

# DataBase Management System

**Project No: 2C**

MockFriends-ClassRoom Friends

GithubLink:

<https://github.com/sudwebd/ClassroomFriends>



**ClassRoom Friends**

**An example of RESTful CRUD in Node.js and mySQL.**

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**Under the guidance of**

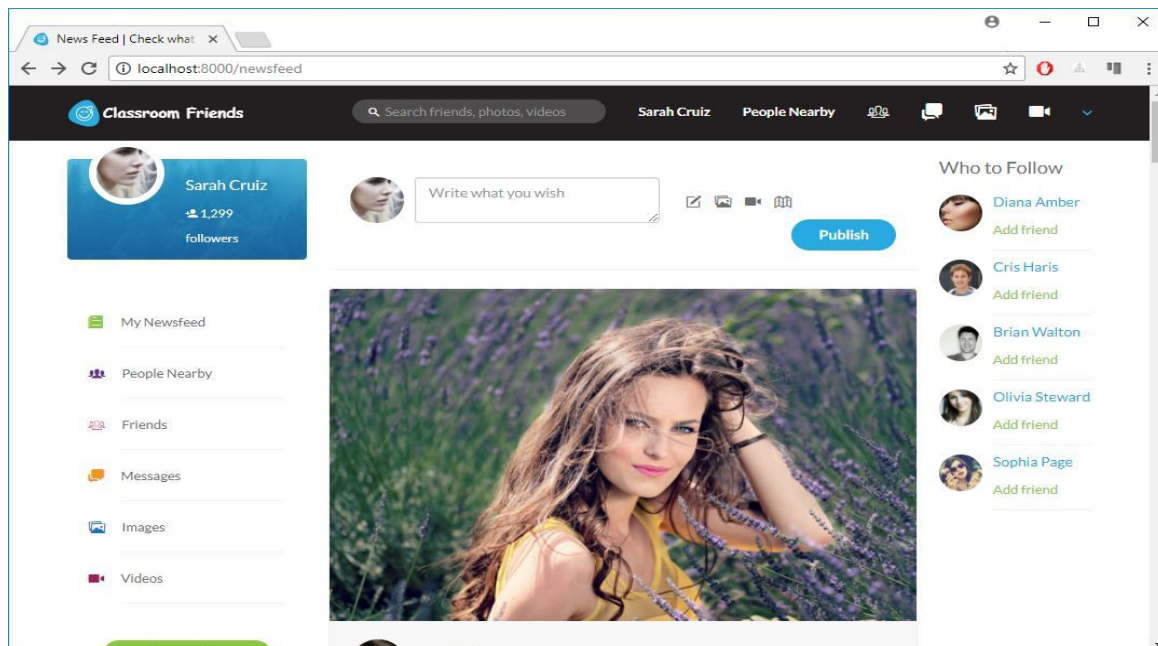
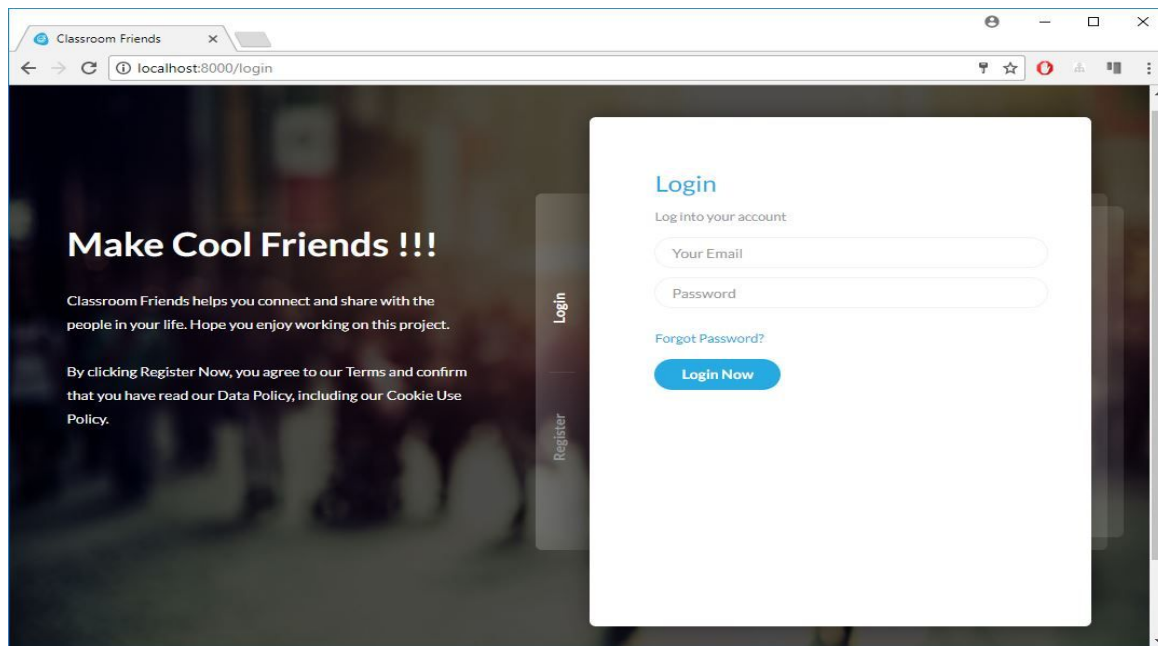
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# CLASSROOM FRIENDS



