

**DATABASE SYSTEMS PROJECT**

**PROPOSAL DOCUMENT**

**Facebook**

**PHASE-1**

**Group Members**

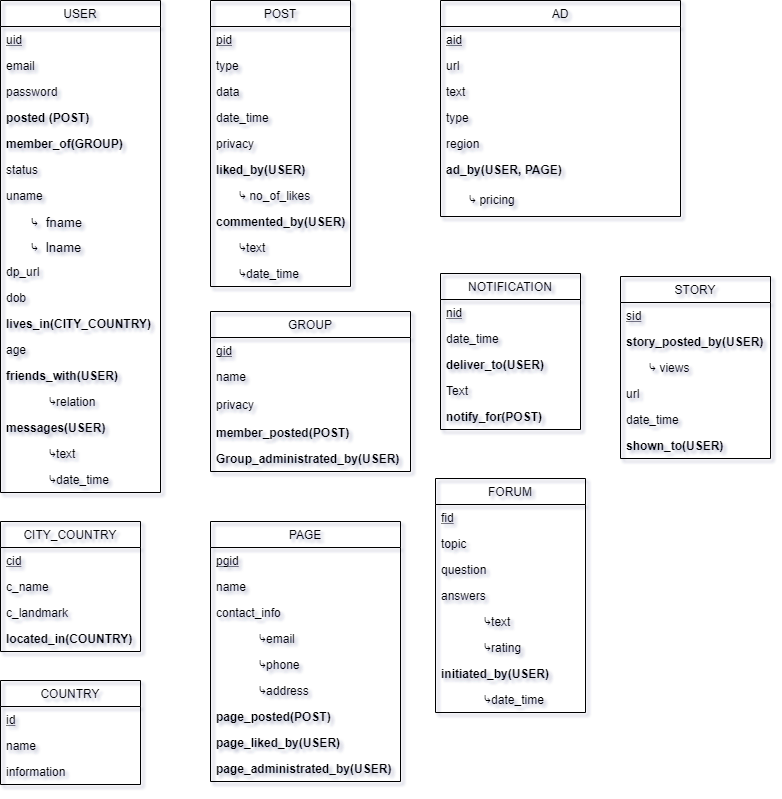
|  |  |
| --- | --- |
| **Name** | **Enrollment No** |
| Ali Sehran | L1F17BSCS0344 |
| Waleed Kamran | L1F17BSCS0328 |
| Hammad Chaudhary | L1F17BSCS0499 |

**Project description:**

Facebook:

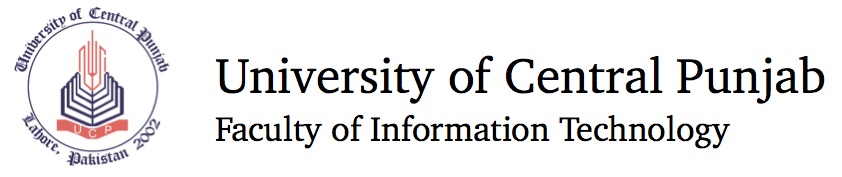
Whole database is splitted into various entities such as user, page, group and post etc. Project will be primarily initialized with 25 user’s data, allowing us to perform almost all basic Facebook features. With the help of our designed relation between each table, we can fetch any desired information.

**List of Entities & Attributes:**



**Proposed Technologies:**

DBMS will be created using MySQL, while front-end will be created using bootstrap powering it with php as our server-side language. All media content such as images will be on cloud, only reference (URL) will be provided in database, this will make our database much lighter in weight.



