

## -- 多表关联查询（以两个表为例）

- 多表查询方式：1. where条件查询
- 2. 嵌套查询
- 3. 左联，右联、内联的关联查询

```
mysql> select * from stu;
```

id	name	sex	age	classid
1	zhangsan	m	20	lamp71
2	lisi	w	22	lamp71
3	wangwu	m	23	lamp72
4	zhaoliu	w	24	lamp68
5	tianqi	w	28	lamp71
6	aa	m	19	lamp72
7	bb	w	29	lamp72
8	cc	m	33	lamp71
9	dd	w	22	lamp72
11	qq	w	22	lamp71
14	kk	w	26	lamp71

```
11 rows in set (0.00 sec)
```

```
mysql> select * from grade;
```

id	sid	php	mysql
1	3	80	90
2	4	58	59
3	1	94	95
4	2	90	78
5	5	57	87
6	8	89	56

```
6 rows in set (0.00 sec)
```

## -- 一、where条件查询

- 1. 查询1号学生的考试成绩。要求只显示（学号、姓名、php和mysql）字段

```
mysql> select stu.id,stu.name,grade.php,grade.mysql from grade,stu  
-> where stu.id=grade.sid and stu.id=1;
```

id	name	php	mysql
1	zhangsan	80	90

```

48      +-----+
49      |  1  | zhangsan |  94  |  95  |
50      +-----+
51      1 row in set (0.00 sec)
52      -- 采用对表起别名的方式查询
53      mysql> select s.id,s.name,g.php,g.mysql from grade g,stu s
54      -> where s.id=g.sid and s.id=1;
55
56
57      -- 2. 查看所有考试信息, 要求只显示 (学号、姓名、php和mysql) 字段
58      mysql> select s.id,s.name,g.php,g.mysql from stu s,grade g where s.id=g.sid;
59
60      +-----+
61      | id | name      | php | mysql |
62      +-----+
63      |  3  | wangwu   |  80  |  90  |
64      |  4  | zhaoliu  |  58  |  59  |
65      |  1  | zhangsan |  94  |  95  |
66      |  2  | lisi     |  90  |  78  |
67      |  5  | tianqi   |  57  |  87  |
68      |  8  | cc       |  89  |  56  |
69      +-----+
70      6 rows in set (0.00 sec)
71
72      -- 3. 查看所有71期考试信息, 要求只显示 (学号、姓名、班级、php和mysql) 字段
73      mysql> select s.id,s.name,s.classid,g.php,g.mysql from stu s,grade g
74      -> where s.id=g.sid and s.classid='lamp71';
75
76      +-----+
77      | id | name      | classid | php | mysql |
78      +-----+
79      |  1  | zhangsan | lamp71  |  94  |  95  |
80      |  2  | lisi     | lamp71  |  90  |  78  |
81      |  5  | tianqi   | lamp71  |  57  |  87  |
82      |  8  | cc       | lamp71  |  89  |  56  |
83      +-----+
84      4 rows in set (0.00 sec)
85
86      -- 4. 查看php考试通过的学生信息。要求只显示 (学号、姓名、php) 字段
87      mysql> select s.id,s.name,g.php from stu s,grade g where s.id=g.sid and g.php>=60;
88
89      +-----+
90      | id | name      | php |
91      +-----+
92      |  3  | wangwu   |  80  |
93      |  1  | zhangsan |  94  |
94      |  2  | lisi     |  90  |
95      |  8  | cc       |  89  |
96      +-----+
97      4 rows in set (0.00 sec)

```

-- 5. 查看学生考试信息, 按总成绩降序排序, 要求只显示 (学号、姓名、php, mysql、总成绩) 字段

```
mysql> select s.id,s.name,g.php,g.mysql,g.php+g.mysql num from stu s,grade g
-> where s.id=g.sid order by num desc;
```

id	name	php	mysql	num
1	zhangsan	94	95	189
3	wangwu	80	90	170
2	lisi	90	78	168
8	cc	89	56	145
5	tianqi	57	87	144
4	zhaoliu	58	59	117

