

```
mysql> SELECT * FROM grade WHERE point>=90;
```

id	name	email	point	regdate
2	Jucy	bnbbs@163.com	92	2017-08-26 19:49:33
4	HanMeimei	HanMeimei@263.com	97	2017-08-26 19:58:05
7	Hali	NULL	93	2017-08-26 20:01:00

3 rows in set (0.00 sec)

```
mysql> SELECT * FROM grade WHERE email IS NOT NULL;      //現在版本的指令
NULL 有規定是空 字串的 NULL 不算
```

id	name	email	point	regdate
1	Lee	yc60.com@gmail.com	88	2017-08-26 19:47:18
2	Jucy	bnbbs@163.com	92	2017-08-26 19:49:33
3	Lilei	lilei@sina.com	67	2017-08-26 19:50:37
4	HanMeimei	HanMeimei@263.com	97	2017-08-26 19:58:05
5	Wang	Wang@hotmail.com	84	2017-08-26 19:53:07
6	Jack	jack@qq.com	72	2017-08-26 19:59:43
7	Hali	NULL	93	2017-08-26 20:01:00

7 rows in set (0.01 sec)

```
mysql> SELECT * FROM grade WHERE email IS NULL;
```

Empty set (0.00 sec)

```
mysql> SELECT * FROM grade WHERE point BETWEEN 70 AND 90;
```

id	name	email	point	regdate
1	Lee	yc60.com@gmail.com	88	2017-08-26 19:47:18
5	Wang	Wang@hotmail.com	84	2017-08-26 19:53:07
6	Jack	jack@qq.com	72	2017-08-26 19:59:43

```
+---+-----+-----+-----+-----+
```

3 rows in set (0.01 sec)

```
mysql> SELECT * FROM grade WHERE point BETWEEN 70 AND 90;
```

```
+---+-----+-----+-----+-----+
```

```
| id | name | email | point | regdate |
```

```
+---+-----+-----+-----+-----+
```

```
| 1 | Lee | yc60.com@gmail.com | 88 | 2017-08-26 19:47:18 |
```

```
| 5 | Wang | Wang@hotmail.com | 84 | 2017-08-26 19:53:07 |
```

```
| 6 | Jack | jack@qq.com | 72 | 2017-08-26 19:59:43 |
```

```
+---+-----+-----+-----+-----+
```

3 rows in set (0.01 sec)

```
mysql> SELECT * FROM grade WHERE point IN (88,72,93);
```

```
+---+-----+-----+-----+-----+
```

```
| id | name | email | point | regdate |
```

```
+---+-----+-----+-----+-----+
```

```
| 1 | Lee | yc60.com@gmail.com | 88 | 2017-08-26 19:47:18 |
```

```
| 6 | Jack | jack@qq.com | 72 | 2017-08-26 19:59:43 |
```

```
| 7 | Hali | NULL | 93 | 2017-08-26 20:01:00 |
```

```
+---+-----+-----+-----+-----+
```

3 rows in set (0.01 sec)

```
mysql> SELECT * FROM grade WHERE name='Lilei' OR name='ManMeimei';
```

```
+---+-----+-----+-----+-----+
```

```
| id | name | email | point | regdate |
```

```
+---+-----+-----+-----+-----+
```

```
| 3 | Lilei | lilei@sina.com | 67 | 2017-08-26 19:50:37 |
```

```
+---+-----+-----+-----+-----+
```

1 row in set (0.00 sec)

```
mysql> SELECT * FROM grade WHERE email LIKE '%163%'; //模糊查找%163%
```

```
+---+-----+-----+-----+-----+
```

```
| id | name | email | point | regdate |
```

```

+---+-----+-----+-----+-----+
| 2 | Jucy | bnbbs@163.com | 92 | 2017-08-26 19:49:33 |
+---+-----+-----+-----+
1 row in set (0.00 sec)

```

mysql> SELECT * FROM grade WHERE email NOT LIKE '%163%';

```

+---+-----+-----+-----+-----+
| id | name      | email                | point | regdate                |
+---+-----+-----+-----+-----+
| 1 | Lee       | yc60.com@gmail.com | 88 | 2017-08-26 19:47:18 |
| 3 | Lilei     | lilei@sina.com      | 67 | 2017-08-26 19:50:37 |
| 4 | HanMeimei | HanMeimei@263.com   | 97 | 2017-08-26 19:58:05 |
| 5 | Wang      | Wang@hotmail.com    | 84 | 2017-08-26 19:53:07 |
| 6 | Jack      | jack@qq.com         | 72 | 2017-08-26 19:59:43 |
| 7 | Hali      | NULL                | 93 | 2017-08-26 20:01:00 |
+---+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

mysql> SELECT * FROM grade ORDER BY point DESC;