**DATABASE SYSTEMS PROJECT**

**Facebook**

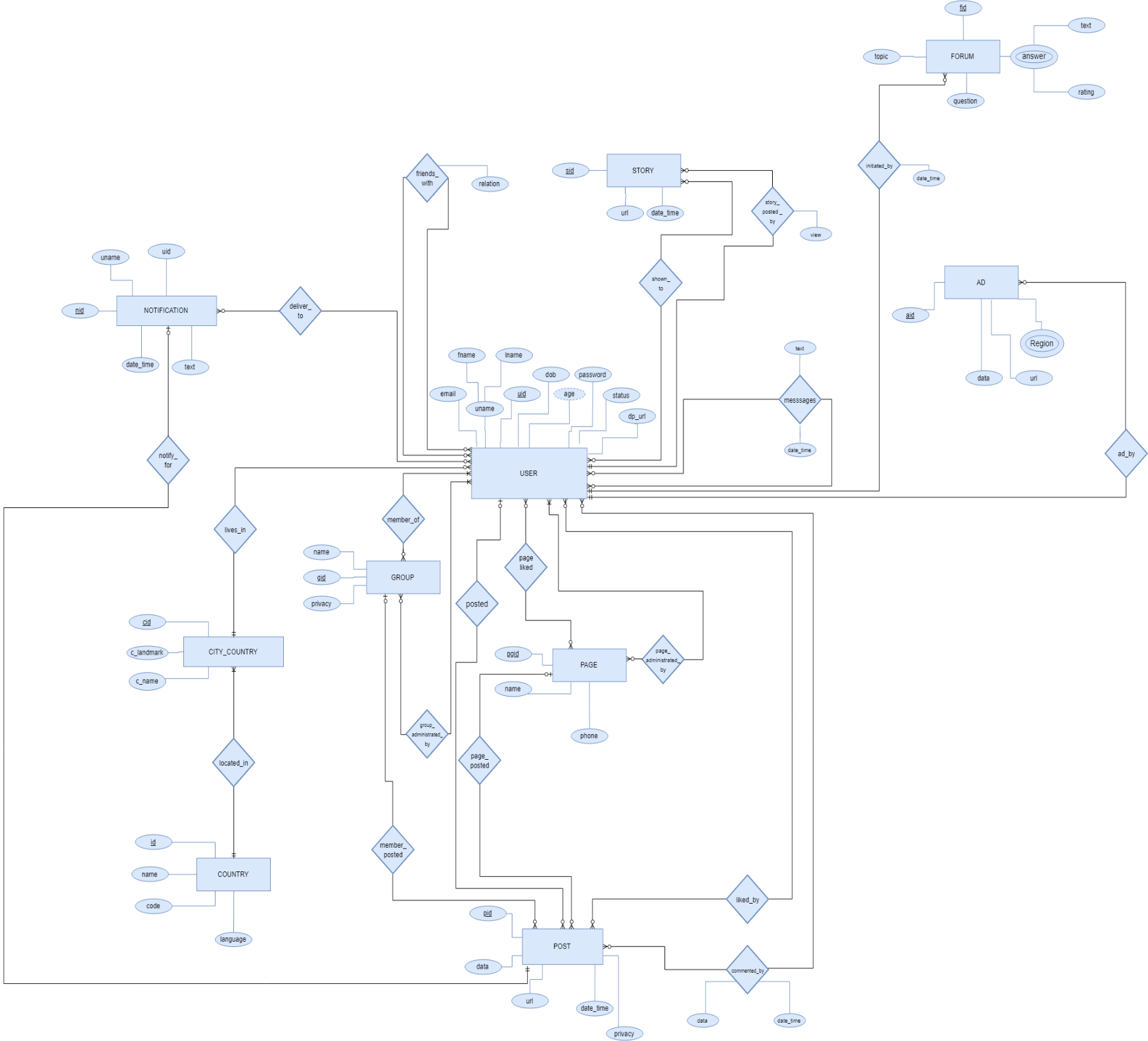
**Group Members**

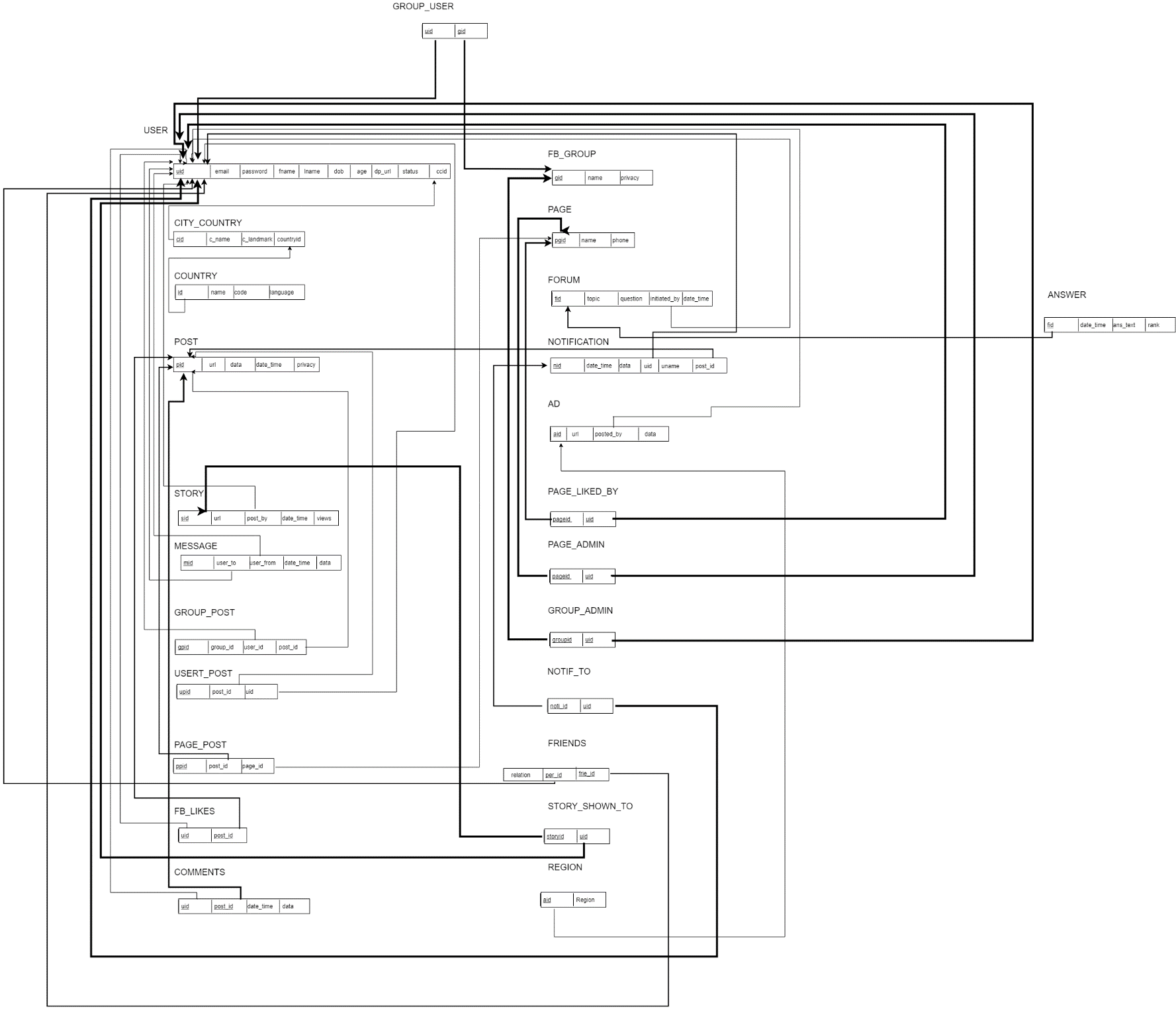
|  |  |
| --- | --- |
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**PHASE -2**

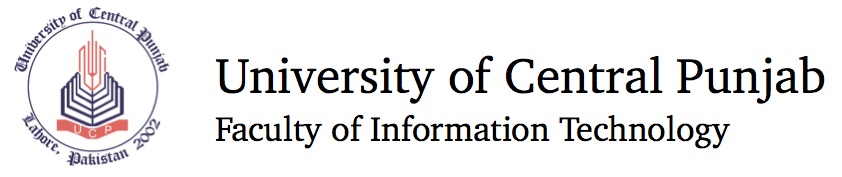
Assumptions:

1. Each post have different URL therefore no one can post the same post more than once.
2. Each group must have at least one admin, admin will also be a member of the same group but will be treated differently.
3. Each user will have some specific city.
4. Every country will have at least one city.
5. Each advertisement have different URL therefore one ad cannot be posted more than once.
6. Each notification will be created against some post, whereas it’s not necessary that each new post will trigger new notification.
7. Only images can be posted in story.
8. It’s necessary for an ad, story, post or forum that someone (USER) initiate it.
9. Ad can be shown in different regions and can be posted only by users.
10. Answers in forums will be posted anonymously.

