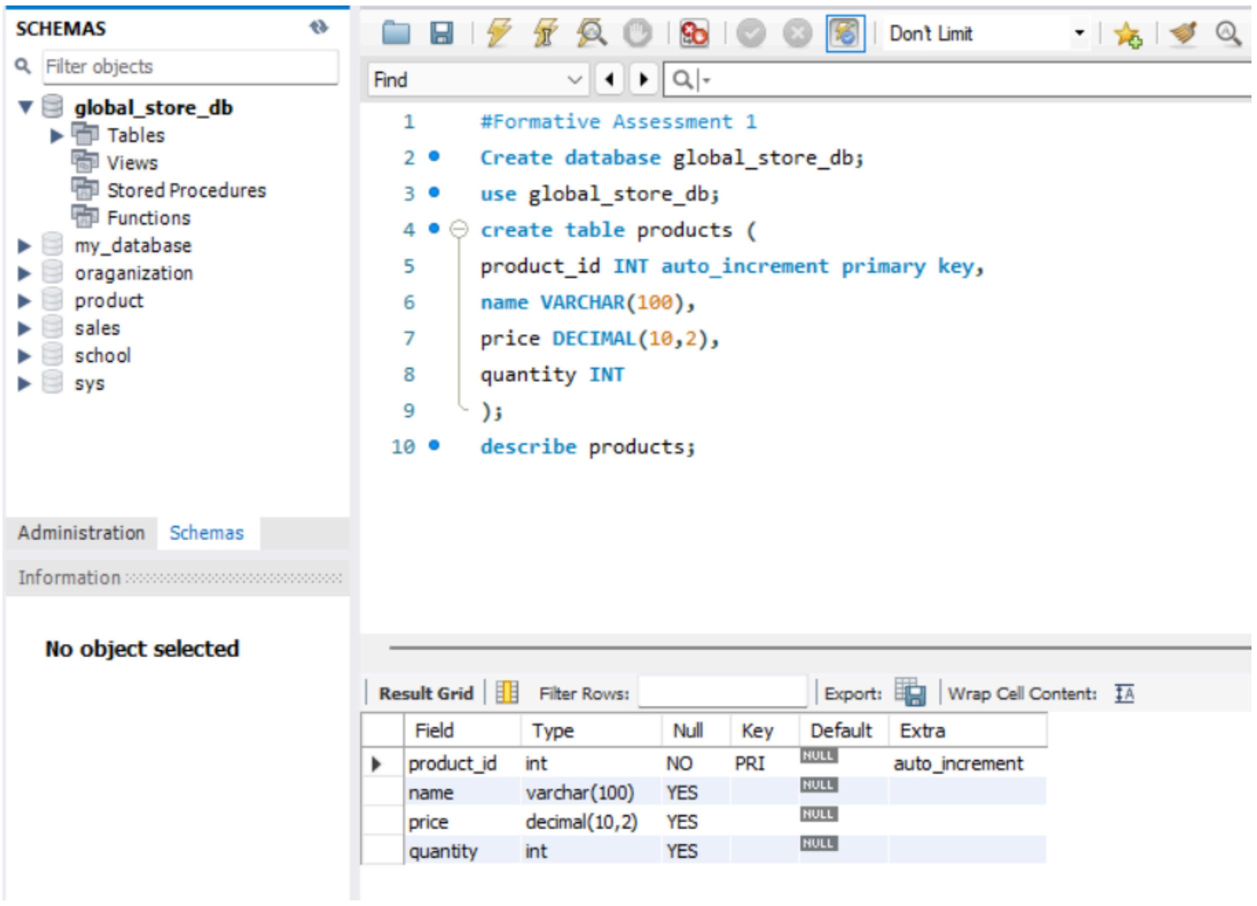
Formative Assessment 1

Instructions:
Complete the following tasks in MySQL. Each task is assigned a specific score. Timely submission earns an additional 1 point.

