DOCUMENTATION OF
SOCIAL NETWORK PROJECT

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Contents

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 reCaptcha[1] 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 [2]

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

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

4. install MySQL[3] 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 LATEX.
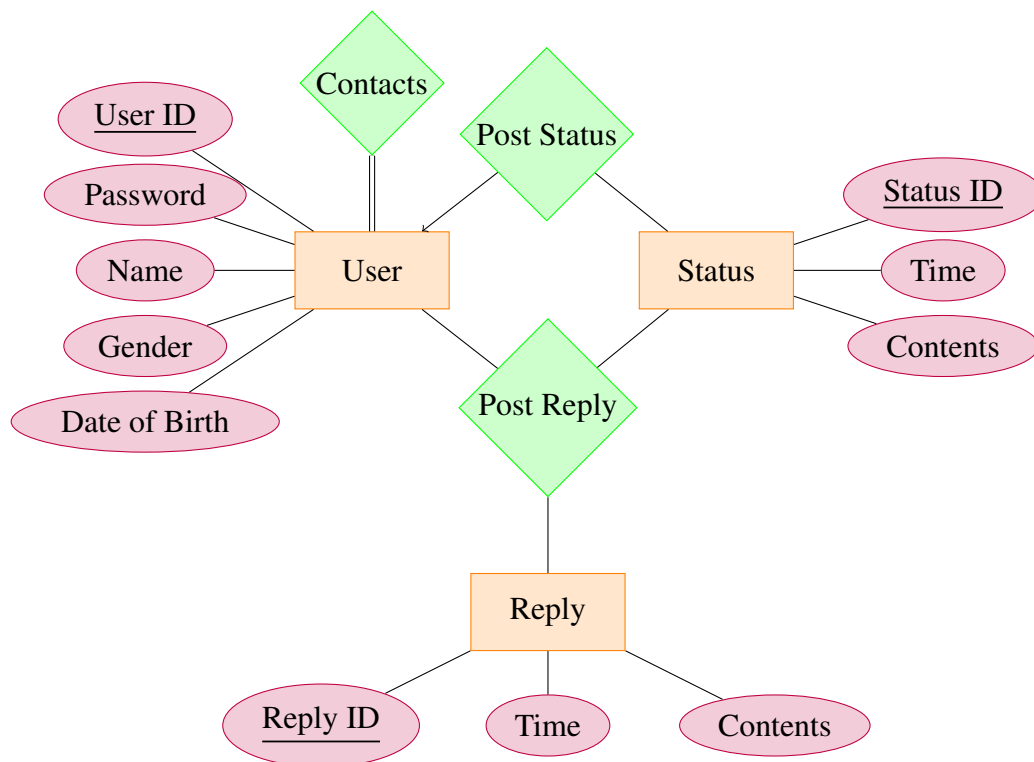

Figure 1: Entity-Relationship Diagram

3.2 MySQL Table

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

Details about the attributes:

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[3]MySQL is case insensitive for Windows and MacOS, but that's not true for Linux.
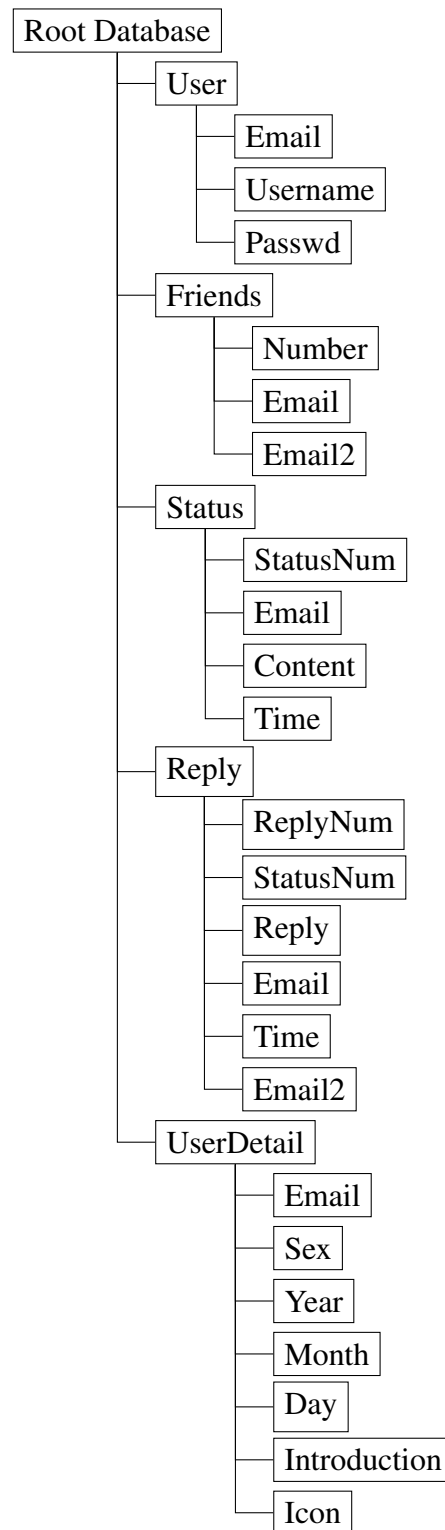
Figure 2: MySQL Table Structure

- 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

- mysql-connector-java-5.1.42-bin.jar

- javax.json-api-1.1.jar