 **ERD-Diagram**

  
Content: Drive\_LINK ->





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**PHASE -3**

Joins

**Question**-1

**Name of users who are notified for any post that is posted in Group25?**

**Query:**

select concat(u.fname,' ',u.lname) as Name from fb\_group fbg join group\_post gp on fbg.gid=gp.group\_id

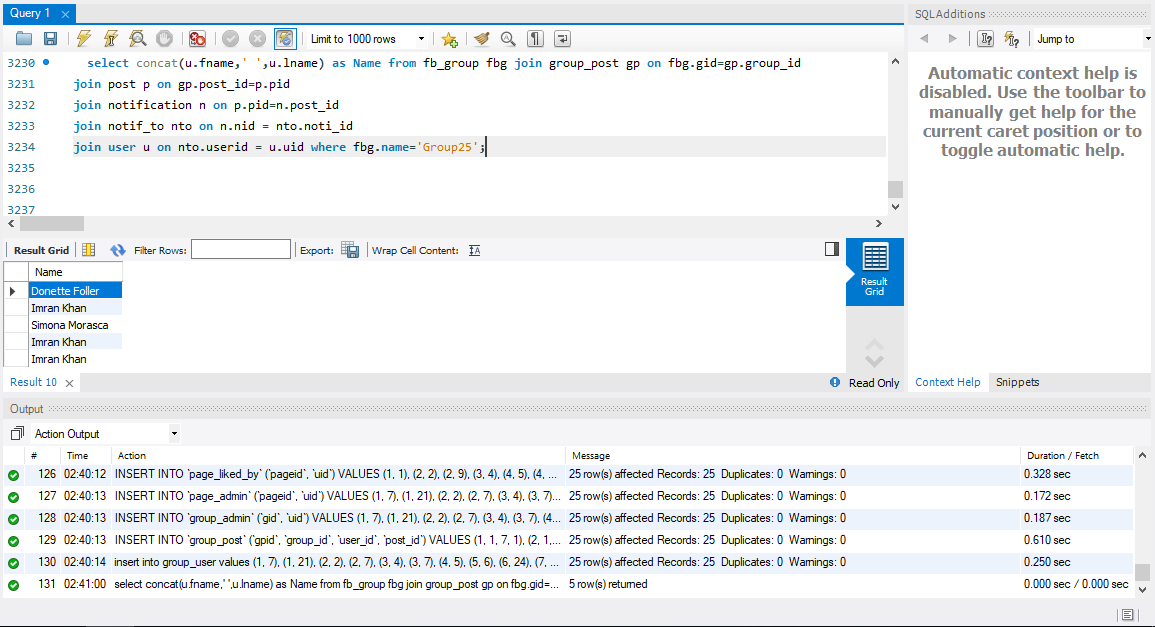
join post p on gp.post\_id=p.pid

join notification n on p.pid=n.post\_id

join notif\_to nto on n.nid = nto.noti\_id

join user u on nto.userid = u.uid where fbg.name='Group25';

**Screenshot:**



**Question**-2

**Showing all the cities and countries and names of all user who have posted any ad?**

**Query:**

select concat(u.fname,' ',u.lname) as Name, cc.c\_name as City\_Name, c.name as Country\_Name from ad a join user u on a.posted\_by=u.uid join city\_country cc on u.ccid=cc.cid

join country c on cc.countryID=c.id;

**Screenshot:**



**Question**-3

**Showing posts of all pages which are public and page is liked by James?**

**Query:**

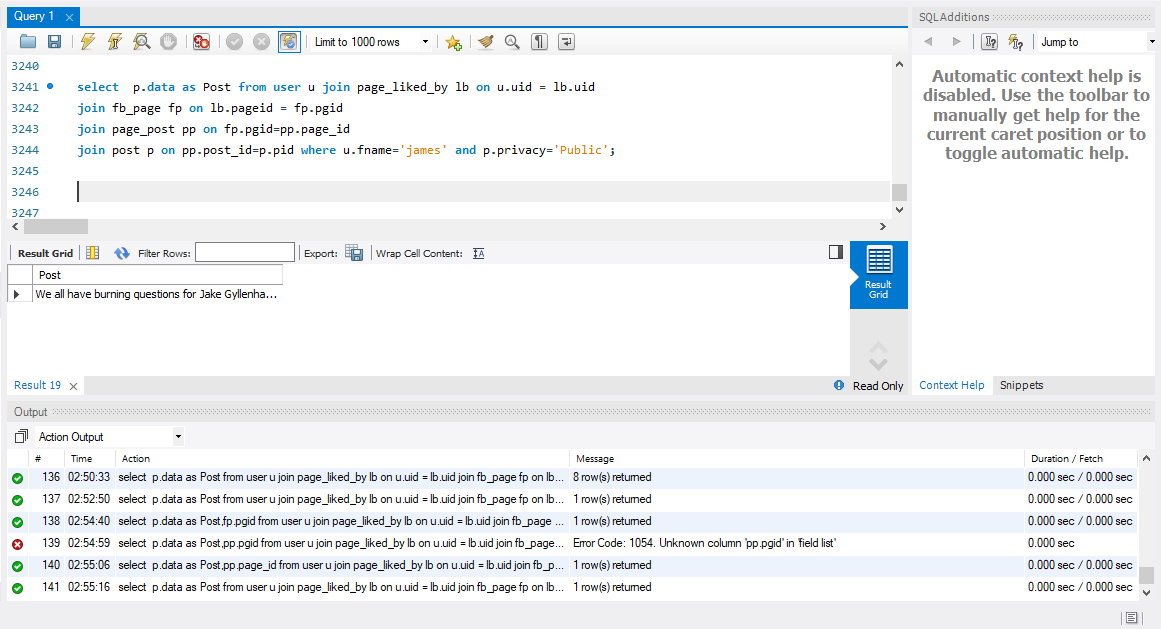
select p.data as Post from user u join page\_liked\_by lb on u.uid = lb.uid

join fb\_page fp on lb.pageid = fp.pgid

join page\_post pp on fp.pgid=pp.page\_id

join post p on pp.post\_id=p.pid where u.fname='james' and p.privacy='Public';

