

**数据库系统**

**实 验 报 告**

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| **评价** | **优** | **良** | **中** | **差** | **评语：** |
| **数据库设计** |  |  |  |  |
| **系统程序** |  |  |  |  |
| **实验报告** |  |  |  |  | **评分** |

**2022-04**

**数据库系统 实验报告**

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| 任课教师 | | 王金宝 | | | 指导教师 | 王金宝 | |
| 实验地点 | | 研究院中507 | | | 实验时间 | 2022年 5月 5 日 | |
| 实验名称 | | 实验3: 数据库系统开发 | | | | | |
| 实验环境 | | Java | | | | | |
| 实验目的 | | | | | | | |
| 在熟练掌握MySQL基本命令、SQL语言以及用高级程序语言编写MySQL操作程序的基础上，学习简单数据库系统的设计方法，包括数据库概要设计、逻辑设计。 | | | | | | | |
| 实验过程和结果 | | | | | | | |
| **需求简介（应用场景、功能简介）**  **社会网络系统**  **1用户可以在该系统中注册、修改个人基本信息**  **2用户可以在该系统中录入、修改个人经历**  **3用户可以在该系统中搜索、添加、删除好友**  **4用户可以在该系统中发表、更改、删除日志**  **5用户可以对好友日志或其他可回复的日志进行回复**  **6用户可以对好友信息或其他可回复的信息进行回复**  **7用户可以分享好友的日志或其他公开的可以分享的日志**  **概念模型设计（给出E-R图）**    **逻辑模型设计（给出各个关系模式及其完整性约束）**  **用户：（id，name，sex，birthDate，email，mailAddress，password）**  **用户日志：（id，user\_id，log，updateDate）**  **用户工作经历：（id，user\_id，work\_position，startDate，endDate，office）**  **用户经历：（id，user\_id，Educationlevel，startDate，endDate，schoolName，degree）**  **用户分享：（id，user\_id，date）**  **用户回复：（id，user\_id，content，date，replied\_user\_id）**  **管理员：（id，email，password）**  **Admin**    **用户经历**    **用户回复**    **用户分享**    **用户信息**    **用户日志**    **用户工作经历**    **SQL语句说明（建立关系及其完整性约束的语句、创建视图的语句、数据插入、删除和修改语句、数据查询语句、建立触发器的语句等）**  **Findemailandpassword**  **：select `user`.`email` AS `电子邮件`,`user`.`password` AS `密码` from `user`**  **Findfriend：**  **select `u`.`id` AS `id`,`u`.`name` AS `name`,`u`.`mailAddress` AS `mailAddress` from `user` `u` where `u`.`id` in (select `f`.`friend\_id` from `friendlist` `f` where (`f`.`user\_id` = '1'))**  **friendlist：**  **CREATE TABLE `friendlist` (**  **`id` INT(10) UNSIGNED NOT NULL AUTO\_INCREMENT,**  **`user\_id` INT(10) UNSIGNED NOT NULL,**  **`friend\_id` INT(10) UNSIGNED NOT NULL,**  **PRIMARY KEY (`id`) USING BTREE,**  **INDEX `FK\_\_user` (`user\_id`) USING BTREE,**  **INDEX `FK\_\_user\_2` (`friend\_id`) USING BTREE,**  **CONSTRAINT `FK\_\_user` FOREIGN KEY (`user\_id`) REFERENCES `social network system`.`user` (`id`) ON UPDATE NO ACTION ON DELETE NO ACTION,**  **Groupby：**  **select `u`.`name` AS `name`,`u`.`id` AS `id`,`u`.`sex` AS `sex`,`u`.`birthDate` AS `birthDate`,`u`.`mailAddress` AS `mailAddress` from `user` `u` group by `u`.`name`**  **leftjoin\_useruselog：**  **select `u`.`name` AS `name`,`u`.`mailAddress` AS `mailAddress`,`userlog`.`user\_id` AS `user\_id`,`userlog`.`log` AS `log`,`userlog`.`updateDate` AS `updateDate` from (`user` `u` left join `userlog` on((`userlog`.`user\_id` = `u`.`id`)))**  **personal\_experience：**  **CREATE TABLE `personal\_experience` (**  **`id` INT(10) UNSIGNED ZEROFILL NOT NULL AUTO\_INCREMENT,**  **`user\_id` INT(10) UNSIGNED NOT NULL,**  **`Educationlevel` VARCHAR(50) NULL DEFAULT NULL COLLATE 'utf8\_general\_ci',**  **`startDate` DATE NULL DEFAULT NULL,**  **`endDate` DATE NULL DEFAULT NULL,**  **`schoolName` VARCHAR(50) NULL DEFAULT '' COLLATE 'utf8\_general\_ci',**  **`degree` VARCHAR(50) NULL DEFAULT '' COLLATE 'utf8\_general\_ci',**  **PRIMARY KEY (`id`) USING BTREE,**  **INDEX `FK\_personal experience\_user` (`user\_id`) USING BTREE,**  **CONSTRAINT `FK\_personal experience\_user` FOREIGN KEY (`user\_id`) REFERENCES `social network system`.