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# CLASSROOM FRIENDS

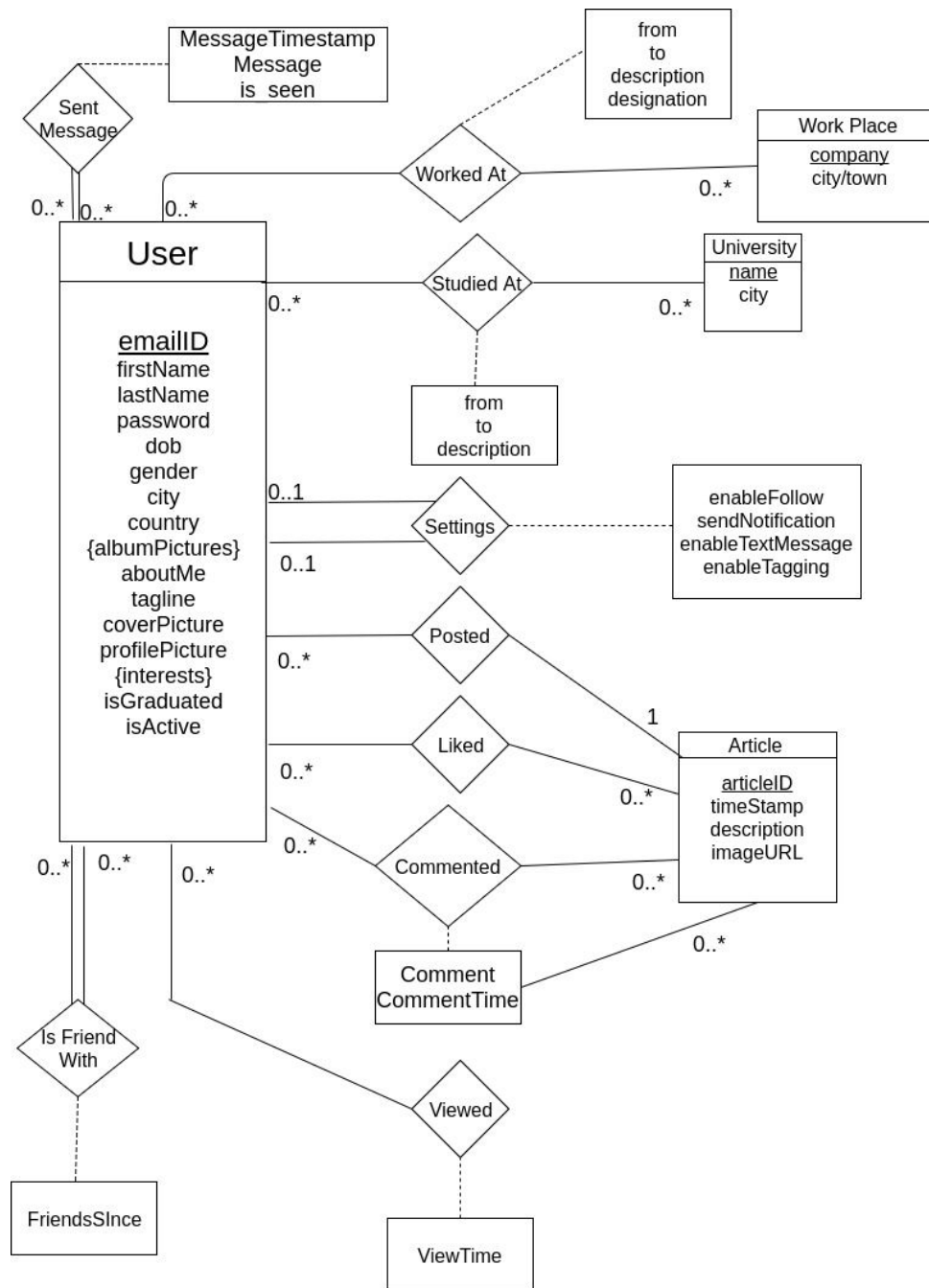
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## ASSUMPTIONS OF THE E-R DIAGRAM:

Before we begin with the project, here are the list of ASSUMPTIONS made while implementing the project.

1. A person **CANNOT** send multiple messages at same point of time.
  2. A person **CANNOT** like/comment/upload multiple contents at a given point of time.
  3. A person **CANNOT** upload multiple pics in a single post.
  4. A person might or might not have profile and cover pic.
  5. A person might or might not like/comment on content.
  6. A person can like/comment his/her content.
  7. Relationships are limited to Friends.
  8. A person might or might not comment same thing more than once.
  9. A person might work in same company more than once on different designations but only at 1 designation at a given time.
  10. "Share article" option is **NOT** available.
  11. Company names and university names are unique.
- 

## CLASSROOM FRIENDS



E-R DIAGRAM

# Functional Dependencies & Candidate Keys

Since, albumPictures and interests are multi-valued attributes, these are already been broken to different tables for simplicity.

### Functional Dependencies:

#### 1. User

(emailId, firstName, lastName, password, dob, gender, city, country, aboutMe, tagline, coverPicture, profilePicture, isGraduated, isActive)

- emailId → firstName, lastName, password, dob, gender, city, country, aboutMe, tagline, coverPicture, profilePicture, isGraduated, isActive

#### 2. Album (emailId, pictureURL)

- No FD

#### 3. Interests (emailId, Interest)

- No FD

#### 4. Friends (emailId1, emailId2, friendsSince)

- {emailId1, emailId2} → friendsSince

#### 5. Article (articleId, emailId, description, timestamp, imageURL)

- articleId → emailId, description, timestamp, imageURL

#### 6. University (universityName, city)

- universityName → city

#### 7. Education (emailId, universityName, from, to, description)

- {emailId, universityName} → from, to, description

#### 8. WorkPlace (company, city)

- company → city

#### 9. Work (emailId, company, designation, from, to, description)

- {emailId, company, designation} → from, to, description
- {emailId, company, from} → designation, to, description

## CLASSROOM FRIENDS

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- {emailId, company, to} -> designation, from, description

### 10. Settings

(emailId1, emailId2, enableFollow, sendNotification, enableTextMessage, enableTagging)

- {emailId1, emailId2} -> enableFollow, sendNotification, enableTextMessage, enableTagging