1. Create the following tables inside the database 'global_store_db'.(Score :2)
'products' with columns:

- product_id (INT, auto_increment, primary key),
- name (VARCHAR(100)),
- price (DECIMAL(10,2)),
- quantity (INT).

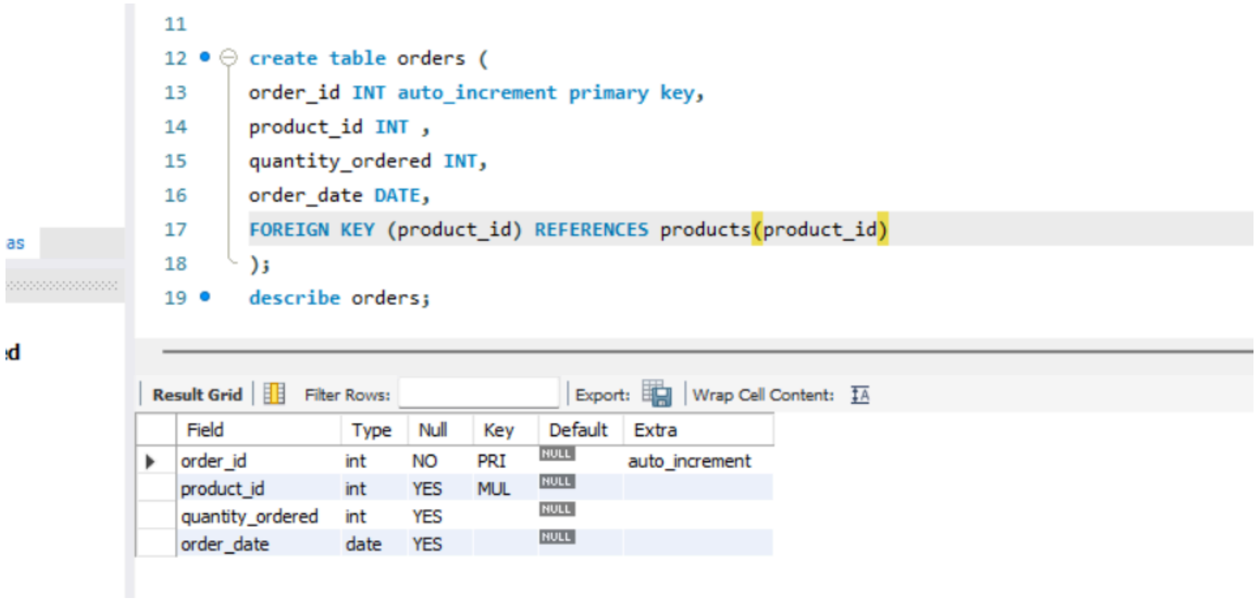


```
#Formative Assessment 1
Create database global_store_db;
use global_store_db;
create table products (
product_id INT auto_increment primary key,
name VARCHAR(100),
price DECIMAL(10,2),
quantity INT
);
describe products;
```

Field	Type	Null	Key	Default	Extra
product_id	int	NO	PRI	NULL	auto_increment
name	varchar(100)	YES		NULL	
price	decimal(10,2)	YES		NULL	
quantity	int	YES		NULL	

'orders' with columns:

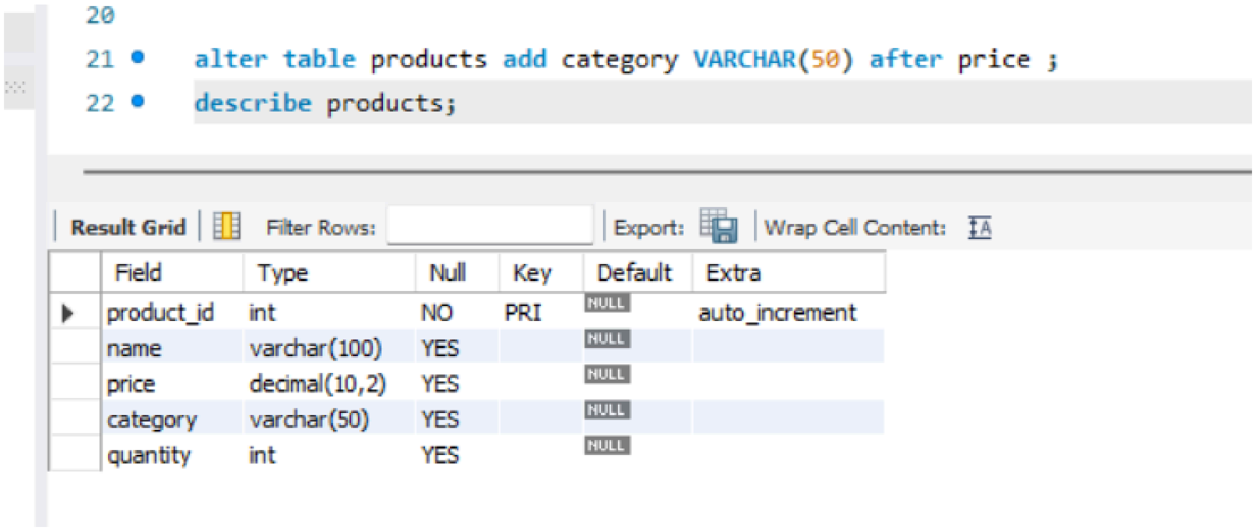
- order_id (INT, auto_increment, primary key),
- product_id (INT, foreign key referencing product_id in the inventory table),
- quantity_ordered (INT)
- order_date (DATE).



```
create table orders (
order_id INT auto_increment primary key,
product_id INT ,
quantity_ordered INT,
order_date DATE,
FOREIGN KEY (product_id) REFERENCES products(product_id)
);
describe orders;
```

Field	Type	Null	Key	Default	Extra
order_id	int	NO	PRI	NULL	auto_increment
product_id	int	YES	MUL	NULL	
quantity_ordered	int	YES		NULL	
order_date	date	YES		NULL	

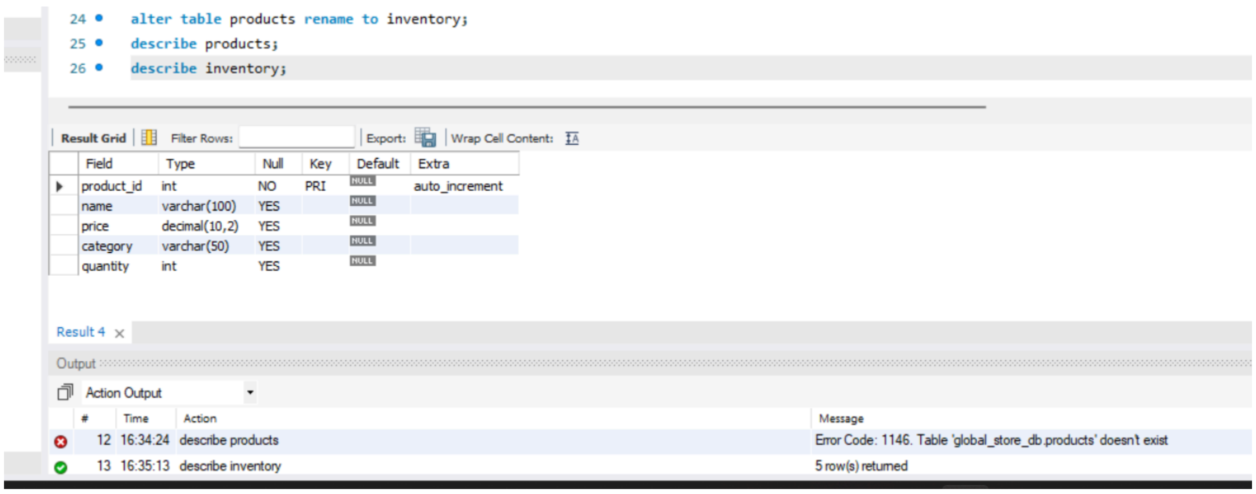
2.Alter the products table to add a new column named category (VARCHAR(50)) after the price column. (score : 0.5)



```
alter table products add category VARCHAR(50) after price ;
describe products;
```