**Screenshot:**



**Question**-4

**Showing comments of all the groups which are commented by user Valentine?**

**Query**

select concat(u.fname,' ',u.lname) as Name,c.data as Comment,fbg.name as Group\_Name from fb\_group fbg

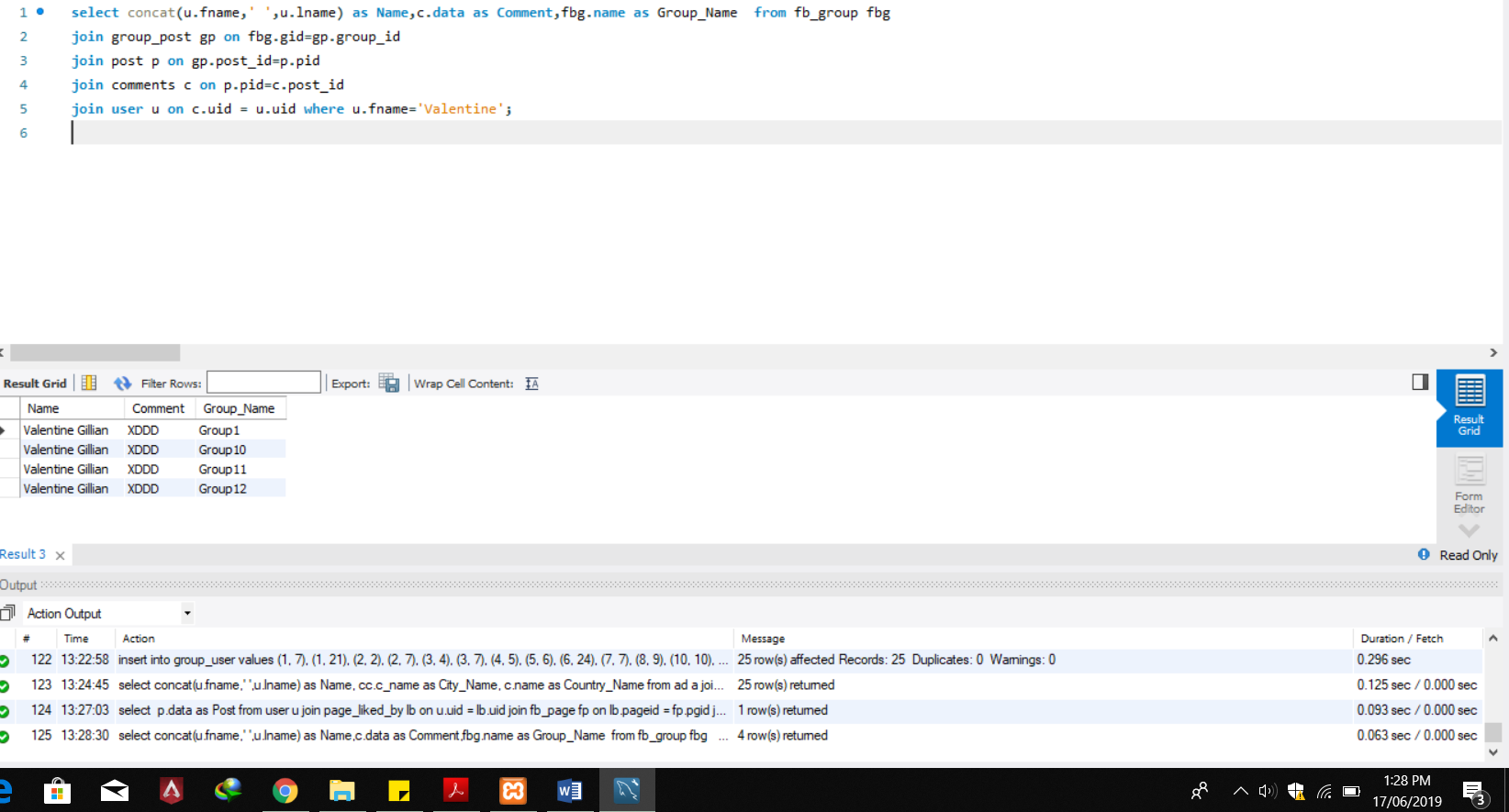
join group\_post gp on fbg.gid=gp.group\_id

join post p on gp.post\_id=p.pid

join comments c on p.pid=c.post\_id

join user u on c.uid = u.uid where u.fname='Valentine';

