

```
CREATE TABLE category (
  category_id INT AUTO_INCREMENT PRIMARY KEY,
  category_name VARCHAR(255) NOT NULL,
  avg_price_in_category INT NOT NULL,
  no_of_products INT NOT NULL
);
```

```
CREATE TABLE products (
  product_id INT AUTO_INCREMENT PRIMARY KEY,
  category_id INT NOT NULL ,
  product_name VARCHAR(255) NOT NULL,
  product_description VARCHAR(255) NOT NULL,
  product_images VARCHAR(255) NOT NULL,
  FOREIGN KEY (category_id) REFERENCES category (category_id) ON DELETE
CASCADE
);
```

```
INSERT INTO category
(category_name,avg_price_in_category,no_of_products,in_stock)
VALUES
("Smart Phones",10000,1000,0),
("Mens Clothing",1000,20000,1),
("Toys",200,50000,0),
("Electronics",3000,90000,1),
("Food",200,1000,0),
("Medicines",200,200000,1),
("Pet Food",500,100000,1);
```

```
MySQL 8.0 Command Line Client
10,"remote car","not playing","url5"),(10,"football","round","url6");
ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails (`ecom`.`products`, CONSTRAINT `products_
ASCAD
mysql> INSERT INTO category (category_name,avg_price_in_category,no_of_products,in_stock)VALUES ("Smart Phones",10000,1000,0)
ood",200,1000,0),("Medicines",200,200000,1),("Pet Food",500,100000,1);
Query OK, 7 rows affected (1.04 sec)
Records: 7 Duplicates: 0 Warnings: 0

mysql> SELECT * from category;
+-----+-----+-----+-----+-----+
| category_id | category_name | avg_price_in_category | no_of_products | in_stock |
+-----+-----+-----+-----+-----+
| 1 | Smart Phones | 10000 | 1000 | 0 |
| 2 | Mens Clothing | 1000 | 20000 | 1 |
| 3 | Toys | 200 | 50000 | 0 |
| 4 | Electronics | 3000 | 90000 | 0 |
| 5 | Food | 200 | 1000 | 0 |
| 6 | Medicines | 200 | 200000 | 0 |
| 7 | Pet Food | 500 | 100000 | 0 |
| 8 | Smart Phones | 10000 | 1000 | 0 |
| 9 | Mens Clothing | 1000 | 20000 | 1 |
| 10 | Toys | 200 | 50000 | 0 |
| 11 | Electronics | 3000 | 90000 | 1 |
| 12 | Food | 200 | 1000 | 0 |
| 13 | Medicines | 200 | 200000 | 1 |
```

```

INSERT INTO products
(category_id,product_name,product_description,product_images)
VALUES
(1,"Apple","good","url1"),
(1,"Lenovo","fine","url2"),
(1,"oppo","good","url3"),
(9,"Fire Truck","playable","url4"),
(9,"remote car","not playing","url5"),
(9,"football","round","url6");

```

```

mysql> select * from product;
ERROR 1146 (42S02): Table 'ecom.product' doesn't exist
mysql> select * from products;
+-----+-----+-----+-----+-----+
| product_id | category_id | product_name | product_description | product_images |
+-----+-----+-----+-----+-----+
| 13 | 1 | Apple | good | url1 |
| 14 | 1 | Lenovo | fine | url2 |
| 15 | 1 | oppo | good | url3 |
| 16 | 9 | Fire Truck | playable | url4 |
| 17 | 9 | remote car | not playing | url5 |
| 18 | 9 | football | round | url6 |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>

```

```

#sub query with set membership operator in
SELECT product_name
FROM products
WHERE category_id IN
(SELECT category_id
FROM category
WHERE in_stock=1
);

```

```
MySQL 8.0 Command Line Client
mysql>
mysql>
mysql>
mysql> SELECT product_name FROM products WHERE category_id IN(SELECT category_id FROM category WHERE in_stock=1);
+-----+
| product_name |
+-----+
| Fire Truck   |
| remote car   |
| football     |
+-----+
3 rows in set (0.00 sec)

mysql>
```

```
# sub query with set not in
SELECT product_name
FROM products
WHERE category_id NOT IN
(SELECT category_id
FROM category
WHERE in_stock=1
);
```

```
MySQL 8.0 Command Line Client
mysql>
mysql>
mysql> SELECT product_name FROM products WHERE category_id IN(SELECT category_id FROM category WHERE in_stock=1);
+-----+
| product_name |
+-----+
| Fire Truck   |
| remote car   |
| football     |
+-----+
3 rows in set (0.00 sec)

mysql> SELECT product_name FROM products WHERE category_id NOT IN (SELECT category_id FROM category WHERE in_stock=1);
+-----+
| product_name |
+-----+
| Apple        |
| Lenovo       |
| oppo         |
+-----+
3 rows in set (0.00 sec)

mysql>
```

```
# sub query with = ANY
SELECT product_name
FROM products
WHERE category_id =
ANY(SELECT category_id
FROM category
WHERE in_stock=1
);
```

```
MySQL 8.0 Command Line Client
| football |
+-----+
3 rows in set (0.00 sec)

mysql> SELECT product_name FROM products WHERE category_id NOT IN (SELECT category_id FROM category WHERE in_stock=1);
+-----+
| product_name |
+-----+
| Apple        |
| Lenovo       |
| oppo         |
+-----+
3 rows in set (0.00 sec)

mysql> SELECT product_name FROM products WHERE category_id = ANY(SELECT category_id FROM category WHERE in_stock=1);
+-----+
| product_name |
+-----+
| Fire Truck   |
| remote car   |
| football     |
+-----+
3 rows in set (0.00 sec)

mysql>
```

```
# sub query with = SOME
SELECT product_name
FROM products
WHERE category_id =
ANY(SELECT category_id
FROM category
WHERE in_stock=1
);
```

```
MySQL 8.0 Command Line Client
Empty set (0.12 sec)

mysql> SELECT product_name FROM products WHERE category_id = SOME(SELECT category_id FROM category WHERE in_stock=1);
+-----+
| product_name |
+-----+
| Fire Truck   |
| remote car   |
| football     |
+-----+
3 rows in set (0.00 sec)

mysql> 
```