### 11. ArticleLiked (emailId, articleId)

- No FDs

### 12. CommentedOn (emailId, articleId, Comment, CommentTime)

- {emailId, articleId, CommentTime} -> Comment

### 13. Viewed (emailId, articleId, ViewTime)

- {emailId, articleId} -> ViewTime

### 14. SentMessage (emailId1, emailId2, message, messageTimeStamp, isSeen)

- {emailId1, emailId2, messageTimeStamp} -> message, isSeen

## Candidate Keys

1. **User** : {emailId}
2. **Album** : {emailId, pictureURL}
3. **Interests** : {emailId, Interest}
4. **Friends** : {emailId1, emailId2}
5. **Article** : {articleId}
6. **University** : {universityName}



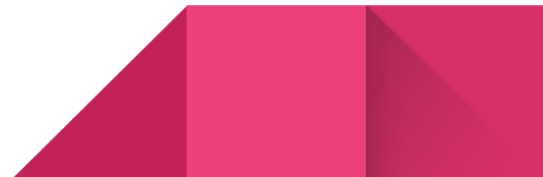
## CLASSROOM FRIENDS

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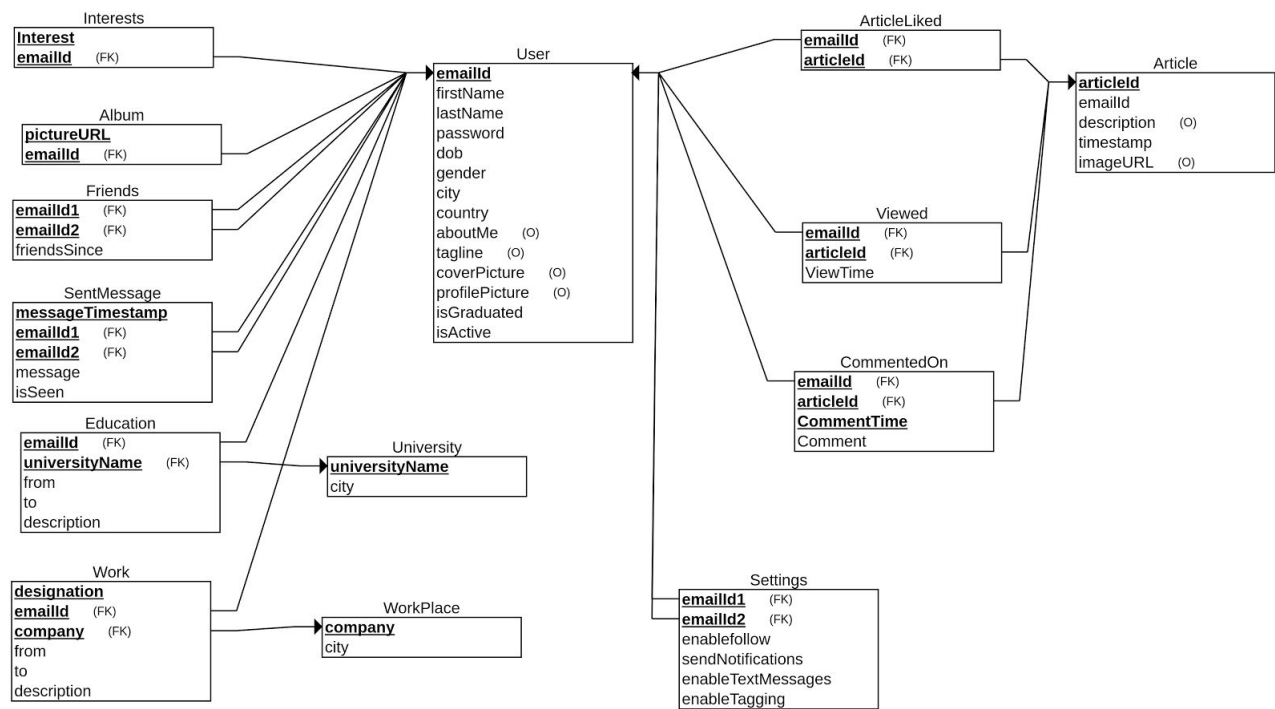
- 7. **Education** : {emailId, universityName}
- 8. **Workplace** : {company}
- 9. **Work** :  
    {emailId, company, designation}, {emailId, company, from}, {emailId, company, to}
- 10. **Settings** : {emailId1, emailId2}
- 11. **ArticleLiked** : {emailId, articleId}
- 12. **CommentedOn** : {emailId, articleId, CommentTime}
- 13. **Viewed** : {emailId, articleId}
- 14. **SentMessage** : {emailId1, emailId2, messageTimeStamp}

## Minimal Cover

Since there is no FD in any relation, in which LHS is not a candidate key, the above written dependencies are also the minimal cover for the schema.



## Schema Diagram



### 1NF, 2NF, 3NF, BCNF 4NF, 5NF

**Observation:** In all our tables, we have FDs of type  $X \rightarrow A$ ,  $X \in \text{Candidate Key}$ .

**1. 1NF:**

- a. Since all our columns are atomic, the tables are in 1NF.

**2. 2NF:**

- a. Since  $X \in \text{Candidate Key}$ , no non-prime attribute can be dependent on a subset of candidate key.

**3. 3NF:**

- a. Since  $X \in \text{Candidate Key}$ , there cannot be a functional dependency from non-prime attribute to non-prime attribute

**4. BCNF:**

- a. Since  $X \in \text{Candidate Key} \subseteq \text{Super Key}$ , this means all our tables are in **BCNF**.