`user` (`id`) ON UPDATE NO ACTION ON DELETE NO ACTION**  **)**  **COLLATE='utf8\_general\_ci'**  **ENGINE=InnoDB**  **;**  **Reply：**  **CREATE TABLE `reply` (**  **`id` INT(10) UNSIGNED NOT NULL AUTO\_INCREMENT,**  **`user\_id` INT(10) UNSIGNED NOT NULL,**  **`content` VARCHAR(50) NOT NULL COLLATE 'utf8\_general\_ci',**  **`date` DATE NOT NULL,**  **`replied\_user\_id` INT(10) UNSIGNED NOT NULL,**  **PRIMARY KEY (`id`) USING BTREE,**  **INDEX `FK\_reply\_user` (`user\_id`) USING BTREE,**  **INDEX `FK\_reply\_user\_2` (`replied\_user\_id`) USING BTREE,**  **CONSTRAINT `FK\_reply\_user` FOREIGN KEY (`user\_id`) REFERENCES `social network system`.`user` (`id`) ON UPDATE NO ACTION ON DELETE NO ACTION,**  **CONSTRAINT `FK\_reply\_user\_2` FOREIGN KEY (`replied\_user\_id`) REFERENCES `social network system`.`user` (`id`) ON UPDATE NO ACTION ON DELETE NO ACTION**  **)**  **COLLATE='utf8\_general\_ci'**  **ENGINE=InnoDB**  **AUTO\_INCREMENT=8**  **;**  **reply\_reply：**  **CREATE TABLE `reply\_reply` (**  **`id` INT(10) UNSIGNED NOT NULL AUTO\_INCREMENT,**  **`reply\_id` INT(10) UNSIGNED NOT NULL,**  **`replied\_id` INT(10) UNSIGNED NOT NULL,**  **PRIMARY KEY (`id`) USING BTREE,**  **INDEX `FK\_\_reply` (`reply\_id`) USING BTREE,**  **INDEX `FK\_\_reply\_2` (`replied\_id`) USING BTREE,**  **CONSTRAINT `FK\_\_reply` FOREIGN KEY (`reply\_id`) REFERENCES `social network system`.`reply` (`id`) ON UPDATE NO ACTION ON DELETE NO ACTION,**  **CONSTRAINT `FK\_\_reply\_2` FOREIGN KEY (`replied\_id`) REFERENCES `social network system`.`reply` (`id`) ON UPDATE NO ACTION ON DELETE NO ACTION**  **)**  **COLLATE='utf8\_general\_ci'**  **ENGINE=InnoDB**  **;**  **reply\_userlog：**  **CREATE TABLE `reply\_userlog` (**  **`id` INT(10) UNSIGNED NOT NULL AUTO\_INCREMENT,**  **`reply\_id` INT(10) UNSIGNED NOT NULL,**  **`log\_id` INT(10) UNSIGNED NOT NULL,**  **PRIMARY KEY (`id`) USING BTREE,**  **INDEX `FK\_reply\_userlog\_user log` (`log\_id`) USING BTREE,**  **INDEX `FK\_reply\_userlog\_user` (`reply\_id`) USING BTREE,**  **CONSTRAINT `FK\_reply\_userlog\_reply` FOREIGN KEY (`reply\_id`) REFERENCES `social network system`.`reply` (`id`) ON UPDATE NO ACTION ON DELETE NO ACTION,**  **CONSTRAINT `FK\_reply\_userlog\_user log` FOREIGN KEY (`log\_id`) REFERENCES `social network system`.`userlog` (`id`) ON UPDATE NO ACTION ON DELETE NO ACTION**  **)**  **COLLATE='utf8\_general\_ci'**  **ENGINE=InnoDB**  **;**  **rightjoin\_userwhouselog：**  **select `u`.`name` AS `name`,`u`.`mailAddress` AS `mailAddress`,`userlog`.`user\_id` AS `user\_id`,`userlog`.`log` AS `log`,`userlog`.`updateDate` AS `updateDate` from (`userlog` left join `user` `u` on((`userlog`.`user\_id` = `u`.`id`)))**  **sharelog：**  **CREATE TABLE `sharelog` (**  **`id` INT(11) UNSIGNED NOT NULL AUTO\_INCREMENT,**  **`user\_id` INT(11) UNSIGNED NOT NULL,**  **`date` DATE NOT NULL,**  **PRIMARY KEY (`id`) USING BTREE,**  **INDEX `FK\_sharelog\_user` (`user\_id`) USING BTREE,**  **CONSTRAINT `FK\_sharelog\_user` FOREIGN KEY (`user\_id`) REFERENCES `social network system`.