

```
Windows PowerShell      +  -  ×
mysql> INSERT INTO S VALUES ('S2', 'Jones', 10, 'Paris');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO S VALUES ('S3', 'Blake', 30, 'Paris');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO S VALUES ('S4', 'Clark', 20, 'London');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO S VALUES ('S5', 'Adams', 30, 'Athens');
Query OK, 1 row affected (0.00 sec)

mysql> DESC S;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| S#    | char(5) | NO   |     | NULL    |       |
| Sname | char(20) | YES  |     | NULL    |       |
| Status | smallint | YES  |     | NULL    |       |
| City  | char(15) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> SELECT * FROM S;
+-----+-----+-----+-----+
| S#  | Sname | Status | City  |
+-----+-----+-----+-----+
| S1  | Smith |    20 | London |
| S2  | Jones |    10 | Paris  |
| S3  | Blake |    30 | Paris  |
| S4  | Clark |    20 | London |
| S5  | Adams |    30 | Athens |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> CREATE TABLE P (`P#` CHAR(6) NOT NULL, Pname CHAR(20), Color CHAR(6), Weight SMALLINT, CITY CHAR(15));
Query OK, 0 rows affected (0.01 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_spj_db |
+-----+
| p               |
| s               |
+-----+
2 rows in set (0.00 sec)

mysql> |
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mysql> CREATE TABLE P (`P#` CHAR(6) NOT NULL, Pname CHAR(20), Color CHAR(6), Weight SMALLINT, CITY CHAR(15));
Query OK, 0 rows affected (0.01 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_spj_db |
+-----+
| p
| s
+-----+
2 rows in set (0.00 sec)

mysql> INSERT INTO P VALUES ('P1', 'Nut', 'Red', 12, 'London');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO P VALUES ('P2', 'Bolt', 'Green', 17, 'Paris');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO P VALUES ('P3', 'Screw', 'Blue', 17, 'Rome');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO P VALUES ('P4', 'Screw', 'Red', 14, 'London');
Query OK, 1 row affected (0.00 sec)

mysql> DESC P;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| P#    | char(6) | NO   |     | NULL    |       |
| Pname | char(20) | YES  |     | NULL    |       |
| Color | char(6)  | YES  |     | NULL    |       |
| Weight | smallint | YES  |     | NULL    |       |
| CITY  | char(15) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> SELECT * FROM P;
+-----+-----+-----+-----+-----+
| P#  | Pname | Color | Weight | CITY  |
+-----+-----+-----+-----+-----+
| P1  | Nut   | Red   |    12  | London |
| P2  | Bolt   | Green  |    17  | Paris  |
| P3  | Screw  | Blue  |    17  | Rome   |
| P4  | Screw  | Red   |    14  | London |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> |
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mysql> CREATE TABLE J (`J#` CHAR(4) NOT NULL, Jname CHAR(10), City CHAR(15));
Query OK, 0 rows affected (0.02 sec)

mysql> INSERT INTO J VALUES ('J1', 'Sorter', 'Paris');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO J VALUES ('J2', 'Punch', 'Rome');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO J VALUES ('J3', 'Reader', 'Athens');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO J VALUES ('J4', 'Console', 'Athens');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO J VALUES ('J5', 'Collater', 'London');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO J VALUES ('J6', 'Terminal', 'Oslo');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO J VALUES ('J7', 'Tape', 'London');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM J;
+---+-----+-----+
| J# | Jname   | City    |
+---+-----+-----+
| J1 | Sorter  | Paris   |
| J2 | Punch   | Rome    |
| J3 | Reader  | Athens  |
| J4 | Console | Athens  |
| J5 | Collater| London  |
| J6 | Terminal| Oslo    |
| J7 | Tape    | London  |
+---+-----+-----+
7 rows in set (0.00 sec)

mysql> |
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| J2 | Punch      | Rome   |
| J3 | Reader     | Athens |
| J4 | Console    | Athens |
| J5 | Collater   | London |
| J6 | Terminal   | Oslo   |
| J7 | Tape        | London |
+---+
7 rows in set (0.00 sec)

mysql> DESC J;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| J#   | char(4) | NO   |   | NULL    |       |
| Jname | char(10) | YES  |   | NULL    |       |
| City  | char(15) | YES  |   | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> CREATE TABLE SP (`S#` CHAR(4) NOT NULL, `P#` CHAR(4) NOT NULL, `J#` CHAR(4) NOT NULL, QTY INT);
Query OK, 0 rows affected (0.01 sec)

mysql> INSERT INTO SP VALUES ('S1', 'P1', 'J1', 200);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S1', 'P1', 'J4', 700);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S2', 'P3', 'J1', 400);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S2', 'P3', 'J2', 200);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S2', 'P3', 'J3', 200);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S2', 'P3', 'J4', 500);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S2', 'P3', 'J5', 600);
Query OK, 1 row affected (0.00 sec)

mysql> |
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```
mysql> INSERT INTO SP VALUES ('S1', 'P1', 'J4', 700);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S2', 'P3', 'J1', 400);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S2', 'P3', 'J2', 200);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S2', 'P3', 'J3', 200);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S2', 'P3', 'J4', 500);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S2', 'P3', 'J5', 600);
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM SP;
+---+---+---+---+
| S# | P# | J# | QTY |
+---+---+---+---+
| S1 | P1 | J1 | 200 |
| S1 | P1 | J4 | 700 |
| S2 | P3 | J1 | 400 |
| S2 | P3 | J2 | 200 |
| S2 | P3 | J3 | 200 |
| S2 | P3 | J4 | 500 |
| S2 | P3 | J5 | 600 |
+---+---+---+---+
7 rows in set (0.00 sec)

mysql> DESC SP;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| S#    | char(4) | NO  |     | NULL    |       |
| P#    | char(4) | NO  |     | NULL    |       |
| J#    | char(4) | NO  |     | NULL    |       |
| QTY   | int    | YES |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> |
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```
mysql> DESC SP;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| S#    | char(4) | NO   |      | NULL    |       |
| P#    | char(4) | NO   |      | NULL    |       |
| J#    | char(4) | NO   |      | NULL    |       |
| QTY   | int     | YES  |      | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> INSERT INTO SP VALUES ('S2', 'P3', 'J6', 400);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S2', 'P3', 'J7', 800);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S2', 'P5', 'J2', 100);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S3', 'P3', 'J1', 200);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S3', 'P4', 'J2', 500);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S4', 'P6', 'J3', 300);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S4', 'P6', 'J7', 300);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P2', 'J2', 200);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P2', 'J4', 100);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P5', 'J5', 500);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P5', 'J7', 100);
Query OK, 1 row affected (0.00 sec)
```