Since there are no multi-valued dependencies or Join Dependencies, the schema is in **5NF**



## CLASSROOM FRIENDS

## Queries and Screenshots Of Features

**NOTE: Please import the “classroomfriends.sql” file in database before running the following queries. [Link](#)**

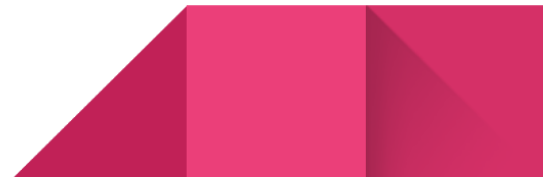
**Also, As the front-end of template provided was not compatible with it's backend, UI integration had to be skipped.**

- When someone registers on Mockfriend
  - First, following query is run to check whether user already exists in database or not  
`Select count(email) from users where email = "sudhanshu@gmail.com";`  
If query returns one user is notified that email id is already being used, else following query is run to add entry to database (**Note: As 'sudhanshu@gmail.com' has now been added to the database, above query will give result as 1, please to add some other user**):
    - `INSERT INTO users VALUES ("sudhanshu@gmail.com","Sarah Cruiz","hellopeople",'30/12/1999', "Male", "Roorkee", "India", "Dancer", "tagline", "123.png","pewwes.png", 0, 1);`

```
mysql> Select count(email) from users where email = "sudhanshu@gmail.com";
+-----+
| count(email) |
+-----+
|           0 |
+-----+
1 row in set (0.01 sec)
```

```
mysql> INSERT INTO users VALUES ('sudhanshu@gmail.com','Sarah Cruiz','hellopeople','30/12/1999','Male','Roorkee','India','Dancer','tagline','123.png','pewwes.png',0,1);
Query OK, 1 row affected (0.01 sec)

mysql> select * from users where email="sudhanshu@gmail.com";
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| email          | name      | password   | dob       | gender | city    | country | aboutMe | tagline | coverPicture | profilePicture | isGraduated |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| sudhanshu@gmail.com | Sarah Cruiz | hellopeople | 30/12/1999 | Male   | Roorkee | India   | Dancer  | tagline | 123.png     | pewwes.png     | 0           |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
```



## CLASSROOM FRIENDS

---

- When logging in

- Suppose user enters sarah@gmail.com as email and 'hellopeople' password, (i.e. right credentials ) then

Select count(email) from users where email = "sarah@gmail.com" and password = "hellopeople";

gives 1 which means given values are correct and user is logged in.

- Suppose user enters sarah@gmail.com as email and 'hipeople' password, (i.e. wrong credentials )then

Select count(email) from users where email = "sarah@gmail.com" and password = "people";

gives 0 which means given inputs are incorrect and user is not logged in.

```
mysql> Select count(email) from users where email = "sarah@gmail.com" and password = "hellopeople";
+-----+
| count(email) |
+-----+
|             1 |
+-----+
1 row in set (0.00 sec)

mysql> Select count(email) from users where email = "sarah@gmail.com" and password = "people";
+-----+
| count(email) |
+-----+
|             0 |
+-----+
1 row in set (0.00 sec)
```

- ```
name = "Sudhanshu Sambharya",
dob = "18/03/1996",
city = "Roorkee",
country = "India"
where email = "sudhanshu@gmail.com";
```

```
mysql> UPDATE users
-> SET
-> name = "Sudhanshu Sambharya",
-> dob = "18/03/1996",
-> city = "Roorkee",
-> country = "India"
-> where email = "sudhanshu@gmail.com";
Query OK, 0 rows affected (0.01 sec)
Rows matched: 1 Changed: 0 Warnings: 0

mysql> select * from users where email="sudhanshu@gmail.com";
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| email | name | password | dob | gender | city | country | aboutMe | tagline | coverPicture | profilePicture | isGradu |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| email | isActive |
+-----+-----+
| sudhanshu@gmail.com | Sudhanshu Sambharya | hipeople | 18/03/1996 | Male | Roorkee | India | Dancer | tagline | 123.png | pewwes.png |
| 0 | 1 |
+-----+-----+
1 row in set (0.00 sec)
```

## CLASSROOM FRIENDS

- Adding new Interest

- Insert into Interests values ( "Music","sudhanshu@gmail.com");

```
mysql> select * from interests where email="sudhanshu@gmail.com";
Empty set (0.20 sec)

mysql> Insert into Interests values ( "Music","sudhanshu@gmail.com");
Query OK, 1 row affected (0.01 sec)

mysql> select * from interests where email="sudhanshu@gmail.com";
+-----+-----+
| Interest | email          |
+-----+-----+
| Music    | sudhanshu@gmail.com |
+-----+-----+
1 row in set (0.00 sec)
```

- Deleting Interest

- Delete from Interests where email = "sarah@gmail.com" and Interest = "Music";

```
mysql> select * from interests where email="sarah@gmail.com";
+-----+-----+
| Interest | email          |
+-----+-----+
| Dancing  | sarah@gmail.com |
| Music    | sarah@gmail.com |
+-----+-----+
2 rows in set (0.00 sec)

mysql> Delete from Interests where email = "sarah@gmail.com" and Interest = "Music";
Query OK, 1 row affected (0.01 sec)

mysql> select * from interests where email="sarah@gmail.com";
+-----+-----+
| Interest | email          |
+-----+-----+
| Dancing  | sarah@gmail.com |
+-----+-----+
1 row in set (0.00 sec)
```

## CLASSROOM FRIENDS

---

- Editing Password

- First user's present password is matched for security purposes:  
`select count(email) from users where email = "sudhanshu@gmail.com" and password = "hellopeople";`  
If query result is 1, then password is updated, else user is alerted "Wrong Password"
- Query to update password:  
`Update users  
SET  
password = "hipeople"  
where email = "sudhanshu@gmail.com";`

```
mysql> select count(email) from users where email = "sudhanshu@gmail.com" and password = "hellopeople";
+-----+
| count(email) |
+-----+
|          1 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> Update users
-> SET
-> password = "hipeople"
-> where email = "sudhanshu@gmail.com";
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select email,password from users where email="sudhanshu@gmail.com";
+-----+-----+
| email          | password |
+-----+-----+
| sudhanshu@gmail.com | hipeople |
+-----+-----+
1 row in set (0.00 sec)
```



# CLASSROOM FRIENDS

- Editing Settings

- Settings are saved for two users, i.e. access rights for user2 on articles/messaging etc. of user1.

Update settings

SET

enablefollow = 1,

sendNotifications = 1,

enableTagging = 0,

enableTextMessages = 0

where email1 = "sarah@gmail.com" and email2 = "shubhi@gmail.com";

```
Command Prompt - mysql -u root -p
mysql> select * from settings;
+-----+-----+-----+-----+-----+-----+
| email1 | email2 | enablefollow | sendNotifications | enableTextMessages | enableTagging |
+-----+-----+-----+-----+-----+-----+
sarah@gmail.com	shubhi@gmail.com	1	1	1	1
shubhi@gmail.com	akhilanthony@gmail.com	1	0	1	1
sharma_s@gmail.com	ram.vishnu@gmail.com	1	1	0	0
rameshdutta1234@gmail.com	jyotiprabhu@gmail.com	1	0	1	1
jyotiprabhu@gmail.com	akhilanthony@gmail.com	1	1	1	0
monika_jain@gmail.com	jyotiprabhu@gmail.com	1	0	0	0
akhilanthony@gmail.com	ram.vishnu@gmail.com	1	1	1	1
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.08 sec)

mysql> Update settings
-> SET
-> enablefollow = 1,
-> sendNotifications = 1,
-> enableTagging = 0,
-> enableTextMessages = 0
-> where email1 = "sarah@gmail.com" and email2 = "shubhi@gmail.com";
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> select * from settings;
+-----+-----+-----+-----+-----+-----+
| email1 | email2 | enablefollow | sendNotifications | enableTextMessages | enableTagging |
+-----+-----+-----+-----+-----+-----+
sarah@gmail.com	shubhi@gmail.com	1	1	0	0
shubhi@gmail.com	akhilanthony@gmail.com	1	0	1	1
sharma_s@gmail.com	ram.vishnu@gmail.com	1	1	0	0
rameshdutta1234@gmail.com	jyotiprabhu@gmail.com	1	0	1	1
jyotiprabhu@gmail.com	akhilanthony@gmail.com	1	1	1	0
monika_jain@gmail.com	jyotiprabhu@gmail.com	1	0	0	0
akhilanthony@gmail.com	ram.vishnu@gmail.com	1	1	1	1
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>
```

## CLASSROOM FRIENDS

- Editing Work

- Adding new work:

Insert into work values ( "Data Analyst","sarah@gmail.com","Goldman Sachs","20/09/17 13:05",NULL,"Data analyse krta hun");

```
mysql> select * from work where email1="sarah@gmail.com";
+-----+-----+-----+-----+-----+-----+
| designation | email1 | company | st | en | description |
+-----+-----+-----+-----+-----+-----+
| Software Developer | sarah@gmail.com | LiveMint | 2020-09-16 00:00:00 | 2020-10-17 00:00:00 | Handled major tech part |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> Insert into work values ( "Data Analyst","sarah@gmail.com","Goldman Sachs","20/09/17 13:05",NULL,"Data analyse krta hun");
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select * from work where email1="sarah@gmail.com";
+-----+-----+-----+-----+-----+-----+
| designation | email1 | company | st | en | description |
+-----+-----+-----+-----+-----+-----+
| Software Developer | sarah@gmail.com | LiveMint | 2020-09-16 00:00:00 | 2020-10-17 00:00:00 | Handled major tech part |
| Data Analyst | sarah@gmail.com | Goldman Sachs | 2020-09-17 13:05:00 | NULL | Data analyse krta hun |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

- Deleting a work:

Delete from work where email1 = "sarah@gmail.com" and designation = "Data Analyst" and company = "Goldman Sachs";

```
mysql> select * from work where email1="sarah@gmail.com";
+-----+-----+-----+-----+-----+-----+
| designation | email1 | company | st | en | description |
+-----+-----+-----+-----+-----+-----+
| Software Developer | sarah@gmail.com | LiveMint | 2020-09-16 00:00:00 | 2020-10-17 00:00:00 | Handled major tech part |
| Data Analyst | sarah@gmail.com | Goldman Sachs | 2020-09-17 13:05:00 | NULL | Data analyse krta hun |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> delete from work where email1 = "sarah@gmail.com" and designation = "Data Analyst" and company = "Goldman Sachs";
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select * from work where email1="sarah@gmail.com";
+-----+-----+-----+-----+-----+-----+
| designation | email1 | company | st | en | description |
+-----+-----+-----+-----+-----+-----+
| Software Developer | sarah@gmail.com | LiveMint | 2020-09-16 00:00:00 | 2020-10-17 00:00:00 | Handled major tech part |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

# CLASSROOM FRIENDS

- Editing Education
  - Adding new Education:

Insert into Education values ("sharma\_s@gmail.com","MIT","15/12/17 00:00:00",NULL,"CSE Post-graduate");

```
mysql> select * from education;
```

| email1                    | universityName                         | st                  | en                  | description |
|---------------------------|----------------------------------------|---------------------|---------------------|-------------|
| sarah@gmail.com           | Indian Institute of Technology Roorkee | 2020-09-13 00:00:00 | 2020-10-17 00:00:00 | Civil       |
| akhilanthony@gmail.com    | Indian Institute of Technology Ropar   | 2010-09-13 00:00:00 | 2020-10-17 00:00:00 | ECE         |
| sharma_s@gmail.com        | Indian Institute of Technology Ropar   | 2000-02-17 00:00:00 | 2004-02-17 00:00:00 | CSE         |
| jyotiprabhu@gmail.com     | Indian Institute of Technology Bombay  | 2003-01-15 00:00:00 | 2024-12-17 00:00:00 | Chem        |
| monika_jain@gmail.com     | Indian Institute of Technology Kanpur  | 2023-11-12 00:00:00 | 2024-12-16 00:00:00 | CSE         |
| rameshdutta1234@gmail.com | Indian Institute of Technology Delhi   | 2023-11-12 00:00:00 | 2024-12-16 00:00:00 | EE          |
| shubhi@gmail.com          | Indian Institute of Technology Kanpur  | 2023-11-14 00:00:00 | 2024-12-16 00:00:00 | MNC         |

7 rows in set (0.00 sec)

```
mysql> Insert into Education values ("sharma_s@gmail.com","MIT","15/12/17 00:00:00",NULL,"CSE Post-graduate");
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select * from education;
```

| email1                    | universityName                         | st                  | en                  | description       |
|---------------------------|----------------------------------------|---------------------|---------------------|-------------------|
| sarah@gmail.com           | Indian Institute of Technology Roorkee | 2020-09-13 00:00:00 | 2020-10-17 00:00:00 | Civil             |
| akhilanthony@gmail.com    | Indian Institute of Technology Ropar   | 2010-09-13 00:00:00 | 2020-10-17 00:00:00 | ECE               |
| sharma_s@gmail.com        | Indian Institute of Technology Ropar   | 2000-02-17 00:00:00 | 2004-02-17 00:00:00 | CSE               |
| jyotiprabhu@gmail.com     | Indian Institute of Technology Bombay  | 2003-01-15 00:00:00 | 2024-12-17 00:00:00 | Chem              |
| monika_jain@gmail.com     | Indian Institute of Technology Kanpur  | 2023-11-12 00:00:00 | 2024-12-16 00:00:00 | CSE               |
| rameshdutta1234@gmail.com | Indian Institute of Technology Delhi   | 2023-11-12 00:00:00 | 2024-12-16 00:00:00 | EE                |
| shubhi@gmail.com          | Indian Institute of Technology Kanpur  | 2023-11-14 00:00:00 | 2024-12-16 00:00:00 | MNC               |
| sharma_s@gmail.com        | MIT                                    | 2015-12-17 00:00:00 | NULL                | CSE Post-graduate |

8 rows in set (0.00 sec)

## CLASSROOM FRIENDS

- Deleting an Education:

Delete from Education where email1 = "sharma\_s@gmail.com" and universityName = "MIT";

```
mysql> select * from education;
```

| email1                    | universityName                         | st                  | en                  | description       |
|---------------------------|----------------------------------------|---------------------|---------------------|-------------------|
| sarah@gmail.com           | Indian Institute of Technology Roorkee | 2020-09-13 00:00:00 | 2020-10-17 00:00:00 | Civil             |
| akhilanthony@gmail.com    | Indian Institute of Technology Ropar   | 2010-09-13 00:00:00 | 2020-10-17 00:00:00 | ECE               |
| sharma_s@gmail.com        | Indian Institute of Technology Ropar   | 2000-02-17 00:00:00 | 2004-02-17 00:00:00 | CSE               |
| jyotiprabhu@gmail.com     | Indian Institute of Technology Bombay  | 2003-01-15 00:00:00 | 2024-12-17 00:00:00 | Chem              |
| monika_jain@gmail.com     | Indian Institute of Technology Kanpur  | 2023-11-12 00:00:00 | 2024-12-16 00:00:00 | CSE               |
| rameshdutta1234@gmail.com | Indian Institute of Technology Delhi   | 2023-11-12 00:00:00 | 2024-12-16 00:00:00 | EE                |
| shubhi@gmail.com          | Indian Institute of Technology Kanpur  | 2023-11-14 00:00:00 | 2024-12-16 00:00:00 | MNC               |
| sharma_s@gmail.com        | MIT                                    | 2015-12-17 00:00:00 | NULL                | CSE Post-graduate |

8 rows in set (0.00 sec)

```
mysql> delete from education where email1="sharma_s@gmail.com" and universityName="MIT";
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select * from education;
```

| email1                    | universityName                         | st                  | en                  | description |
|---------------------------|----------------------------------------|---------------------|---------------------|-------------|
| sarah@gmail.com           | Indian Institute of Technology Roorkee | 2020-09-13 00:00:00 | 2020-10-17 00:00:00 | Civil       |
| akhilanthony@gmail.com    | Indian Institute of Technology Ropar   | 2010-09-13 00:00:00 | 2020-10-17 00:00:00 | ECE         |
| sharma_s@gmail.com        | Indian Institute of Technology Ropar   | 2000-02-17 00:00:00 | 2004-02-17 00:00:00 | CSE         |
| jyotiprabhu@gmail.com     | Indian Institute of Technology Bombay  | 2003-01-15 00:00:00 | 2024-12-17 00:00:00 | Chem        |
| monika_jain@gmail.com     | Indian Institute of Technology Kanpur  | 2023-11-12 00:00:00 | 2024-12-16 00:00:00 | CSE         |
| rameshdutta1234@gmail.com | Indian Institute of Technology Delhi   | 2023-11-12 00:00:00 | 2024-12-16 00:00:00 | EE          |
| shubhi@gmail.com          | Indian Institute of Technology Kanpur  | 2023-11-14 00:00:00 | 2024-12-16 00:00:00 | MNC         |

7 rows in set (0.00 sec)

- Chat Messages between two users with timestamp

- Select \* from sentmessage where (email1 = "sarah@gmail.com" and email2 = "shubhi@gmail.com") or (email1 = "shubhi@gmail.com" and email2 = "sarah@gmail.com") order by messageTimestamp;

```
mysql> Select * from sentmessage where (email1 = "sarah@gmail.com" and email2 = "shubhi@gmail.com") or (email1 = "shubhi@gmail.com" and email2 = "sarah@gmail.com") order by messageTimestamp;
```

| messageTimestamp    | email1           | email2           | message           | isSeen |
|---------------------|------------------|------------------|-------------------|--------|
| 2020-09-17 01:40:00 | shubhi@gmail.com | sarah@gmail.com  | I am also Good!!! | 1      |
| 2020-09-17 01:40:15 | sarah@gmail.com  | shubhi@gmail.com | I am also Good!!! | 1      |
| 2020-09-17 13:01:00 | sarah@gmail.com  | shubhi@gmail.com | Hows life going?  | 1      |

3 rows in set (0.00 sec)



## CLASSROOM FRIENDS

- Friend List of a user with timestamp
  - (select email2, friendsSince from Friends where email1 = "sarah@gmail.com")  
union  
(select email1, friendsSince from Friends where email2 = "sarah@gmail.com");

```
mysql> select * from friends;
```

| email1                    | email2                 | friendsSince        |
|---------------------------|------------------------|---------------------|
| akhilanthony@gmail.com    | ram.vishnu@gmail.com   | 2006-08-21 08:04:09 |
| jyotiprabhu@gmail.com     | akhilanthony@gmail.com | 2013-08-21 14:07:09 |
| monika_jain@gmail.com     | jyotiprabhu@gmail.com  | 2012-08-21 06:01:09 |
| rameshdutta1234@gmail.com | jyotiprabhu@gmail.com  | 2016-08-21 14:03:22 |
| sarah@gmail.com           | akhilanthony@gmail.com | 2012-08-11 00:12:00 |
| sarah@gmail.com           | shubhi@gmail.com       | 2011-08-21 14:08:09 |
| sharma_s@gmail.com        | ram.vishnu@gmail.com   | 2003-08-21 09:11:53 |
| sharma_s@gmail.com        | sarah@gmail.com        | 2013-08-11 00:12:00 |
| shubhi@gmail.com          | akhilanthony@gmail.com | 2009-08-21 14:11:09 |

```
9 rows in set (0.00 sec)
```

```
mysql> (select email2, friendsSince from Friends where email1 = "sarah@gmail.com") union  
-> (select email1, friendsSince from Friends where email2 = "sarah@gmail.com");
```

| email2                 | friendsSince        |
|------------------------|---------------------|
| akhilanthony@gmail.com | 2012-08-11 00:12:00 |
| shubhi@gmail.com       | 2011-08-21 14:08:09 |
| sharma_s@gmail.com     | 2013-08-11 00:12:00 |

```
3 rows in set (0.00 sec)
```

## CLASSROOM FRIENDS

- Mutual friends of two users
  - `SELECT email,name from users where email in (SELECT email2 from friends where email1 = "shubhi@gmail.com" and email2 in (SELECT email2 from friends where email1="sharma_s@gmail.com" union SELECT email1 from friends where email2="sharma_s@gmail.com")) union SELECT email1 from friends where email2 = "shubhi@gmail.com" and email1 in (SELECT email2 from friends where email1="sharma_s@gmail.com" union SELECT email1 from friends where email2="sharma_s@gmail.com"));`

```
mysql> select * from friends;
+-----+-----+-----+
| email1 | email2 | friendsSince |
+-----+-----+-----+
akhilanthony@gmail.com	ram.vishnu@gmail.com	2006-08-21 08:04:09
jyotiprabhu@gmail.com	akhilanthony@gmail.com	2013-08-21 14:07:09
monika_jain@gmail.com	jyotiprabhu@gmail.com	2012-08-21 06:01:09
rameshdutta1234@gmail.com	jyotiprabhu@gmail.com	2016-08-21 14:03:22
sarah@gmail.com	akhilanthony@gmail.com	2012-08-11 00:12:00
sarah@gmail.com	shubhi@gmail.com	2011-08-21 14:08:09
sharma_s@gmail.com	ram.vishnu@gmail.com	2003-08-21 09:11:53
sharma_s@gmail.com	sarah@gmail.com	2013-08-11 00:12:00
shubhi@gmail.com	akhilanthony@gmail.com	2009-08-21 14:11:09
+-----+-----+-----+
9 rows in set (0.00 sec)

mysql> SELECT email,name from users where email in (SELECT email2 from friends where email1 = "shubhi@gmail.com" and email2 in (SELECT email2 from friends where email1="sharma_s@gmail.com" union SELECT email1 from friends where email2="sharma_s@gmail.com")) union
-> union
-> SELECT email1 from friends where email2 = "shubhi@gmail.com" and email1 in (SELECT email2 from friends where email1="sharma_s@gmail.com" union SELECT email1 from friends where email2="sharma_s@gmail.com"));
+-----+-----+
| email | name |
+-----+-----+
| sarah@gmail.com | Sarah Cruiz |
+-----+-----+
1 row in set (0.00 sec)
```

## CLASSROOM FRIENDS

- All articles of a user
  - Select \* from article where email1 = "sarah@gmail.com";

```
mysql> Select * from article where email1 = "sarah@gmail.com";
+-----+-----+-----+-----+-----+
| articleid | email1 | description | timeposted | imageURL |
+-----+-----+-----+-----+-----+
| 333322227777777 | sarah@gmail.com | Party in LLAAA!!! | 2012-09-17 09:01:00 | 23dfcsddewfe3d.jpg |
| 1111222223335556 | sarah@gmail.com | Enjoying in miami!!!! | 2010-10-17 11:01:00 | 23dfcsdajswfsfe3d.jpg |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

- Name and email of users who liked a particular article
  - Select email,name from users where email in (select email1 from articleliked where articleid = "333322227777777");

