mca@localhost:~

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```
mysql> desc products;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| product_id  | int         | NO   | PRI | NULL    |       |
| name        | varchar(50) | NO   | UNI | NULL    |       |
| price       | float(6,2)  | YES  |     | 100.00  |       |
| category_id | int         | YES  | MUL | NULL    |       |
| quantity    | int         | YES  |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)

mysql> alter table products modify product_id int auto_increment;
Query OK, 7 rows affected (0.97 sec)
Records: 7  Duplicates: 0  Warnings: 0

mysql>
mysql>
mysql> select name from categories union select name from products;
+-------------------+
| name              |
+-------------------+
| Phones            |
| Laptops           |
| Consoles          |
| iPhone            |
| Windows           |
| Xbox              |
| MAC X             |
| Dell XPS 15       |
| iPhone 12         |
| MAC Mni           |
| MacBook Pro       |
| Nintendo          |
| Sony PlayStation 5 |
| Xbox Series X     |
```

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```
mysql> select name from categories union {all} select name from products;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '{all} select name from products' at line 1
mysql> select name from categories union all select name from products;
+--------------------+
| name               |
+--------------------+
| Phones             |
| Laptops            |
| Consoles           |
| iPhone             |
| Windows            |
| Xbox               |
| MAC X              |
| Dell XPS 15        |
| iPhone 12          |
| MAC Mni            |
| MacBook Pro        |
| Nintendo           |
| Sony PlayStation 5 |
| Xbox Series X      |
+--------------------+
14 rows in set (0.01 sec)

mysql>
mysql> select * from products;
+------------+--------------------+---------+-------------+----------+
| product_id | name               | price   | category_id | quantity |
+------------+--------------------+---------+-------------+----------+
|          1 | iPhone 12          |  999.99 |           4 |       10 |
|          2 | MacBook Pro        | 1999.99 |           2 |        5 |
|          3 | Dell XPS 15        | 1599.99 |           5 |        8 |
|          4 | Sony PlayStation 5 |  499.99 |           3 |       20 |
|          5 | Nintendo           |  149.99 |           3 |       12 |
|          6 | Xbox Series X      |  499.99 |           6 |     NULL |
|          7 | MAC Mni            |  129.00 |           2 |       10 |
```

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```
+------------+----------+-----------------+----------+-----------+
7 rows in set (0.00 sec)

mysql> select * from categories;
+-------------+----------+-----------------+
| category_id | name     | parent_category |
+-------------+----------+-----------------+
|           1 | Phones   |            NULL |
|           2 | Laptops  |            NULL |
|           3 | Consoles |            NULL |
|           4 | iPhone   |               1 |
|           5 | Windows  |               2 |
|           6 | Xbox     |               3 |
|           7 | MAC X    |               2 |
+-------------+----------+-----------------+
7 rows in set (0.00 sec)

mysql> select * fom categories join products on categories.category_id=products.category_id;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to
use near 'fom categories join products on categories.category_id=products.category_id' at line 1
mysql> select * fom categories join products on categories.category_id = products.category_id;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to
use near 'fom categories join products on categories.category_id = products.category_id' at line 1
mysql> select * from categories join products on categories.category_id=products.category_id;
+-------------+----------+-----------------+------------+------------------+---------+-------------+----------+
| category_id | name     | parent_category | product_id | name             | price   | category_id | quantity |
+-------------+----------+-----------------+------------+------------------+---------+-------------+----------+
|           2 | Laptops  |            NULL |          2 | MacBook Pro      | 1999.99 |           2 |        5 |
|           2 | Laptops  |            NULL |          7 | MAC Mni          |  129.00 |           2 |       10 |
|           3 | Consoles |            NULL |          4 | Sony PlayStation 5 | 499.99 |           3 |       20 |
|           3 | Consoles |            NULL |          5 | Nintendo         |  149.99 |           3 |       12 |
|           4 | iPhone   |               1 |          1 | iPhone 12        |  999.99 |           4 |       10 |
|           5 | Windows  |               2 |          3 | Dell XPS 15      | 1599.99 |           5 |        8 |
|           6 | Xbox     |               3 |          6 | Xbox Series X    |  499.99 |           6 |     NULL |
+-------------+----------+-----------------+------------+------------------+---------+-------------+----------+
7 rows in set (0.00 sec)
```

```
7 rows in set (0.00 sec)

mysql> mysql> create view product_category as(select c.category_id,c.name as category_name,c.parent_category,p.product_id,p.name as product_name,
p.price,p.quantity from categories as c left outer join products as p on c.category_id = p.category_id;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to
use near '.name as category_name,c.parent_category,p.product_id,p.name as product_name,p.p' at line 1
mysql> create view product_category as(select c.category_id,c.name a.name as category_name,c.parent_category,p.product_id,p.name as product_name,
p.price,p.quantity from categories as c left outer join products as p on c.category_id = p.category_id);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to
use near '.name as category_name,c.parent_category,p.product_id,p.name as product_name,p.p' at line 1
mysql> create view product_category as(select c.category_id,c.name a.name as category_name,c.parent_category,p.product_id,p.name as product_name,
p.price,p.quantity from categories as c left outer join products as p on c.category_id = p.category_id);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to
use near '.name as category_name,c.parent_category,p.product_id,p.name as product_name,p.p' at line 1
mysql>
mysql>
mysql> create view product_category as(select c.category_id,c.name as category_name,c.parent_category,p.product_id,p.name as product_name,p.price
,p.quantity from categories as c left outer join products as p on c.category_id = p.category_id);
Query OK, 0 rows affected (0.06 sec)

mysql> select * from product_category;
+-------------+---------------+-----------------+------------+------------------+---------+----------+
| category_id | category_name | parent_category | product_id | product_name     | price   | quantity |
+-------------+---------------+-----------------+------------+------------------+---------+----------+
|           1 | Phones        |            NULL |       NULL | NULL             |    NULL |     NULL |
|           2 | Laptops       |            NULL |          2 | MacBook Pro      | 1999.99 |        5 |
|           2 | Laptops       |            NULL |          7 | MAC Mni          |  129.00 |       10 |
|           3 | Consoles      |            NULL |          4 | Sony PlayStation 5 |  499.99 |     20 |
|           3 | Consoles      |            NULL |          5 | Nintendo         |  149.99 |       12 |
|           4 | iPhone        |               1 |          1 | iPhone 12        |  999.99 |       10 |
|           5 | Windows       |               2 |          3 | Dell XPS 15      | 1599.99 |        8 |
|           6 | Xbox          |               3 |          6 | Xbox Series X    |  499.99 |     NULL |
|           7 | MAC X         |               2 |       NULL | NULL             |    NULL |     NULL |
+-------------+---------------+-----------------+------------+------------------+---------+----------+
9 rows in set (0.00 sec)

mysql>
```