

## 实验二：创建相关的数据库以及表格

### 1. 创建的表的截图

课程表C：

	class_id	class_name	class_score	class_time	yxh
1	08301001	分子物理学	4	40	03
2	08302001	通信学	3	30	02
3	08305001	离散数学	4	40	01
4	08305002	数据库原理	4	50	01
5	08305003	数据结构	4	50	01
6	08305004	系统结构	6	60	01

院系表D：

	yxh	depart_name	depart_place	depart_phone
1	01	计算机学院	上大东校区三号楼	65347567
2	02	通讯学院	上大东校区二号楼	65341234
3	03	材料学院	上大东校区四号楼	65347890

开课表O：

	term	class_id	teacher_id	schooltime
1	201201	08305001	0102	星期三5-8
2	201201	08305001	0103	星期三5-8
3	201201	08305004	0101	星期二1-4
4	201202	08305001	0101	星期三5-8
5	201202	08305002	0101	星期三1-4
6	201202	08305002	0102	星期三1-4
7	201202	08305002	0103	星期三1-4
8	201202	08305003	0102	星期五5-8

选课表E：

	student_id	term	class_id	teacher_id	score
1	1101	201201	08305001	0103	60
2	1102	201201	08305001	0103	87
3	1102	201202	08305002	0103	82
4	1102	201301	08305004	0101	<null>
5	1103	201201	08305001	0103	56
6	1103	201202	08305002	0102	75
7	1103	201202	08305003	0102	84
8	1103	201301	08305001	0102	<null>
9	1103	201301	08305004	0101	<null>
10	1104	201201	08305001	0103	74
11	1104	201302	08302001	0201	<null>
12	1106	201201	08305001	0103	85
13	1106	201202	08305002	0103	66
14	1107	201201	08305001	0103	90
15	1107	201202	08305003	0102	79
16	1107	2013-2014秋季	08305004	0101	<null>

## 学生表S:

	student_id	student_name	gender	birthday	native_place	phone_number	yxh	state
1	1101	李明	男	1993-03-06 00:00:00	上海	13613005486	02	<null>
2	1102	刘晓明	男	1992-12-08 00:00:00	安徽	18913457890	01	<null>
3	1103	张颖	女	1993-01-05 00:00:00	江苏	18826490423	01	<null>
4	1104	刘晶晶	女	1994-11-06 00:00:00	上海	13331934111	01	<null>
5	1105	刘成刚	男	1991-06-07 00:00:00	上海	18015872567	01	<null>
6	1106	李二丽	女	1993-05-04 00:00:00	江苏	18107620945	01	<null>
7	1107	张晓峰	男	1992-08-16 00:00:00	浙江	13912341078	01	<null>

## 教师表T:

	teacher_id	teacher_name	gender	birthday	job_title	yxh
1	0101	陈迪茂	男	1973-03-06 00:00:00	副教授	01
2	0102	马小红	女	1972-12-08 00:00:00	讲师	01
3	0103	吴宝钢	男	1980-11-06 00:00:00	讲师	01
4	0201	张心颖	女	1960-01-05 00:00:00	教授	02

## 2. 相关的代码:

```

1  -- create the student table --
2  CREATE TABLE Student
3  (
4      student_id    int          NOT NULL AUTO_INCREMENT ,
5      name          char(50)     NOT NULL ,
6      gender        char(5)      NOT NULL ,
7      birthday      datetime     NOT NULL ,
8      native_place  char(50)     NOT NULL ,
9      phone_number  char(50)     NOT NULL ,
10     yxh            char(10)     NOT NULL ,
11     state         char(20)     NULL ,
12
13     PRIMARY KEY (student_id)
14 ) ENGINE=InnoDB;
15
16 -- create table of departments --
17 CREATE TABLE department

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18 (
19     yxh            char(10)    NOT NULL ,
20     depart_name    char(50)    NOT NULL ,
21     depart_place   char(100)   NOT NULL ,
22     depart_phone   char(50)    NOT NULL ,
23
24     PRIMARY KEY (yxh)
25 ) ENGINE = InnoDB;
26
27 -- create table of teachers --
28 CREATE TABLE teacher
29 (
30     teacher_id     char(10)    NOT NULL ,
31     teacher_name    char(20)    NOT NULL ,
32     gender          char(2)     NOT NULL ,
33     birthday        datetime    NOT NULL ,
34     job_title       char(10)    NOT NULL ,
35     yxh             char(10)    NOT NULL ,
36
37     PRIMARY KEY (teacher_id)
38 ) ENGINE = InnoDB;
39
40 -- create the table of class --
41 CREATE TABLE class
42 (
43     class_id        char(15)    NOT NULL ,
44     class_name       char(20)    NOT NULL ,
45     class_score      int         NOT NULL ,
46     class_time       int         NOT NULL ,
47     yxh             char(10)    NOT NULL ,
48
49     PRIMARY KEY (class_id)
50 ) ENGINE = InnoDB;
51
52 -- create the table of open_class --
53 CREATE TABLE open_class
54 (
55     term            char(10)    NOT NULL ,
56     class_id        char(10)    NOT NULL ,
57     teacher_id      char(10)    NOT NULL ,
58     schooltime      char(20)    NOT NULL ,
59
60     PRIMARY KEY (term,class_id)
61 ) ENGINE = InnoDB;
62
63 -- create the table of select_class
64 CREATE TABLE select_class
65 (
66     student_id      int         NOT NULL ,
67     term            char(10)    NOT NULL ,
68     class_id        char(15)    NOT NULL ,
69     teacher_id      char(10)    NOT NULL ,
70     score           int         NULL ,
71
72     PRIMARY KEY (student_id,term,class_id,teacher_id)

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1  -- define foreign keys --
2  ALTER TABLE student ADD CONSTRAINT fk_student_yxh FOREIGN KEY (yxh)
   REFERENCES department (yxh);
3  ALTER TABLE teacher ADD CONSTRAINT fk_tearcher_yxh FOREIGN KEY (yxh)
   REFERENCES department (yxh);
4
5  ALTER TABLE class ADD CONSTRAINT fk_class_yxh FOREIGN KEY (yxh) REFERENCES
   department (yxh);
6
7  ALTER TABLE open_class ADD CONSTRAINT fk_open_class FOREIGN KEY (class_id)
   REFERENCES class (class_id);
8  ALTER TABLE open_class ADD CONSTRAINT fk_open_tercher FOREIGN KEY
   (teacher_id) REFERENCES teacher (teacher_id);
9
10 ALTER TABLE select_class ADD CONSTRAINT fk_select_student FOREIGN KEY
   (student_id) REFERENCES student (student_id);
11 ALTER TABLE select_class ADD CONSTRAINT fk_select_class FOREIGN KEY
   (class_id) REFERENCES class (class_id);
12 ALTER TABLE select_class ADD CONSTRAINT fk_select_teacher FOREIGN KEY
   (teacher_id) REFERENCES teacher (teacher_id);
13
14
15
16 # show create table select_class;
17 # show create table open_class;
18 # alter table open_class modify column term varchar(30);
19 # alter table open_class modify column class_id char(15);
20 # alter table open_class drop foreign key fk_open_class;
21
22
23
24
25 -- Populate student table --
26 INSERT INTO student(student_id, student_name, gender, birthday,
   native_place, phone_number, yxh)
27 VALUES (1101, '李明', '男', '1993-03-06', '上海', '13613005486', '02');
28 INSERT INTO student(student_id, student_name, gender, birthday,
   native_place, phone_number, yxh)
29 VALUES (1102, '刘晓明', '男', '1992-12-08', '安徽', '18913457890', '01');
30 INSERT INTO student(student_id, student_name, gender, birthday,
   native_place, phone_number, yxh)
31 VALUES (1103, '张颖', '女', '1993-01-05', '江苏', '18826490423', '01');
32 INSERT INTO student(student_id, student_name, gender, birthday,
   native_place, phone_number, yxh)
33 VALUES (1104, '刘晶晶', '女', '1994-11-06', '上海', '13331934111', '01');
34 INSERT INTO student(student_id, student_name, gender, birthday,
   native_place, phone_number, yxh)
35 VALUES (1105, '刘成刚', '男', '1991-06-07', '上海', '18015872567', '01');
36 INSERT INTO student(student_id, student_name, gender, birthday,
   native_place, phone_number, yxh)
37 VALUES (1106, '李二丽', '女', '1993-05-04', '江苏', '18107620945', '01');
38 INSERT INTO student(student_id, student_name, gender, birthday,
   native_place, phone_number, yxh)

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39 VALUES (1107,'张晓峰','男','1992-08-16','浙江','13912341078','01');
40
41 -- Populate department table --
42 INSERT INTO department(yxh, depart_name, depart_place, depart_phone)
43 VALUES ('01','计算机学院','上大东校区三号楼','65347567');
44 INSERT INTO department(yxh, depart_name, depart_place, depart_phone)
45 VALUES ('02','通讯学院','上大东校区二号楼','65341234');
46 INSERT INTO department(yxh, depart_name, depart_place, depart_phone)
47 VALUES ('03','材料学院','上大东校区四号楼','65347890');
48
49 -- Populate teacher table --
50 INSERT INTO teacher(teacher_id, teacher_name, gender, birthday, job_title,
yxh)
51 VALUES ('0101','陈迪茂','男','1973-03-06','副教授','01');
52 INSERT INTO teacher(teacher_id, teacher_name, gender, birthday, job_title,
yxh)
53 VALUES ('0102','马小红','女','1972-12-08','讲师','01');
54 INSERT INTO teacher(teacher_id, teacher_name, gender, birthday, job_title,
yxh)
55 VALUES ('0201','张心颖','女','1960-01-05','教授','02');
56 INSERT INTO teacher(teacher_id, teacher_name, gender, birthday, job_title,
yxh)
57 VALUES ('0103','吴宝钢','男','1980-11-06','讲师','01');
58
59 -- Populate open_class table --
60 INSERT INTO open_class(term, class_id, teacher_id, schooltime)
61 VALUES ('201201','08305001','0103','星期三5-8');
62 INSERT INTO open_class(term, class_id, teacher_id, schooltime)
63 VALUES ('201202','08305002','0101','星期三1-4');
64 INSERT INTO open_class(term, class_id, teacher_id, schooltime)
65 VALUES ('201202','08305002','0102','星期三1-4');
66 INSERT INTO open_class(term, class_id, teacher_id, schooltime)
67 VALUES ('201202','08305002','0103','星期三1-4');
68 INSERT INTO open_class(term, class_id, teacher_id, schooltime)
69 VALUES ('201202','08305003','0102','星期五5-8');
70 INSERT INTO open_class(term, class_id, teacher_id, schooltime)
71 VALUES ('201201','08305004','0101','星期二1-4');
72 INSERT INTO open_class(term, class_id, teacher_id, schooltime)
73 VALUES ('201201','08305001','0102','星期三5-8');
74 INSERT INTO open_class(term, class_id, teacher_id, schooltime)
75 VALUES ('201202','08305001','0101','星期三5-8');
76 -- change the primary key of table --
77 -- alter table open_class drop primary key ;
78 -- alter table open_class add primary key (term,class_id,teacher_id);
79
80
81 -- Populate class table --
82 INSERT INTO class(class_id, class_name, class_score, class_time, yxh)
83 VALUES ('08305001','离散数学',4,40,'01');
84 INSERT INTO class(class_id, class_name, class_score, class_time, yxh)
85 VALUES ('08305002','数据库原理',4,50,'01');
86 INSERT INTO class(class_id, class_name, class_score, class_time, yxh)
87 VALUES ('08305003','数据结构',4,50,'01');
88 INSERT INTO class(class_id, class_name, class_score, class_time, yxh)
89 VALUES ('08305004','系统结构',6,60,'01');

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90 INSERT INTO class(class_id, class_name, class_score, class_time, yxh)
91 VALUES ('08301001', '分子物理学', 4, 40, '03');
92 INSERT INTO class(class_id, class_name, class_score, class_time, yxh)
93 VALUES ('08302001', '通信学', 3, 30, '02');
94 -- show create table class;
95
96 -- Populate class table --
97 INSERT INTO select_class(student_id, term, class_id, teacher_id, score)
98 VALUES (1101, '201201', '08305001', '0103', 60);
99 INSERT INTO select_class(student_id, term, class_id, teacher_id, score)
100 VALUES (1102, '201201', '08305001', '0103', 87);
101 INSERT INTO select_class(student_id, term, class_id, teacher_id, score)
102 VALUES (1102, '201202', '08305002', '0103', 82);
103 INSERT INTO select_class(student_id, term, class_id, teacher_id)
104 VALUES (1102, '201301', '08305004', '0101');
105 INSERT INTO select_class(student_id, term, class_id, teacher_id, score)
106 VALUES (1103, '201201', '08305001', '0103', 56);
107 INSERT INTO select_class(student_id, term, class_id, teacher_id, score)
108 VALUES (1103, '201202', '08305002', '0102', 75);
109 INSERT INTO select_class(student_id, term, class_id, teacher_id, score)
110 VALUES (1103, '201202', '08305003', '0102', 84);
111 INSERT INTO select_class(student_id, term, class_id, teacher_id)
112 VALUES (1103, '201301', '08305001', '0102');
113 INSERT INTO select_class(student_id, term, class_id, teacher_id)
114 VALUES (1103, '201301', '08305004', '0101');
115 INSERT INTO select_class(student_id, term, class_id, teacher_id, score)
116 VALUES (1104, '201201', '08305001', '0103', 74);
117 INSERT INTO select_class(student_id, term, class_id, teacher_id)
118 VALUES (1104, '201302', '08302001', '0201');
119 INSERT INTO select_class(student_id, term, class_id, teacher_id, score)
120 VALUES (1106, '201201', '08305001', '0103', 85);
121 INSERT INTO select_class(student_id, term, class_id, teacher_id, score)
122 VALUES (1106, '201202', '08305002', '0103', 66);
123 INSERT INTO select_class(student_id, term, class_id, teacher_id, score)
124 VALUES (1107, '201201', '08305001', '0103', 90);
125 INSERT INTO select_class(student_id, term, class_id, teacher_id, score)
126 VALUES (1107, '201202', '08305003', '0102', 79);
127 INSERT INTO select_class(student_id, term, class_id, teacher_id)
128 VALUES (1107, '2013-2014秋季', '08305004', '0101');
129
130 -- alter table select_class modify column term varchar(30);

```