6 rows in set (0.00 sec)

-- 6. 统计参加考试的每个班php成绩及格人数和不及人数;

--1) 先显示所有PHP成绩信息

```
select s.classid,g.php from stu s,grade g where s.id=g.sid
```

classid	php
lamp72	80
lamp68	58
lamp71	94
lamp71	90
lamp71	57
lamp71	89

--2) 再统计每个班级参加PHP考试的人数 (内部执行:先查询再分组最后输出并计算) ---分组统计

```
select s.classid,count(g.php) from stu s,grade g
where s.id=g.sid group by s.classid;
```

classid	count(g.php)
lamp68	1
lamp71	4
lamp72	1

--3) 结合以上统计及格和不及格的人数

```
mysql> select s.classid,count(g.php) m,sum(g.php>=60) y,sum(g.php<60) n
from stu s,grade g where s.id=g.sid group by s.classid;
```

classid	m	y	n
---------	---	---	---

```

141 | lamp68 | 1 | 0 | 1 |
142 | lamp71 | 4 | 3 | 1 |
143 | lamp72 | 1 | 1 | 0 |
144 +-----+
145 3 rows in set (0.00 sec)

```

--查看每个班级中PHP成绩最高分

```

148 mysql> select s.classid,max(g.php) from stu s,grade g
149       where s.id=g.sid group by s.classid;
150 +-----+
151 | classid | max(g.php) |
152 +-----+
153 | lamp68  |          78 |
154 | lamp71  |          94 |
155 | lamp72  |          80 |
156 +-----+
157 3 rows in set (0.00 sec)

```

--查看班里最高分是谁? (相同高分也显示)

-- 二、 嵌套查询 (一个表的查询结果作为另一个表的查询条件)

-- 1. 查看年龄最大是谁? (单表查询 注意:一个表可以通过取别名查询)

--select \* from stu order by age desc limit 1;无法获取最大年龄相同的多个值

mysql> select \* from stu where age=(select max(age) from stu);--先查到最大作为条件

```

166 +-----+
167 | id | name | sex | age | classid |
168 +-----+
169 | 8  | cc   | m   | 33  | lamp71  |
170 | 14 | kk   | w   | 33  | lamp71  |
171 +-----+
172 2 rows in set (0.00 sec)

```

--2. 使用嵌套查询lamp71期的考试信息(多表查询)

```

175 mysql> select * from grade where sid in(select id from stu where classid='lamp71');
176 --select g.* from grade g,stu s where s.id=g.sid and s.classid='lamp71';
177 +-----+
178 | id | sid | php | mysql |
179 +-----+
180 | 3  | 1  | 94  | 95     |
181 | 4  | 2  | 90  | 78     |
182 | 5  | 5  | 57  | 87     |
183 | 6  | 8  | 89  | 56     |
184 +-----+
185 4 rows in set (0.00 sec)