```

+---+-----+-----+-----+-----+
| id | name      | email                | point | regdate                |
+---+-----+-----+-----+-----+
| 4 | HanMeimei | HanMeimei@263.com   | 97 | 2017-08-26 19:58:05 |
| 7 | Hali      | NULL                | 93 | 2017-08-26 20:01:00 |
| 2 | Jucy      | bnbbs@163.com       | 92 | 2017-08-26 19:49:33 |
| 1 | Lee       | yc60.com@gmail.com | 88 | 2017-08-26 19:47:18 |
| 5 | Wang      | Wang@hotmail.com    | 84 | 2017-08-26 19:53:07 |
| 6 | Jack      | jack@qq.com         | 72 | 2017-08-26 19:59:43 |
| 3 | Lilei     | lilei@sina.com      | 67 | 2017-08-26 19:50:37 |
+---+-----+-----+-----+-----+
7 rows in set (0.00 sec)

```

mysql> SELECT * FROM grade ORDER BY point ASC;

```

+---+-----+-----+-----+-----+
| id | name      | email                | point | regdate                |
+---+-----+-----+-----+-----+

```

```

+---+-----+-----+-----+-----+
| 3 | Lilei      | lilei@sina.com      | 67 | 2017-08-26 19:50:37 |
| 6 | Jack       | jack@qq.com         | 72 | 2017-08-26 19:59:43 |
| 5 | Wang       | Wang@hotmail.com    | 84 | 2017-08-26 19:53:07 |
| 1 | Lee        | yc60.com@gmail.com   | 88 | 2017-08-26 19:47:18 |
| 2 | Jucy       | bnbbs@163.com       | 92 | 2017-08-26 19:49:33 |
| 7 | Hali       | NULL                | 93 | 2017-08-26 20:01:00 |
| 4 | HanMeimei  | HanMeimei@263.com   | 97 | 2017-08-26 19:58:05 |
+---+-----+-----+-----+-----+
7 rows in set (0.00 sec)

```

```

mysql> SELECT * FROM grade LIMIT 3;      //
+---+-----+-----+-----+-----+
| id | name  | email                | point | regdate                |
+---+-----+-----+-----+-----+
| 1 | Lee   | yc60.com@gmail.com   | 88    | 2017-08-26 19:47:18 |
| 2 | Jucy  | bnbbs@163.com       | 92    | 2017-08-26 19:49:33 |
| 3 | Lilei | lilei@sina.com       | 67    | 2017-08-26 19:50:37 |
+---+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

```

mysql> SELECT * FROM grade LIMIT 0,3;      //從第 0 條開始選 3 條
+---+-----+-----+-----+-----+
| id | name  | email                | point | regdate                |
+---+-----+-----+-----+-----+
| 1 | Lee   | yc60.com@gmail.com   | 88    | 2017-08-26 19:47:18 |
| 2 | Jucy  | bnbbs@163.com       | 92    | 2017-08-26 19:49:33 |
| 3 | Lilei | lilei@sina.com       | 67    | 2017-08-26 19:50:37 |
+---+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

MYSQL 分組函數

```

mysql> SELECT AVG(point) FROM grade;      //求出分數平均
+-----+

```

```
| AVG(point) |
+-----+
|      82.6667 |
+-----+
1 row in set (0.01 sec)
```

```
mysql> SELECT COUNT(*) AS count FROM grade; //求出所有行數
+-----+
| count |
+-----+
|      6 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT COUNT(email) AS email_count FROM grade; //求出有 email 的行數
+-----+
| email_count |
+-----+
|           6 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT MAX(point) FROM grade; //選出最高分數
+-----+
| MAX(point) |
+-----+
|          93 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT MIN(point) FROM grade; //選出最小值
+-----+
| MIN(point) |
+-----+
```

```
|          67 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT SUM(point) FROM grade;    //分數總和
```

```
+-----+
| SUM(point) |
+-----+
|          496 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> SHOW TABLE STATUS \G;    //顯示表的相關信息
```

```
***** 1. row *****
```

```
      Name: grade
      Engine: InnoDB
      Version: 10
      Row_format: Dynamic
      Rows: 6
      Avg_row_length: 2730
      Data_length: 16384
      Max_data_length: 0
      Index_length: 0
      Data_free: 0      //可清理空間
      Auto_increment: 8    //下一個自動編號
      Create_time: 2017-08-26 19:37:20
      Update_time: 2017-08-26 21:55:54
      Check_time: NULL
      Collation: utf8_general_ci
      Checksum: NULL
      Create_options:
      Comment:
1 row in set (0.00 sec)
```

```
ERROR:
```

```
No query specified
```

```
mysql> OPTIMIZE TABLE grade;          //表優化 清理垃圾數據 Data_free 變成 0
```

Table	Op	Msg_type	Msg_text
school.grade	optimize	note	Table does not support optimize, doing recreate + analyze instead
school.grade	optimize	status	OK

2 rows in set (0.09 sec)