**Screenshot:**

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**Question**-5

**Show Name, Email, City and LandMark of Admins of Page1?**

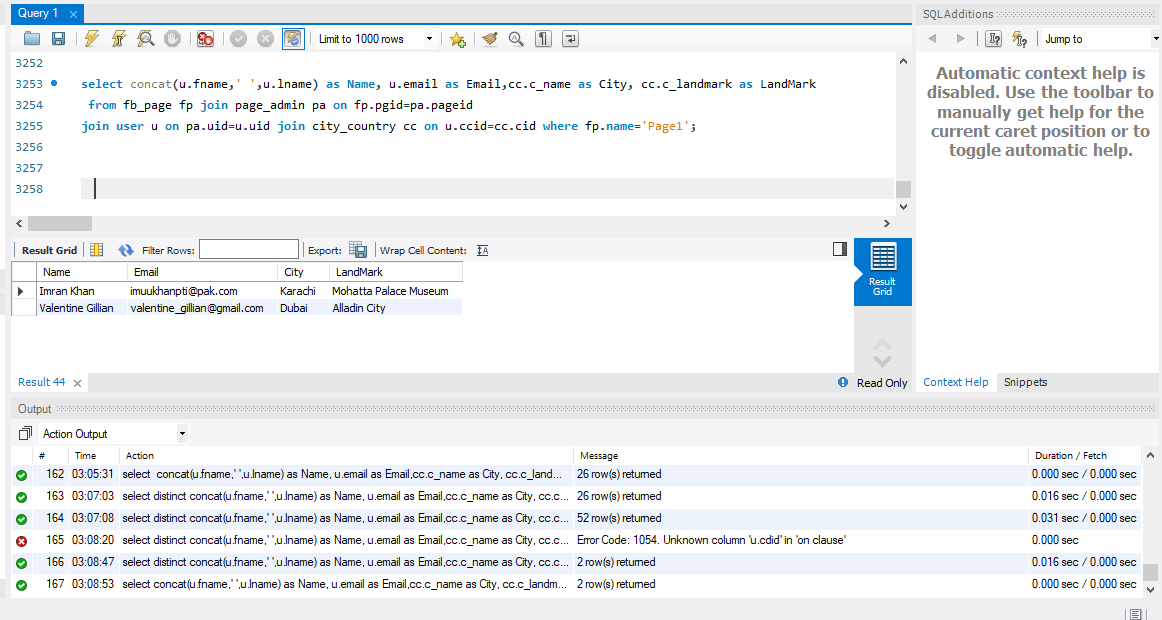
**Query:**

select concat(u.fname,' ',u.lname) as Name, u.email as Email,cc.c\_name as City, cc.c\_landmark as LandMark

from fb\_page fp join page\_admin pa on fp.pgid=pa.pageid

join user u on pa.uid=u.uid join city\_country cc on u.ccid=cc.cid where fp.name='Page1';

**Screenshot:**



Co-Related

**Question**-6

**Print Username and their country whose friends are more than 1**.

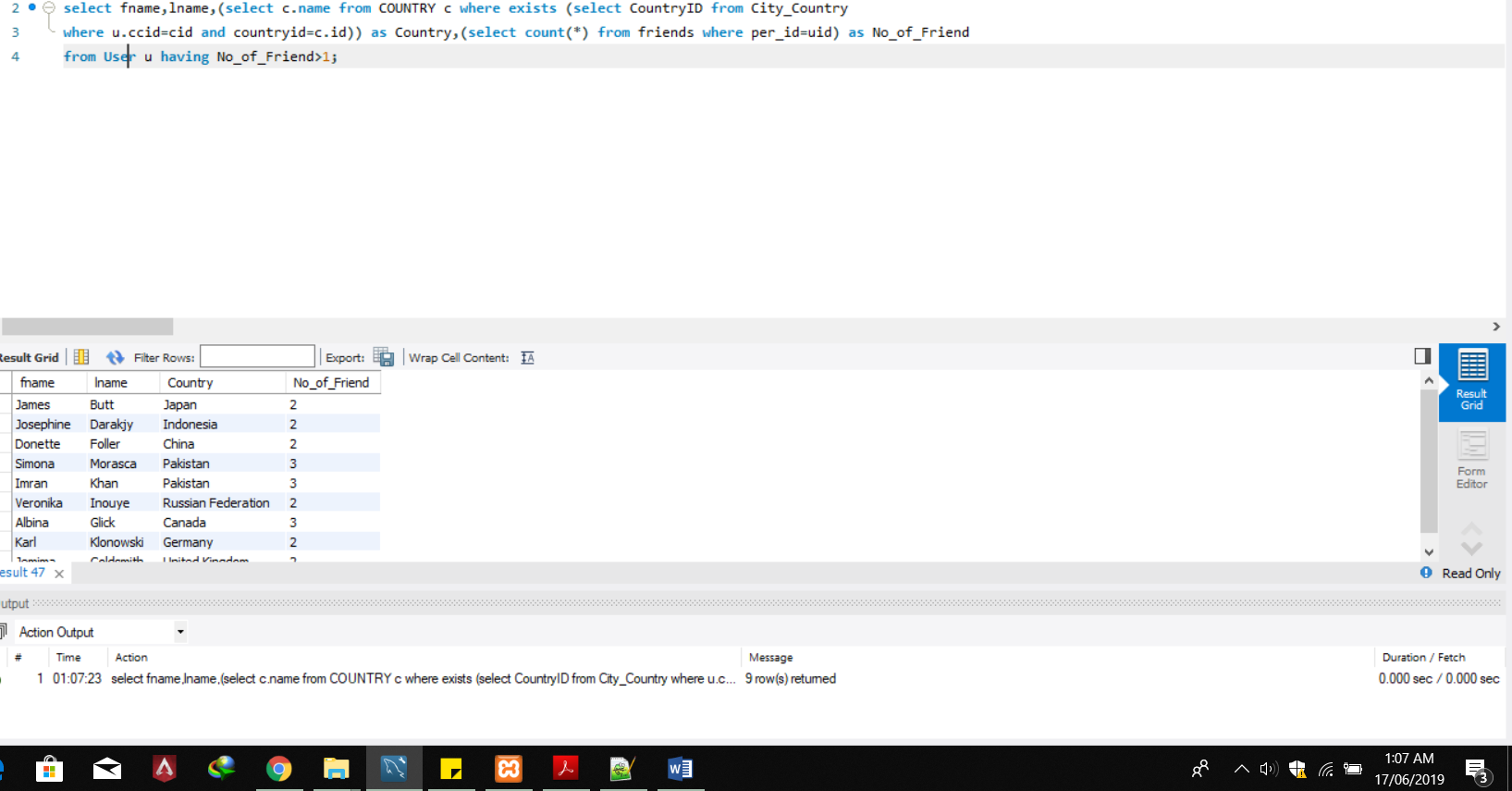
**Query**:

select concat (fname,’ ‘,lname) as UserName,(select c.name from COUNTRY c where id=(select CountryID from City\_Country

where u.ccid=cid)) as Country,(select count(\*) from friends where per\_id=uid) as No\_of\_Friend

from User u having No\_of\_Friend>1;