`user` (`id`) ON UPDATE NO ACTION ON DELETE NO ACTION**  **)**  **COLLATE='utf8\_general\_ci'**  **ENGINE=InnoDB**  **;**  **sharelog\_reply：**  **CREATE TABLE `sharelog\_reply` (**  **`id` INT(11) UNSIGNED NOT NULL AUTO\_INCREMENT,**  **`sharelog\_id` INT(11) UNSIGNED NOT NULL,**  **`reply\_id` INT(11) UNSIGNED NOT NULL,**  **PRIMARY KEY (`id`) USING BTREE,**  **INDEX `FK\_sharelog\_reply\_sharelog` (`sharelog\_id`) USING BTREE,**  **INDEX `FK\_sharelog\_reply\_reply` (`reply\_id`) USING BTREE,**  **CONSTRAINT `FK\_sharelog\_reply\_reply` FOREIGN KEY (`reply\_id`) REFERENCES `social network system`.`reply` (`id`) ON UPDATE NO ACTION ON DELETE NO ACTION,**  **CONSTRAINT `FK\_sharelog\_reply\_sharelog` FOREIGN KEY (`sharelog\_id`) REFERENCES `social network system`.`sharelog` (`id`) ON UPDATE NO ACTION ON DELETE NO ACTION**  **)**  **COLLATE='utf8\_general\_ci'**  **User：**  **CREATE TABLE `user` (**  **`id` INT(10) UNSIGNED NOT NULL AUTO\_INCREMENT,**  **`name` VARCHAR(50) NOT NULL COLLATE 'utf8\_general\_ci',**  **`sex` VARCHAR(50) NOT NULL COLLATE 'utf8\_general\_ci',**  **`birthDate` DATE NOT NULL,**  **`email` VARCHAR(50) NOT NULL COLLATE 'utf8\_general\_ci',**  **`mailAddress` VARCHAR(50) NOT NULL COLLATE 'utf8\_general\_ci',**  **`password` VARCHAR(50) NOT NULL COLLATE 'utf8\_general\_ci',**  **PRIMARY KEY (`id`) USING BTREE,**  **UNIQUE INDEX `email` (`email`) USING BTREE,**  **INDEX `username` (`name`) USING BTREE,**  **INDEX `password` (`password`) USING BTREE**  **)**  **COLLATE='utf8\_general\_ci'**  **ENGINE=InnoDB**  **AUTO\_INCREMENT=17**  **;**  **user log \_delete\_reply：**  **CREATE DEFINER=`root`@`localhost` TRIGGER `user log \_delete\_reply` BEFORE DELETE ON `userlog` FOR EACH ROW BEGIN**  **DELETE FROM reply\_userlog**  **WHERE log\_id=OLD.id;**  **END**  **Userlog：**  **CREATE TABLE `userlog` (**  **`id` INT(10) UNSIGNED NOT NULL AUTO\_INCREMENT,**  **`user\_id` INT(10) UNSIGNED NOT NULL,**  **`log` VARCHAR(50) NOT NULL COLLATE 'utf8\_general\_ci',**  **`updateDate` DATE NOT NULL,**  **PRIMARY KEY (`id`) USING BTREE,**  **INDEX `FK\_user log\_user` (`user\_id`) USING BTREE,**  **CONSTRAINT `FK\_user log\_user` FOREIGN KEY (`user\_id`) REFERENCES `social network system`.`user` (`id`) ON UPDATE NO ACTION ON DELETE NO ACTION**  **)**  **COLLATE='utf8\_general\_ci'**  **ENGINE=InnoDB**  **AUTO\_INCREMENT=3**  **;**  **user\_names：**  **CREATE TABLE `user\_names` (**  **`id` INT(11) NOT NULL AUTO\_INCREMENT,**  **`name` VARCHAR(50) NULL DEFAULT NULL COLLATE 'utf8\_general\_ci',**  **PRIMARY KEY (`id`) USING BTREE**  **)**  **COLLATE='utf8\_general\_ci'**  **ENGINE=InnoDB**  **;**  **work\_experience：**  **CREATE TABLE `work\_experience` (**  **`id` INT(10) UNSIGNED NOT NULL AUTO\_INCREMENT,**  **`user\_id` INT(11) UNSIGNED NOT NULL,**  **`work\_position` VARCHAR(50) NULL DEFAULT NULL COLLATE 'utf8\_general\_ci',**  **`startDate` DATE NULL DEFAULT NULL,**  **`endDate` DATE NULL DEFAULT NULL,**  **`office` DATE NULL DEFAULT NULL,**  **PRIMARY KEY (`id`) USING BTREE,**  **INDEX `FK\_work experience\_user` (`user\_id`) USING BTREE,**  **CONSTRAINT `FK\_work experience\_user` FOREIGN KEY (`user\_id`) REFERENCES `social network system`.`user` (`id`) ON UPDATE NO ACTION ON DELETE NO ACTION**  **)**  **COLLATE='utf8\_general\_ci'**  **ENGINE=InnoDB**  **;**  **程序演示（系统完整的使用流程展示）**    **输入邮箱，密码后可以登录，点击查询好友可以查看好友**    **点击查询好友可以查看好友列表，点击发布日志可以写日志，点击添加好友可以添加新好友**      **点击编辑可以查看好友日志并评论，点击删除可以删好友** | | | | | | | |
| 实验结论（结果分析、遇到的困难和解决方法等） | | | | | | 备注 |  |
| 经过本次数据库实验，我熟练掌握了数据库mysql的知识，各种链接库的方法和前后端相关的知识。为以后投入实际开发奠定了深厚的基础 | | | | | | | |