以学生信息管理系统为例，编写能够满足如下条件的程序：

a. 管理员可以对学生、老师和课程进行增加、删除、查询。

b. 学生登录只能查看、修改自己的个人信息，查看自己所有课程成绩。

c. 班级任课教师登录后，可浏览对应课程学生基本信息和相应的成绩信息。如是java、os、math任课老师，可修改、登记相应课程的信息

**备注：建议大家将《面向对象程序设计》的课程设计题目作为本次综合实验，有三种身份的人群，不同身份的人群拥有不同的权限。**

**1.模块构成**

主要分为三个模块

（1）管理员模块

（2）学生模块

（3）教师模块

（4）实现功能

a. 管理员可以对学生、老师和课程进行增加、删除、查询。

b. 学生登录只能查看、修改自己的个人信息，查看自己所有课程成绩。

c. 班级任课教师登录后，可浏览对应课程学生基本信息和相应的成绩信息。可修改、登记相应课程的信息。

**2.MVC各部分文件名及完成的功能**

|  |  |
| --- | --- |
| mvc部分文件名 | 完成的功能 |
| 1.AddCourseInfo.java | 管理员添加课程信息 |
| 2.AddStuInfo.java | 管理员添加学生信息 |
| 3.AddTeaInfo.java | 管理员添加教师信息 |
| 4.AdminLogin.java | 管理员登陆操作 |
| 5.CoursePageChange.java | 改变课程信息页码 |
| 6.DelCourseInfoById.java | 管理员通过课程号删除课程信息 |
| 7.DelStuInfoById.java | 管理员通过学生号删除学生信息 |
| 8.DelTeaInfoById.java | 管理员通过教工号删除教师信息 |
| 9.Logout.java | 退出登录操作 |
| 10.LookMyInfo.java | 学生查看与自己相关的信息 |
| 11.LookStuAndCourseInfoByTeacherId.java | 教师通过自己的所教课程号查看自己所教学生的相关信息和课程信息 |
| 12.ModifyCourseInfo.java | 教师修改课程相关信息 |
| 13.SearchCourseInfo.java | 管理员查询课程全部信息 |
| 14.SearchStuInfo.java | 管理员查询学生全部信息 |
| 15.SearchTeacherInfo.java | 管理员查询教师全部信息 |
| 16.StudentInfoPageChange.java | 学生信息页面分页处理 |
| 17.StudentLogin.java | 学生登陆操作 |
| 18.TeacherLogin.java | 教师登陆操作 |
| 19.TeacherInfoPageChange.java | 教师信息页面分页处理 |
| 20.UpdateStuPwd.java | 学生修改相关信息 |

**3.相关配置文件如下所示**

<?xml version="1.0" encoding="UTF-8"?>

<web-app xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://java.sun.com/xml/ns/javaee" xsi:schemaLocation="http://java.sun.com/xml/ns/javaee http://java.sun.com/xml/ns/javaee/web-app\_3\_0.xsd" id="WebApp\_ID" version="3.0">

<display-name>student\_manager</display-name>

<welcome-file-list>

<welcome-file>index.html</welcome-file>

<welcome-file>index.htm</welcome-file>

<welcome-file>index.jsp</welcome-file>

<welcome-file>default.html</welcome-file>

<welcome-file>default.htm</welcome-file>

<welcome-file>default.jsp</welcome-file>

</welcome-file-list>

<!-- 管理员登录 -->

<servlet>

<servlet-name>adminLogin</servlet-name>

<servlet-class>myService.AdminLogin</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>adminLogin</servlet-name>

<url-pattern>/adminLogin</url-pattern>

</servlet-mapping>

<!-- 学生登录 -->

<servlet>

<servlet-name>stuLogin</servlet-name>

<servlet-class>myService.StudentLogin</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>stuLogin</servlet-name>

<url-pattern>/stuLogin</url-pattern>

</servlet-mapping>

<!-- 教师登录 -->

<servlet>

<servlet-name>teaLogin</servlet-name>

<servlet-class>myService.TeacherLogin</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>teaLogin</servlet-name>

<url-pattern>/teaLogin</url-pattern>

</servlet-mapping>

<!-- 退出登录 -->

<servlet>

<servlet-name>logout</servlet-name>

<servlet-class>myService.Logout</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>logout</servlet-name>

<url-pattern>/Logout</url-pattern>

</servlet-mapping>

<!-- 添加学生信息 -->

<servlet>

<servlet-name>addStuInfo</servlet-name>

<servlet-class>myService.AddStuInfo</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>addStuInfo</servlet-name>

