
DOCUMENTATION OF SOCIAL NETWORK PROJECT

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1 Introduction

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

1.1 Main Features

- *Compulsory:*
 - Sign up & in
 - Search for contacts & Post status and reply
 - 30 secs refreshment
- *Optional:*
 - Email address regex check
 - Ajax
 - Add Google's reCaptcha¹ 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 Connector²

¹Completely Automated Public Turing test to tell Computers and Humans Apart

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

4. install MySQL³ 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^AT_EX.

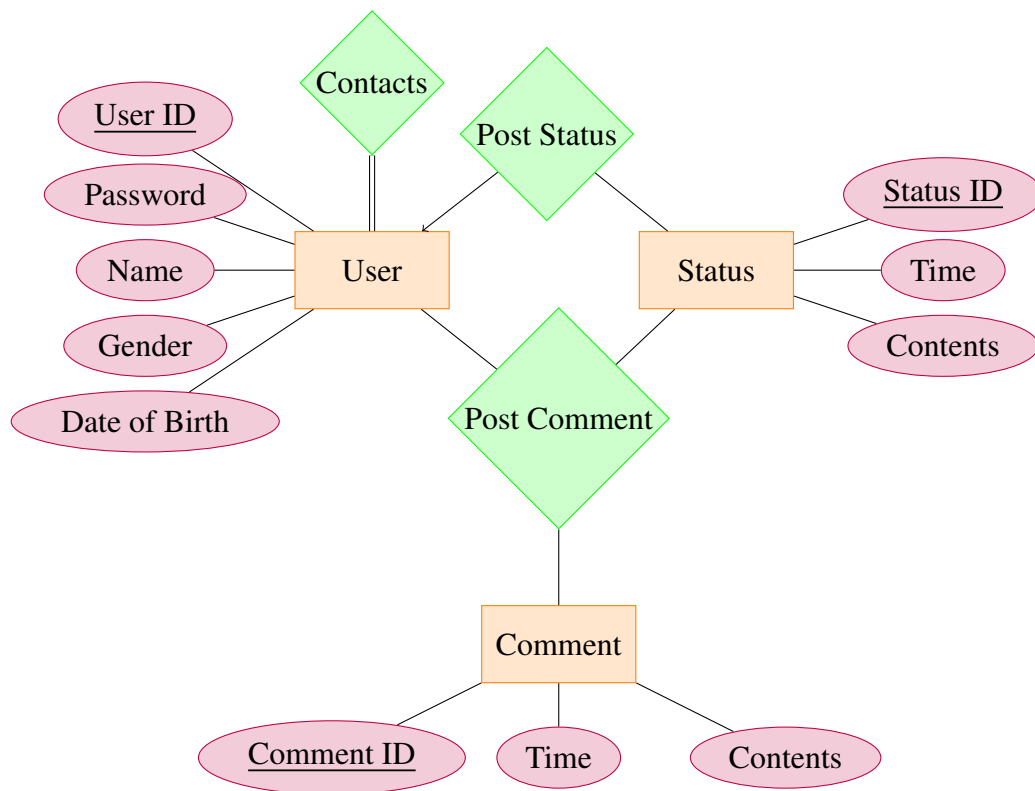


Figure 1: Entity-Relationship Diagram

3.2 MySQL Table

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

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

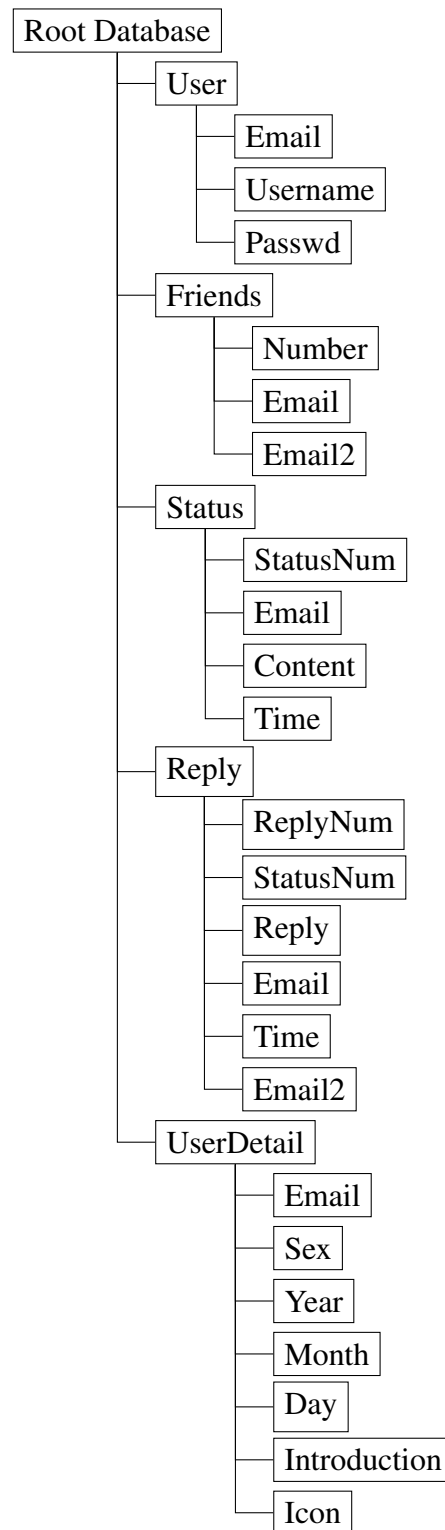


Figure 2: MySQL Table Structure

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
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Table 1: Group Members

Division of labor:

- He Yan: write documentation for project via \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
- \LaTeX template provided by [Overleaf](http://www.overleaf.com)
- [mysql-connector-java-5.1.42-bin.jar](#)
- [javax.json-api-1.1.jar](#)