**Screenshot**:



**Question**- 7

**Show all those posts whose notification is delivered to User having fname='Imran'**

**Query**:

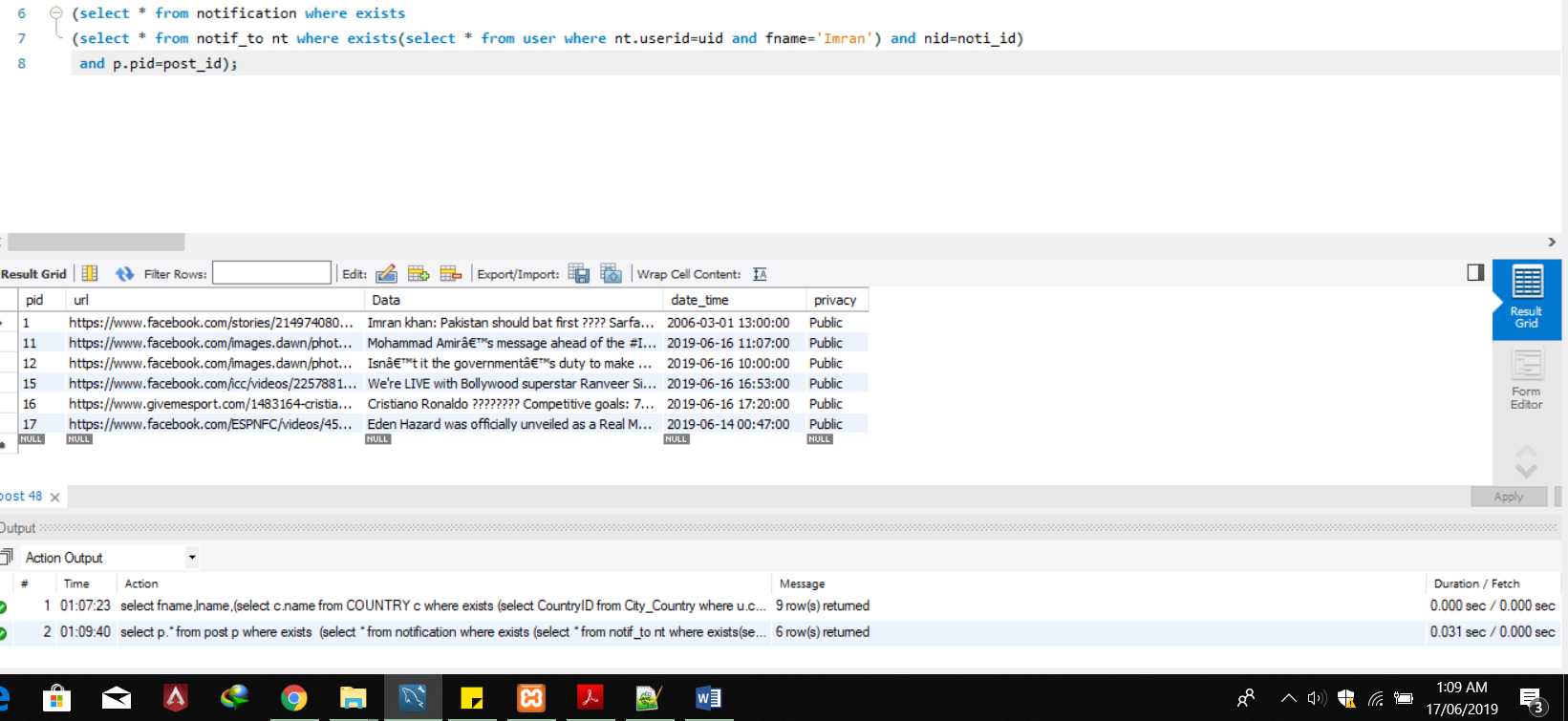
select p.\* from post p where exists

(select \* from notification where exists

(select \* from notif\_to nt where exists(select \* from user where nt.userid=uid and fname='Imran') and nid=noti\_id)

and p.pid=post\_id);