```

```

188 -- 三、关联查询（左联：left join, 右联 right join 内联 inner join）
189 -----
190 --1. 查看所有学生的考试信息，要求只显示（学号、姓名、php和mysql）字段 以学生为主
191 --1.2. 查看所有考试信息，要求只显示（学号、姓名、php和mysql）字段 以考试为主 要区分开
192 mysql> select stu.id,stu.name,grade.php,grade.mysql from stu left join grade on
193 stu.id=grade.sid;
194 +-----+
195 | id | name      | php  | mysql |
196 +-----+
197 | 1  | zhangsan  | 94   | 95    |
198 | 2  | lisi      | 90   | 78    |
199 | 3  | wangwu    | 80   | 90    |
200 | 4  | zhaoliu   | 58   | 59    |
201 | 5  | tianqi    | 57   | 87    |
202 | 6  | aa        | NULL | NULL  |
203 | 7  | bb        | NULL | NULL  |
204 | 8  | cc        | 89   | 56    |
205 | 9  | dd        | NULL | NULL  |
206 | 11 | qq        | NULL | NULL  |
207 | 14 | kk        | NULL | NULL  |
208 +-----+
209 11 rows in set (0.00 sec)
210 --别名方式
211 mysql> select s.id,s.name,g.php,g.mysql from stu s left join grade g
212         -> on s.id=g.sid;
213 +-----+
214 | id | name      | php  | mysql |
215 +-----+
216 | 1  | zhangsan  | 94   | 95    |
217 | 2  | lisi      | 90   | 78    |
218 | 3  | wangwu    | 80   | 90    |
219 | 4  | zhaoliu   | 58   | 59    |
220 | 5  | tianqi    | 57   | 87    |
221 | 6  | aa        | NULL | NULL  |
222 | 7  | bb        | NULL | NULL  |
223 | 8  | cc        | 89   | 56    |
224 | 9  | dd        | NULL | NULL  |
225 | 11 | qq        | NULL | NULL  |
226 | 14 | kk        | NULL | NULL  |
227 +-----+
228 11 rows in set (0.00 sec)
229
230 mysql>
231
232
233 -- 内联查询等价于为where条件查询
234 mysql> select s.id,s.name,g.php,g.mysql from stu s inner join grade g
235         -> on s.id=g.sid;
236 +-----+

```

```

237 | id | name      | php | mysql |
238 +---+-----+-----+-----+
239 | 3 | wangwu   | 80  | 90    |
240 | 4 | zhaoliu  | 58  | 59    |
241 | 1 | zhangsan | 94  | 95    |
242 | 2 | lisi     | 90  | 78    |
243 | 5 | tianqi   | 57  | 87    |
244 | 8 | cc       | 89  | 56    |
245 +---+-----+-----+
246 6 rows in set (0.00 sec)

```

```

247
248 mysql> select s.id,s.name,g.php,g.mysql from stu s,grade g where s.id=g.sid;

```

```

249 +---+-----+-----+-----+
250 | id | name      | php | mysql |
251 +---+-----+-----+-----+
252 | 3 | wangwu   | 80  | 90    |
253 | 4 | zhaoliu  | 58  | 59    |
254 | 1 | zhangsan | 94  | 95    |
255 | 2 | lisi     | 90  | 78    |
256 | 5 | tianqi   | 57  | 87    |
257 | 8 | cc       | 89  | 56    |
258 +---+-----+-----+
259 6 rows in set (0.00 sec)

```

```

260
261
262 --商品类别的处理

```

```

263 mysql> desc type;

```

```

264 +---+-----+-----+-----+-----+-----+
265 | Field | Type                | Null | Key | Default | Extra          |
266 +---+-----+-----+-----+-----+-----+
267 | id    | int(11) unsigned    | NO   | PRI | NULL    | auto_increment |
268 | name  | varchar(32)         | YES  |     | NULL    |                |
269 | pid   | int(11) unsigned    | YES  |     | 0       |                |
270 | path  | varchar(255)        | YES  |     | NULL    |                |
271 +---+-----+-----+-----+-----+
272 4 rows in set (0.00 sec)

```

```

273
274 -- 查询商品类别id号为1的所有子类，包含子类中的子类：条件是 当前类别的path和id+逗号

```

```

275 mysql> select * from type where path like "0,1,%";

```

```

276
277 -- 查询商品类别id号为1的所有子类对应的商品信息

```

```

278 mysql> select * from goods where typeid in(select id from type where path like "0,1,%");

```

```

279 mysql> select * from goods where typeid in(select id from type where path like "%,1,%");

```

```

280 mysql> select g.*,t.name from goods g,type t
281 where g.typeid=t.id and g.typeid in(select id from type where path like "0,1,%");

```

```

282
283

```

284

285

286

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