Field	Type	Null	Key	Default	Extra
product_id	int	NO	PRI	NULL	auto_increment
name	varchar(100)	YES		NULL	
price	decimal(10,2)	YES		NULL	
category	varchar(50)	YES		NULL	
quantity	int	YES		NULL	

3. Rename the products table to inventory. (score : 0.5)

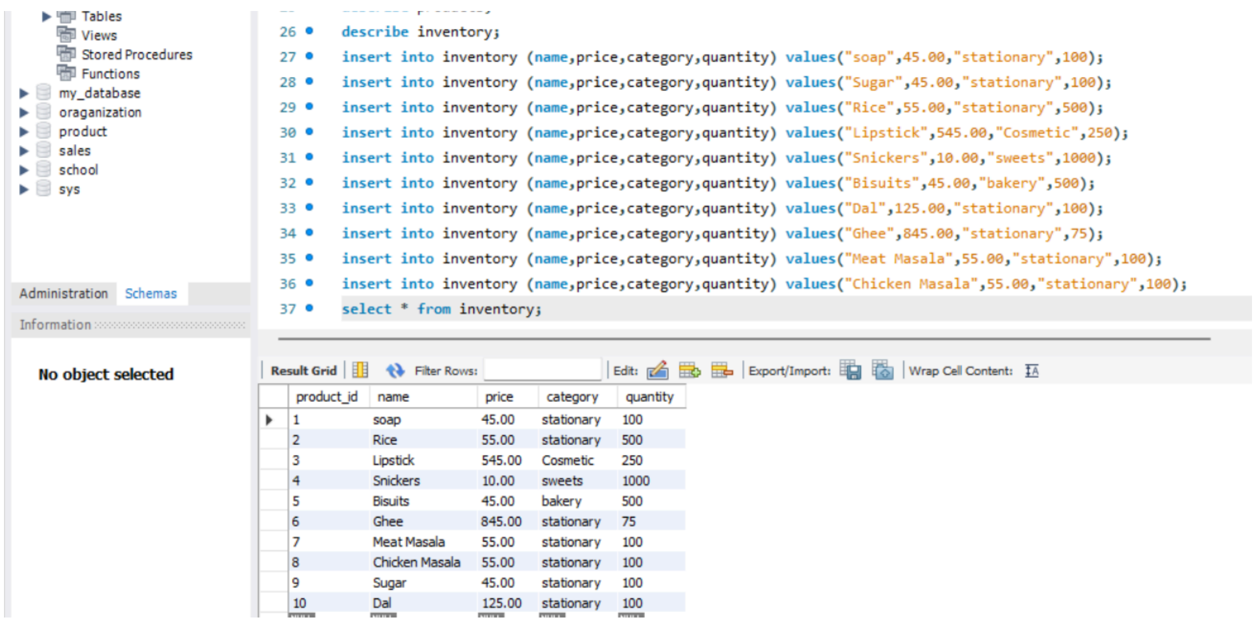


```sql
alter table products rename to inventory;
describe products;
describe inventory;
```

	Field	Type	Null	Key	Default	Extra
▶	product_id	int	NO	PRI	NULL	auto_increment
	name	varchar(100)	YES		NULL	
	price	decimal(10,2)	YES		NULL	
	category	varchar(50)	YES		NULL	
	quantity	int	YES		NULL	