**Screenshot**:



**Question-8**

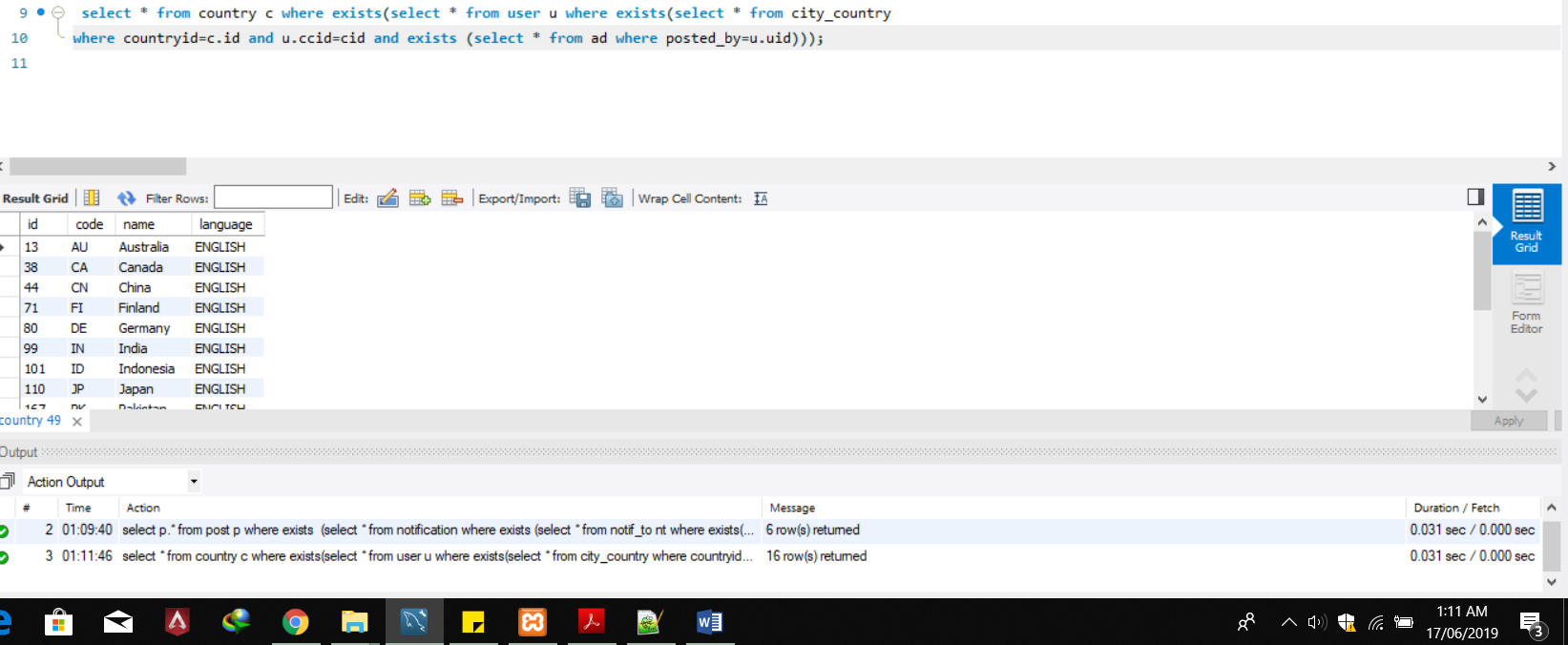
**Fetch countries data from where any user posted any ad.**

**Query:**

select \* from country c where exists(select \* from user u where exists(select \* from city\_country

where countryid=c.id and u.ccid=cid and exists (select \* from ad where posted\_by=u.uid)));

**Screenshot:**

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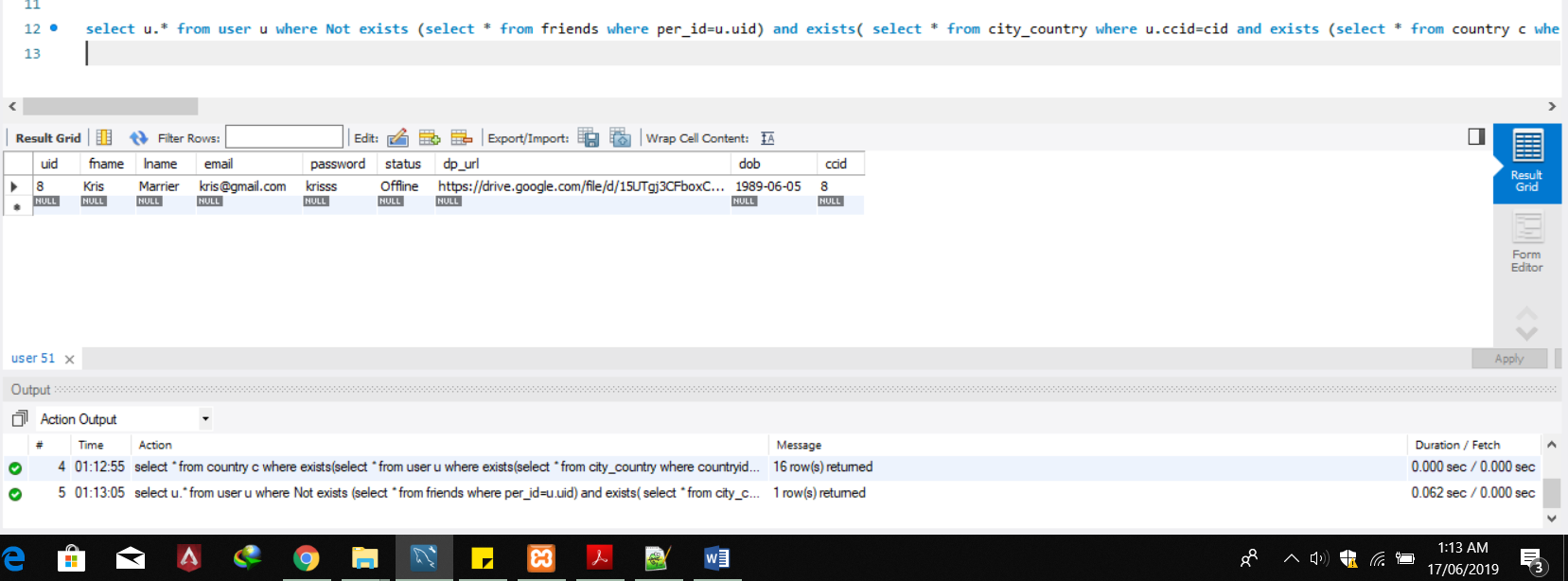
**Question- 9**

**Find all those people who lives in India and have no friends**

**Query:**

select u.\* from user u where Not exists (select \* from friends where per\_id=u.uid) and exists( select \* from city\_country where u.ccid=cid and exists (select \* from country c where countryid=id and c.name='india' ));

