copy Delete	nin212	nin212	2015-04-14 19:15:36	Naimesh	Narsinghani	nin212@nyu.edu	Male	NULL	USA	Active	2015-04-14 22:59:48
Edit Inline Edit Copy Delete	Sgoyal	sgoyal	2015-04-14 19:08:26	Samiksha	Goyal	sg@nyu.edu	Female	NULL	USA	Active	2015-04-14 22:59:20

Check All / Uncheck All *With selected:* Change Delete Export

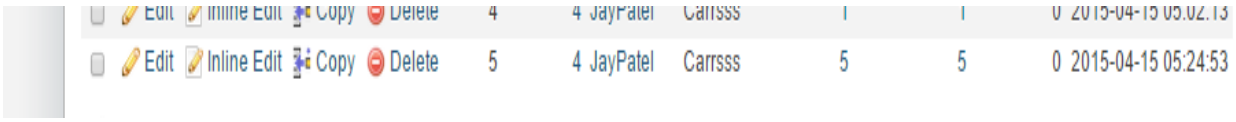
2) **Pinning on boards**

The registered user is expected to upload a picture or provide its URL to pin a picture to his/her board.

```
insert  into
`pictures`(`pict_id`,`file_name`,`url_pic`,`url_site`,`total_likes`,`user_id`,`title`,`description`,`created
`) values (5,'6.jpg','
http://upload.wikimedia.org/wikipedia/commons/thumb/5/59/BMW_328i_F30_2012_vl_2.jpg/10
24px-BMW_328i_F30_2012_vl_2.jpg','
http://en.wikipedia.org/wiki/BMW',0,'JayPatel','BMW','LuxCars','2015-04-15 05:21:34');
```

	Pict_id	file_name	url_pic	url_site	total_likes	user_id	title	description	created
elete	1	1.jpg	http://www.autoworld.com/UploadedImages/photo/1420...	http://www.autoworld.com/47/Rolls-Royce.htm	0	KunalRelia	RollsRoyce	RRPhantom,LuxCars	2015-04-15 02:41:54
elete	2	3.jpg	http://en.wikipedia.org/wiki/Taj_Mahal#/media/File...	http://en.wikipedia.org/wiki/Taj_Mahal	1	Sgoyal	TajMahal	Wonders	2015-04-15 02:48:54
elete	3	4.jpg	http://en.wikipedia.org/wiki/Mount_Everest#/media/...	http://en.wikipedia.org/wiki/Mount_Everest	1	KunalRelia	MtEverest	Mountains	2015-04-15 02:51:24
elete	4	5.jpg	http://zombiedrive.com/images/mercedes-benz-3.jpg	http://zombiedrive.com/mercedes-benz/	0	KunalRelia	Mercedes	Luxcars	2015-04-15 02:52:54
	5	6.jpg	http://upload.wikimedia.org/wikipedia/commons/thu...	http://en.wikipedia.org/wiki/BMW	0	JayPatel	BMW	LuxCars	2015-04-15 05:21:34

```
insert  into `pins`
(`pin_id`,`pinbrd_id`,`user_id`,`tag`,`pict_id`,`parent_pin_id`,`local_likes`,`created`) values
(5,4,'JayPatel','Carrsss',5,5,0,'2015-04-15 05:24:53');
```



Edit Inline Edit Copy Delete 4 4 JayPatel Carrsss 1 1 0 2015-04-15 05:02:13

Edit Inline Edit Copy Delete 5 4 JayPatel Carrsss 5 5 0 2015-04-15 05:24:53

Alternatively, an already pinned picture can be re-pinned. The query for re-pinning can be as shown below.

insert into `pins`
(`pin_id`,`pinbrd_id`,`user_id`,`tag`,`pict_id`,`parent_pin_id`,`local_likes`,`created`) values
(4,4,'JayPatel','Carrsss',1,1,0,'2015-04-15 05:02:13');

	pin_id	pinbrd_id	user_id	tag	pict_id	parent_pin_id	local_likes	created
Edit Inline Edit Copy Delete	1	1	KunalRelia	LuxCars	1	1	1	2015-04-15 03:36:29
Edit Inline Edit Copy Delete	2	3	KunalRelia	PlacesToVisit	3	2	1	2015-04-15 03:42:44
Edit Inline Edit Copy Delete	3	2	Sgoyal	PlacestoVisit	2	3	1	2015-04-15 03:42:29
Edit Inline Edit Copy Delete	4	4	JayPatel	Carrsss	1	1	0	2015-04-15 05:02:13

3) **A user can become friends with other people. Hence the query that can be used to send a friend request will be like**

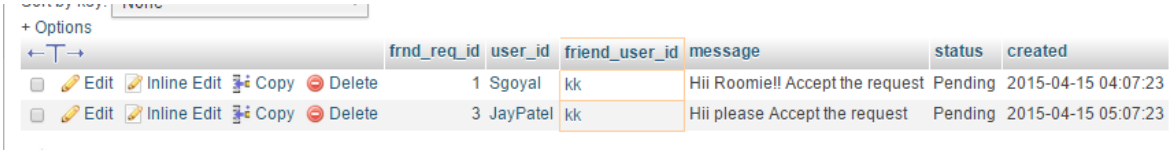
insert into `friend_request` (`frnd_req_id`,`user_id`,`friend_user_id`,`message`,`status`,`created`) values (3 ,'JayPatel','kk','Hii please Accept the request','Pending', '2015-04-15 05:07:23');

	frnd_req_id	user_id	friend_user_id	message	status	created
Edit Inline Edit Copy Delete	1	Sgoyal	kk	Hii Roomie!! Accept the request	Pending	2015-04-15 04:07:23
Edit Inline Edit Copy Delete	2	nin212	kk	Hii!!	Rejected	2015-04-15 04:09:23
Edit Inline Edit Copy Delete	3	JayPatel	kk	Hii please Accept the request	Pending	2015-04-15 05:07:23

Check All / Uncheck All With selected: Change Delete Export

4) **A user can accept or reject a received request. Let us consider a case where in the request is accepted.**

Select * from `friend_request` where friend_user_id = 'kk' AND status = 'Pending'



+ Options

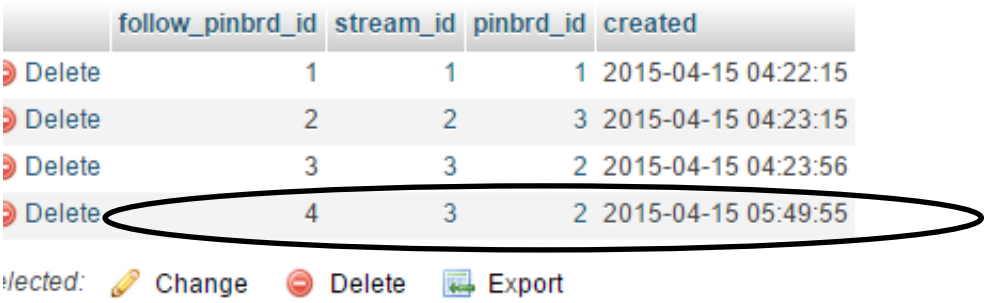
	frnd_req_id	user_id	friend_user_id	message	status	created
Edit Inline Edit Copy Delete	1	Sgoyal	kk	Hii Roomie!! Accept the request	Pending	2015-04-15 04:07:23
Edit Inline Edit Copy Delete	3	JayPatel	kk	Hii please Accept the request	Pending	2015-04-15 05:07:23

Now, if kk becomes friends with JayPatel, then the following query will be executed.

insert into `friends`(`frnd_id`,`user_id`,`friend_user_id`,`created`) values (5,'kk','JayPatel','2015-04-15 05:13:39');

5) A user is also given the privilege of following a particular pinboard.

insert into `follow_pinboard`(`follow_pinbrd_id`,`stream_id`,`pinbrd_id`,`created`) values (4,3,2,'2015-04-15 05:49:55');



6) Further adding onto the functionality, a user can also like or comment as per the pin's privilege level.

insert into `likes`(`like_id`,`pin_id`,`user_id`,`root_pin_id`,`created`) values (5,5,'JayPatel',5,'2015-04-15 05:54:44');

7) One of the last functionality is the advantage of searching streams using certain keywords.

Select * from streams where keyword_query like "%car%"