DOCUMENTATION OF SOCIAL NETWORK PROJECT

May 28, 2017

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1 Introduction

This project aims to build a social network with JSP and MySQL, implementing functions as the following.

1.1 Main Features

- Support signing up & in with email regex check
- Search for contacts
- Post status and reply
- 30 secs refreshment

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 [1]
4. install MySQL and prepare MySQL connector/J in WEB-INF/lib

While building runtime environment, there's some trouble when I'm trying to link Apache with Tomcat. It does cost a lot of time to Google for the right configuration, but finally it goes well.

[1] This makes it possible to run static web pages on Apache and dynamic ones on Tomcat

In addition, MySQL is case insensitive for Windows and MacOS, but that's not true for table names in Linux. One needs to configure it manually by adding lower_case_table_names=1 to /etc/my.cnf, which quite confused me for a long time.

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 LaTeX.

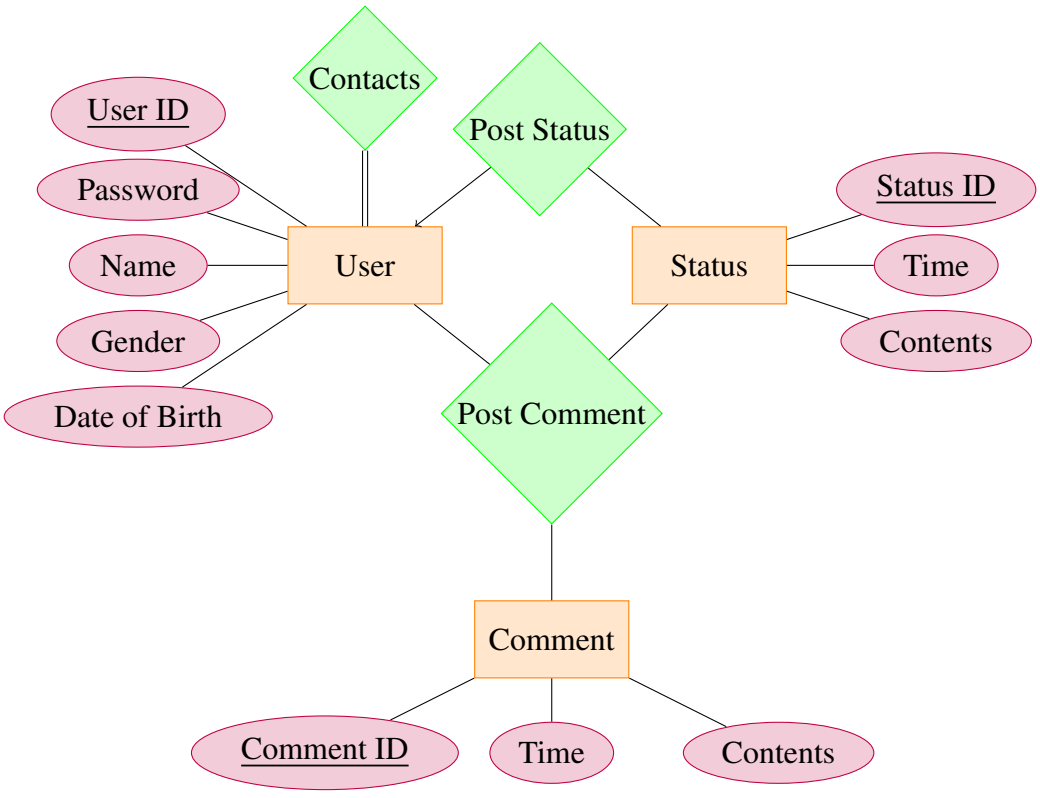

Figure 1: Entity-Relationship Diagram

3.2 MySQL Table

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

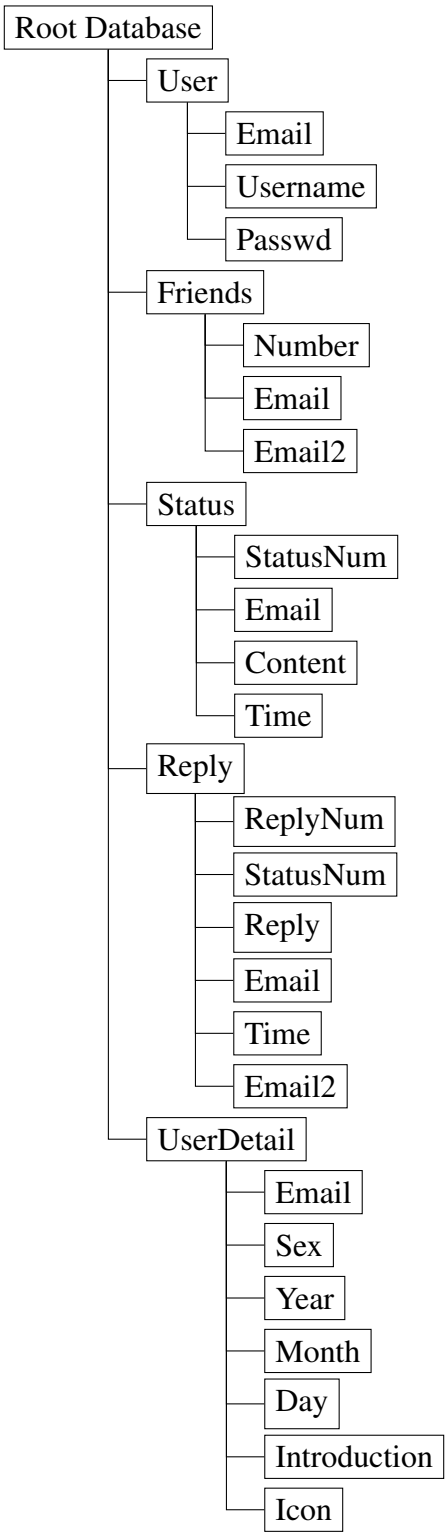

Figure 2: MySQL Table Structure

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

- 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