**Screenshot:**

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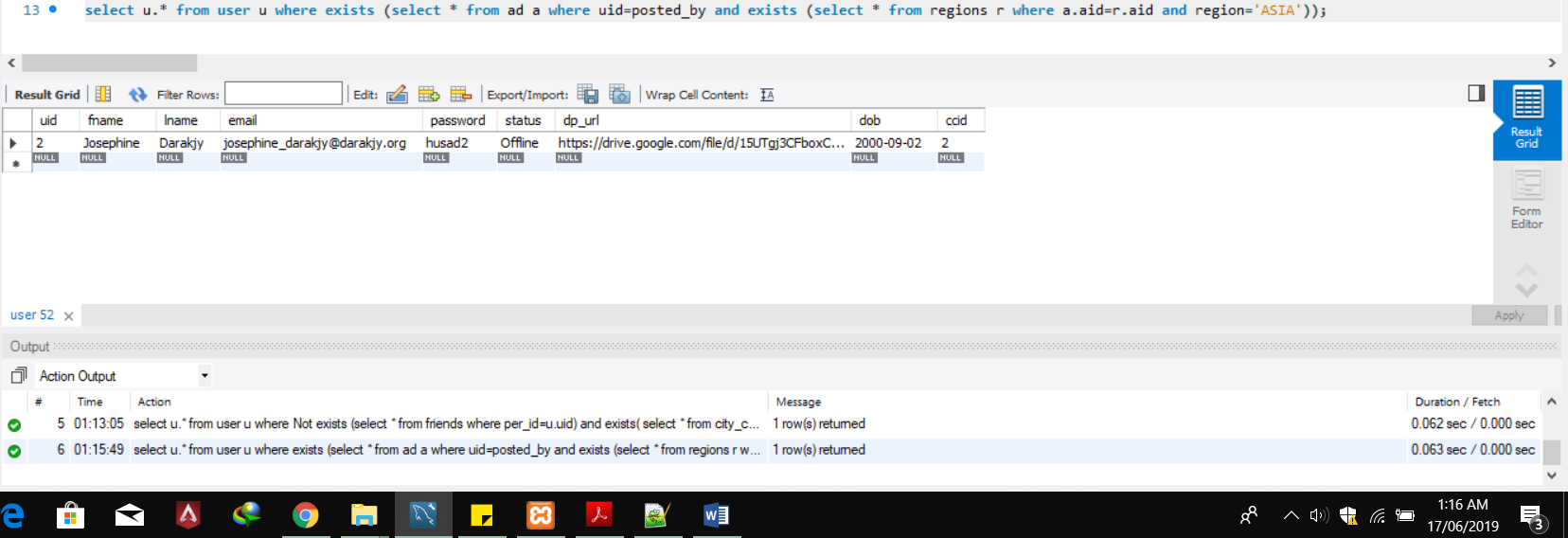
**Question- 10**

**Find user’s data who posted an ad for Asia region.**

**Query:**

select u.\* from user u where exists (select \* from ad a where uid=posted\_by and exists (select \* from regions r where a.aid=r.aid and region='ASIA'));

**Screenshot:**

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**Question- 11**

**Find the name/s of city/ies all around the world from where user posted maximum number of post.**

**Query:**

select c\_name as CityName from City\_country cc where exists

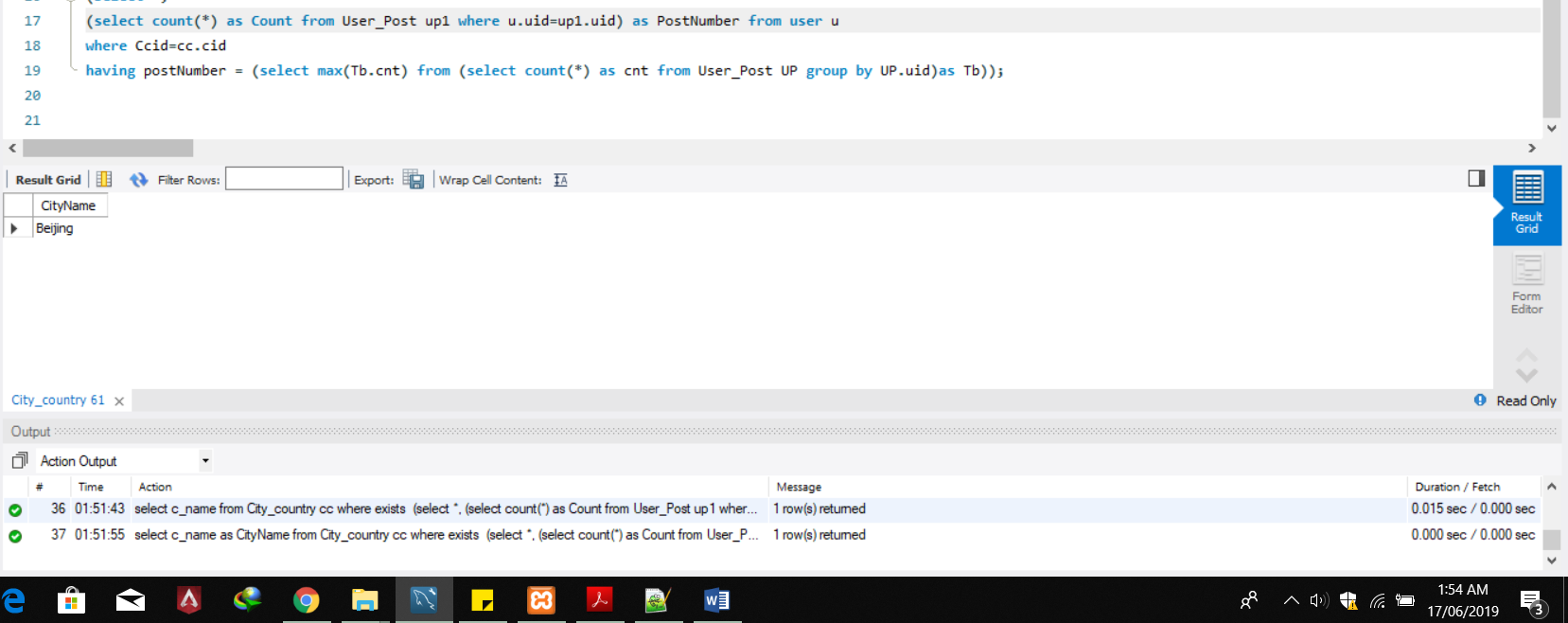
(select \*,

(select count(\*) as Count from User\_Post up1 where u.uid=up1.uid) as PostNumber from user u

where Ccid=cc.cid

having postNumber = (select max(Tb.cnt) from (select count(\*) as cnt from User\_Post UP group by UP.uid)as Tb));

**Screenshot:**



Scan for rest file: