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# **DOCUMENTATION OF SOCIAL NETWORK PROJECT**

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He Yan

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# 1 Introduction

This project aims to build a social network with JSP and MySQL.

## 1.1 Main Features

- *Compulsory:*
  - Support signing up & in
  - Search for contacts & Post status and reply
  - 30 secs refreshment
- *Optional:*
  - Email address regex check
  - Add Google's reCaptcha<sup>1</sup> validation

## 1.2 Components

- Apache, Tomcat
- Apache-Tomcat-Connector
- MySQL, MySQL Connector/J (JDBC)

Visit our project site at [Database Course Project](#).

# 2 Environment

This project is hosted on Amazon Linux AMI server provided by AWS. To build the environment for running our website, we took steps as below.

1. install OpenJDK-1.8.0
2. install and configure Apache (httpd) & Tomcat
3. link Apache and Tomcat with Apache Tomcat Connector<sup>2</sup>

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<sup>1</sup>Completely Automated Public Turing test to tell Computers and Humans Apart

<sup>2</sup>This makes it possible to run static web pages on Apache and dynamic ones on Tomcat.

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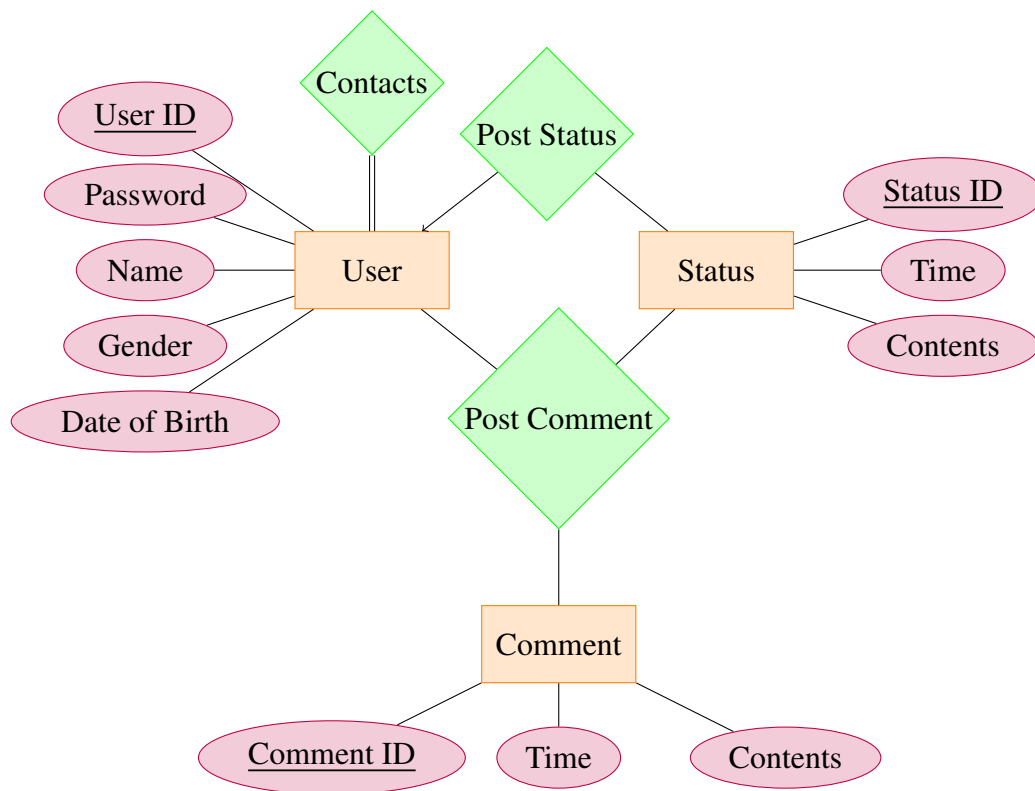
4. install MySQL<sup>3</sup> and prepare MySQL connector/J in WEB-INF/lib

Note: we've taken GitHub for convenient teamwork. Our project is being maintained at <https://github.com/PKU-2017-Database/Social-Network>.

## 3 Data Structure

### 3.1 Entity-Relationship Diagram

We refer to the ER Diagram provided by TA. Here is an English version of that ER Diagram redrawn by L<sup>A</sup>T<sub>E</sub>X.



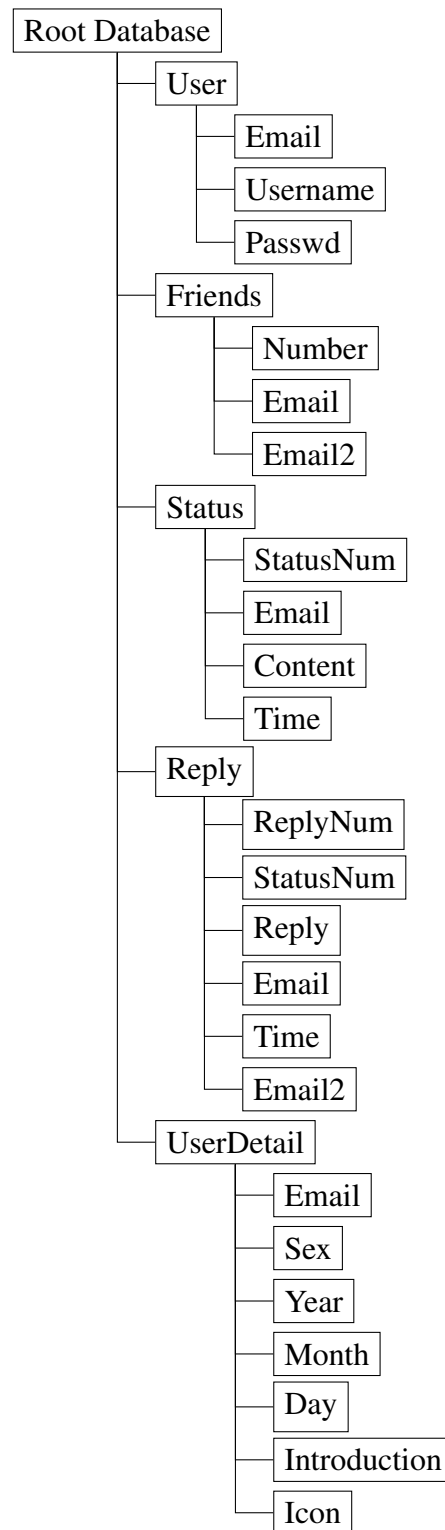
**Figure 1:** Entity-Relationship Diagram

### 3.2 MySQL Table

According to the above ER Diagram, we've designed MySQL tables as below.

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<sup>3</sup>MySQL is case insensitive for Windows and MacOS, but that's not true for Linux.



**Figure 2:** MySQL Table Structure

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Details about the attributes:

- User - deal with signing up & in
  - Email: primary key to identify users in registration and log-in
  - Username: nickname, which can be edited after registration
  - Passwd: password to validate a user
- Friends - record friend relationships
  - Number: auto-increment primary key for identification
  - Email: follower's email
  - Email2: followee's email
- Status - store posted statuses
  - StatusNum: auto-increment primary key for identification
  - Email: poster's email
  - Content: posted contents
  - Time: posting time
- Reply - store posted replies to status
  - ReplyNum: auto-increment primary key for identification
  - StatusNum: replied status number
  - Reply: reply contents
  - Email: replier's email
  - Time: replying time
  - Email2: repliee's email
- UserDetail - store user details
  - Email: primary & foreign key pointing to User.Email
  - Sex: user's sex
  - Year: user's year of birth
  - Month: user's month of birth

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- Day: user’s day of birth
  - Introduction: simple introduction to the user
  - Icon: user’s avatar

## 4 Division of Labor

Our group members:

Name	Student ID	Mobile	Email
He Yan	1400015464	15910670278	heyan@pku.edu.cn
Sun Meng	1500012867	15010189739	1400017665@pku.edu.cn
Wu Chuchuan	1500062802	18811788416	wuchuchuan@pku.edu.cn

**Table 1:** Group Members

Division of labor:

- He Yan: write documentation for project via  $\text{\LaTeX}$
- Sun Meng: CSS design of website
- Wu Chuchuan: HTML (via JSP or PHP) and database

## 5 References

- Guidebook, installers and demo provided at [course.pku.edu.cn](http://course.pku.edu.cn)
- $\text{\LaTeX}$  template provided by [Overleaf](http://www.overleaf.com)
- [mysql-connector-java-5.1.42-bin.jar](#)
- [javax.json-api-1.1.jar](#)