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Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S3', 'P3', 'J1', 200);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S3', 'P4', 'J2', 500);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S4', 'P6', 'J3', 300);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S4', 'P6', 'J7', 300);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P2', 'J2', 200);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P2', 'J4', 100);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P5', 'J5', 500);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P5', 'J7', 100);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P6', 'J2', 200);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P1', 'J4', 100);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P3', 'J4', 200);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P4', 'J4', 800);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P5', 'J4', 400);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P6', 'J4', 500);
Query OK, 1 row affected (0.00 sec)

mysql> |
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```
mysql> INSERT INTO SP VALUES ('S5', 'P3', 'J4', 200);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P4', 'J4', 800);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P5', 'J4', 400);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO SP VALUES ('S5', 'P6', 'J4', 500);
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM SP;
+---+---+---+---+
| S# | P# | J# | QTY |
+---+---+---+---+
| S1 | P1 | J1 | 200 |
| S1 | P1 | J4 | 700 |
| S2 | P3 | J1 | 400 |
| S2 | P3 | J2 | 200 |
| S2 | P3 | J3 | 200 |
| S2 | P3 | J4 | 500 |
| S2 | P3 | J5 | 600 |
| S2 | P3 | J6 | 400 |
| S2 | P3 | J7 | 800 |
| S2 | P5 | J2 | 100 |
| S3 | P3 | J1 | 200 |
| S3 | P4 | J2 | 500 |
| S4 | P6 | J3 | 300 |
| S4 | P6 | J7 | 300 |
| S5 | P2 | J2 | 200 |
| S5 | P2 | J4 | 100 |
| S5 | P5 | J5 | 500 |
| S5 | P5 | J7 | 100 |
| S5 | P6 | J2 | 200 |
| S5 | P1 | J4 | 100 |
| S5 | P3 | J4 | 200 |
| S5 | P4 | J4 | 800 |
| S5 | P5 | J4 | 400 |
| S5 | P6 | J4 | 500 |
+---+---+---+---+
24 rows in set (0.00 sec)

mysql> |
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