<url-pattern>/addStuInfo</url-pattern>

</servlet-mapping>

<!-- 添加课程信息 -->

<servlet>

<servlet-name>addCourseInfo</servlet-name>

<servlet-class>myService.AddCourseInfo</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>addCourseInfo</servlet-name>

<url-pattern>/addCourseInfo</url-pattern>

</servlet-mapping>

<!-- 添加教师信息 -->

<servlet>

<servlet-name>addTeaInfo</servlet-name>

<servlet-class>myService.AddTeaInfo</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>addTeaInfo</servlet-name>

<url-pattern>/addTeacherInfo</url-pattern>

</servlet-mapping>

<!-- 通过学号删除学生信息 -->

<servlet>

<servlet-name>delStuInfoById</servlet-name>

<servlet-class>myService.DelStuInfoById</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>delStuInfoById</servlet-name>

<url-pattern>/delStuInfoById</url-pattern>

</servlet-mapping>

<!-- 通过教工号删除教师信息 -->

<servlet>

<servlet-name>delTeaInfoById</servlet-name>

<servlet-class>myService.DelTeaInfoById</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>delTeaInfoById</servlet-name>

<url-pattern>/delTeaInfoById</url-pattern>

</servlet-mapping>

<!-- 通过课程号删除教师信息 -->

<servlet>

<servlet-name>delCourseInfoById</servlet-name>

<servlet-class>myService.DelCourseInfoById</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>delCourseInfoById</servlet-name>

<url-pattern>/delCourseInfoById</url-pattern>

</servlet-mapping>

<!-- 查询课程信息 -->

<servlet>

<servlet-name>searchCourseInfo</servlet-name>

<servlet-class>myService.SearchCourseInfo</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>searchCourseInfo</servlet-name>

<url-pattern>/searchCourseInfo</url-pattern>

</servlet-mapping>

<!-- 课程页数改变 -->

<servlet>

<servlet-name>CoursePageChange</servlet-name>

<servlet-class>myService.CoursePageChange</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>CoursePageChange</servlet-name>

<url-pattern>/CoursePageChange</url-pattern>

</servlet-mapping>

<!-- 教师信息页数改变处理-->

<servlet>

<servlet-name>teacherInfoPageChange</servlet-name>

<servlet-class>myService.TeacherInfoPageChange</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>teacherInfoPageChange</servlet-name>

<url-pattern>/teacherInfoPageChange</url-pattern>

</servlet-mapping>

<!-- 查询教师信息-->

<servlet>

<servlet-name>searchTeacherInfo</servlet-name>

<servlet-class>myService.SearchTeacherInfo</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>searchTeacherInfo</servlet-name>

<url-pattern>/searchTeacherInfo</url-pattern>

</servlet-mapping>

<!-- 学生信息页数改变处理-->

<servlet>

<servlet-name>studentInfoPageChange</servlet-name>

<servlet-class>myService.StudentInfoPageChange</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>studentInfoPageChange</servlet-name>

<url-pattern>/studentInfoPageChange</url-pattern>

</servlet-mapping>

<!-- 查询学生信息-->

<servlet>

<servlet-name>searchStudentInfo</servlet-name>

<servlet-class>myService.SearchStudentInfo</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>searchStudentInfo</servlet-name>

<url-pattern>/searchStudentInfo</url-pattern>

</servlet-mapping>

<!-- 学生登录查询个人信息-->

<servlet>

<servlet-name>lookMyInfo</servlet-name>

<servlet-class>myService.LookMyInfo</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>lookMyInfo</servlet-name>

<url-pattern>/lookMyInfo</url-pattern>

</servlet-mapping>

<!-- 学生修改个人信息(密码)-->

<servlet>

<servlet-name>updateStuPwd</servlet-name>

<servlet-class>myService.UpdateStuPwd</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>updateStuPwd</servlet-name>

<url-pattern>/updateStuPwd</url-pattern>

</servlet-mapping>

<!--浏览对应课程学生基本信息和相应的成绩信息-->

<servlet>

<servlet-name>lookStuAndCouseInfoByTeacherId</servlet-name>

<servlet-class>myService.LookStuAndCouseInfoByTeacherId</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>lookStuAndCouseInfoByTeacherId</servlet-name>

<url-pattern>/lookStuAndCouseInfoByTeacherId</url-pattern>

</servlet-mapping>

<!--教师修改相应的课程信息-->

<servlet>

<servlet-name>modifyCourseInfo</servlet-name>

<servlet-class>myService.ModifyCourseInfo</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>modifyCourseInfo</servlet-name>