```
mysql> Select email,name from users where email in (select email1 from articleliked where articleid = "333322227777777");
+-----+-----+
| email | name |
+-----+-----+
sarah@gmail.com	Sarah Cruiz
rameshdutta1234@gmail.com	Ramesh Dutta
sharma_s@gmail.com	Shyam Sharma
+-----+-----+
3 rows in set (0.00 sec)
```

- Name,email and comments with timestamp of users who have Commented on a particular article
  - Select name,email, Comment, CommentTime from commentedon natural join users where articleid = "12322222222333" order by CommentTime;

```
mysql> Select name,email, Comment, CommentTime from commentedon natural join users where articleid = "12322222222333" order by CommentTime;
+-----+-----+-----+-----+
| name | email | Comment | CommentTime |
+-----+-----+-----+-----+
Subhi Jain	shubhi@gmail.com	Hows life there?	2015-07-17 07:01:00
Ram Vishnu	ram.vishnu@gmail.com	This is it!!!!	2015-07-17 08:55:00
Sarah Cruiz	sarah@gmail.com	This is lit!	2015-07-17 09:45:00
+-----+-----+-----+-----+
3 rows in set (0.02 sec)
```

## CLASSROOM FRIENDS

- Name and email of users with view timestamp who viewed a particular article
  - Select name,email,ViewTime from viewed natural join users where articleid = "12322222222333" order by ViewTime;

```
mysql> Select name,email,ViewTime from viewed natural join users where articleid = "12322222222333" order by ViewTime;
+-----+-----+-----+
| name      | email          | ViewTime      |
+-----+-----+-----+
Ram Vishnu	ram.vishnu@gmail.com	2015-07-17 08:55:00
Sarah Cruiz	sarah@gmail.com	2015-07-17 09:45:00
Subhi Jain	shubhi@gmail.com	2015-09-17 13:05:00
+-----+-----+-----+
3 rows in set (0.00 sec)
```

- Name and email of friends who are online
  - Select name,email from users where isActive = 1 and email in (select email2 from friends where email1 = "sarah@gmail.com" union select email1 from friends where email2 = "sarah@gmail.com");

```
mysql> Select name,email from users where isActive = 1 and email in (select email2 from friends where email1 = "sarah@gmail.com" union
-> select email1 from friends where email2 = "sarah@gmail.com");
+-----+-----+
| name      | email          |
+-----+-----+
Akhil Anthony	akhilanthony@gmail.com
Shyam Sharma	sharma_s@gmail.com
Subhi Jain	shubhi@gmail.com
+-----+-----+
3 rows in set (0.00 sec)
```

- Name and email of nearby users (who are not your friends on MockFriends and in same city)
  - Select name,email from users where city = "Roorkee" and email not in (select email2 from friends where email1 = "sarah@gmail.com" union select email1 from friends where email2 = "sarah@gmail.com") and email <> "sarah@gmail.com";

```
mysql> Select name,email from users where city = "Roorkee" and email not in (select email2 from friends where email1 = "sarah@gmail.com" union
-> select email1 from friends where email2 = "sarah@gmail.com") and email <> "sarah@gmail.com";
+-----+-----+
| name      | email          |
+-----+-----+
| Raj 265   | hjdvagv@habsd.com |
| Sudhanshu Sambharya | sudhanshu@gmail.com |
+-----+-----+
2 rows in set (0.00 sec)
```



## CLASSROOM FRIENDS

- Followers of a user

- Select name,email from users where email in (select email1 from settings where email2="jyotiprabhu@gmail.com" and enablefollow = 1);

```
mysql> select * from settings;
```

| email1                    | email2                 | enablefollow | sendNotifications | enableTextMessages | enableTagging |
|---------------------------|------------------------|--------------|-------------------|--------------------|---------------|
| sarah@gmail.com           | shubhi@gmail.com       | 1            | 1                 | 0                  | 0             |
| shubhi@gmail.com          | akhilanthony@gmail.com | 1            | 0                 | 1                  | 1             |
| sharma_s@gmail.com        | ram.vishnu@gmail.com   | 1            | 1                 | 0                  | 0             |
| rameshdutta1234@gmail.com | jyotiprabhu@gmail.com  | 1            | 0                 | 1                  | 1             |
| jyotiprabhu@gmail.com     | akhilanthony@gmail.com | 1            | 1                 | 1                  | 0             |
| monika_jain@gmail.com     | jyotiprabhu@gmail.com  | 1            | 0                 | 0                  | 0             |
| akhilanthony@gmail.com    | ram.vishnu@gmail.com   | 1            | 1                 | 1                  | 1             |

```
7 rows in set (0.00 sec)
```

```
mysql> Select name,email from users where email in (select email1 from settings where email2="jyotiprabhu@gmail.com" and enablefollow = 1);
```

| name         | email                     |
|--------------|---------------------------|
| Ramesh Dutta | rameshdutta1234@gmail.com |
| Monika Jain  | monika_jain@gmail.com     |

```
2 rows in set (0.00 sec)
```

- Articles in the newsfeed of a particular user

- Articles of those users are to be added to newsfeed who are followed by this user:

Select \* from article where email1 in (select email2 from settings where email1 = "sharma\_s@gmail.com");

```
mysql> Select * from article where email1 in (select email2 from settings where email1 = "sharma_s@gmail.com")
-> ;
```

| articleid        | email1               | description           | timeposted          | imageUrl              |
|------------------|----------------------|-----------------------|---------------------|-----------------------|
| 22222244444442   | ram.vishnu@gmail.com | My new car.           | 2010-06-17 19:01:00 | 23dfcsdddddde3d.jpg   |
| 3333222277777777 | sarah@gmail.com      | Party in LLAAA!!!     | 2012-09-17 09:01:00 | 23dfcsddewfe3d.jpg    |
| 1111222223335556 | sarah@gmail.com      | Enjoying in miami!!!! | 2010-10-17 11:01:00 | 23dfcsdajswfsfe3d.jpg |

```
3 rows in set (0.00 sec)
```