<url-pattern>/modifyCourseInfo</url-pattern>

</servlet-mapping>

</web-app>

**4.后台数据库设计如下所示，并已经放置到项目文件根目录下面的asserts文件夹下名字为test.sql. （所用的数据库为MYSQL）**

/\*

Navicat MySQL Data Transfer

Source Server : evan

Source Server Version : 50717

Source Host : localhost:3306

Source Database : test

Target Server Type : MYSQL

Target Server Version : 50717

File Encoding : 65001

Date: 2017-12-02 19:54:48

\*/

SET FOREIGN\_KEY\_CHECKS=0;

-- ----------------------------

-- Table structure for `admininfo`

-- ----------------------------

DROP TABLE IF EXISTS `admininfo`;

CREATE TABLE `admininfo` (

`adminname` varchar(20) NOT NULL,

`adminpwd` varchar(20) NOT NULL,

PRIMARY KEY (`adminname`)

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COMMENT='管理员信息表';

-- ----------------------------

-- Records of admininfo

-- ----------------------------

INSERT INTO `admininfo` VALUES ('evan', '123456');

INSERT INTO `admininfo` VALUES ('jack', '123456');

-- ----------------------------

-- Table structure for `course`

-- ----------------------------

DROP TABLE IF EXISTS `course`;

CREATE TABLE `course` (

`courseId` varchar(20) NOT NULL COMMENT '课程号',

`courseName` varchar(20) NOT NULL COMMENT '课程名称',

PRIMARY KEY (`courseId`)

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COMMENT='课程表';

-- ----------------------------

-- Records of course

-- ----------------------------

INSERT INTO `course` VALUES ('2', 'math');

INSERT INTO `course` VALUES ('3', 'os');

INSERT INTO `course` VALUES ('5', 'chinese');

-- ----------------------------

-- Table structure for `sc`

-- ----------------------------

DROP TABLE IF EXISTS `sc`;

CREATE TABLE `sc` (

`stuId` varchar(20) NOT NULL,

`courseId` varchar(20) NOT NULL,

`grade` int(3) NOT NULL DEFAULT '0',

PRIMARY KEY (`stuId`,`courseId`),

KEY `stuId` (`stuId`),

KEY `sc\_ibfk\_2` (`courseId`),

CONSTRAINT `sc\_ibfk\_1` FOREIGN KEY (`stuId`) REFERENCES `stuinfo` (`stuId`) ON DELETE CASCADE ON UPDATE CASCADE,

CONSTRAINT `sc\_ibfk\_2` FOREIGN KEY (`courseId`) REFERENCES `course` (`courseId`) ON DELETE CASCADE ON UPDATE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COMMENT='学生选课表';

-- ----------------------------

-- Records of sc

-- ----------------------------

INSERT INTO `sc` VALUES ('2016', '2', '90');

INSERT INTO `sc` VALUES ('2016', '3', '50');

INSERT INTO `sc` VALUES ('2017', '3', '60');

INSERT INTO `sc` VALUES ('2018', '2', '70');

-- ----------------------------

-- Table structure for `stuinfo`

-- ----------------------------

DROP TABLE IF EXISTS `stuinfo`;

CREATE TABLE `stuinfo` (

`stuId` varchar(20) NOT NULL COMMENT '学生学号',

`stuName` varchar(20) NOT NULL COMMENT '学生姓名',

`password` varchar(20) NOT NULL COMMENT '登录密码',

PRIMARY KEY (`stuId`)

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COMMENT='学生信息表';

-- ----------------------------

-- Records of stuinfo

-- ----------------------------

INSERT INTO `stuinfo` VALUES ('2016', 'evani', '1234');

INSERT INTO `stuinfo` VALUES ('2017', 'mark', '12345');

INSERT INTO `stuinfo` VALUES ('2018', 'zd', '1234');

-- ----------------------------

-- Table structure for `teacherinfo`

-- ----------------------------

DROP TABLE IF EXISTS `teacherinfo`;

CREATE TABLE `teacherinfo` (

`teacherId` varchar(20) NOT NULL COMMENT '教工号',

`teacherName` varchar(20) NOT NULL COMMENT '教师姓名',

`tno` varchar(20) NOT NULL COMMENT '所教课程号',

`tPassword` varchar(20) NOT NULL COMMENT '教工登录密码',

PRIMARY KEY (`teacherId`),

KEY `tno` (`tno`),

CONSTRAINT `tno` FOREIGN KEY (`tno`) REFERENCES `course` (`courseId`) ON DELETE CASCADE ON UPDATE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COMMENT='教师信息表';

-- ----------------------------

-- Records of teacherinfo

-- ----------------------------

INSERT INTO `teacherinfo` VALUES ('0102', 'dasfd', '2', '12456');

INSERT INTO `teacherinfo` VALUES ('0103', 'ease', '3', '123456');

INSERT INTO `teacherinfo` VALUES ('0104', 'efads', '5', 'das');

数据表截图如下所示：