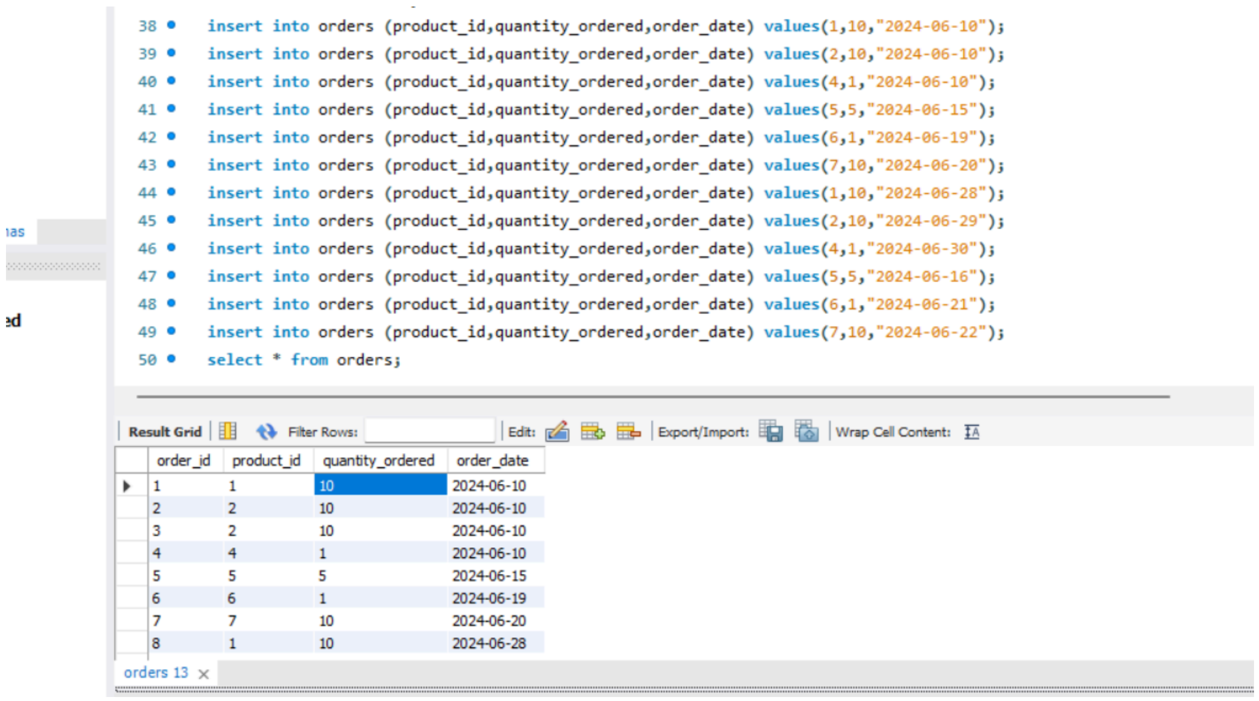
	#	Time	Action	Message
✗	12	16:34:24	describe products	Error Code: 1146. Table 'global_store_db.products' doesn't exist
✓	13	16:35:13	describe inventory	5 row(s) returned

4. Insert at least 10 records into the inventory table and 5 records into orders table and display the tables. (score : 1)



```sql
describe inventory;
insert into inventory (name,price,category,quantity) values("soap",45.00,"stationary",100);
insert into inventory (name,price,category,quantity) values("Sugar",45.00,"stationary",100);
insert into inventory (name,price,category,quantity) values("Rice",55.00,"stationary",500);
insert into inventory (name,price,category,quantity) values("Lipstick",545.00,"Cosmetic",250);
insert into inventory (name,price,category,quantity) values("Snickers",10.00,"sweets",1000);
insert into inventory (name,price,category,quantity) values("Bisuits",45.00,"bakery",500);
insert into inventory (name,price,category,quantity) values("Dal",125.00,"stationary",100);
insert into inventory (name,price,category,quantity) values("Ghee",845.00,"stationary",75);
insert into inventory (name,price,category,quantity) values("Meat Masala",55.00,"stationary",100);
insert into inventory (name,price,category,quantity) values("Chicken Masala",55.00,"stationary",100);
select * from inventory;
```

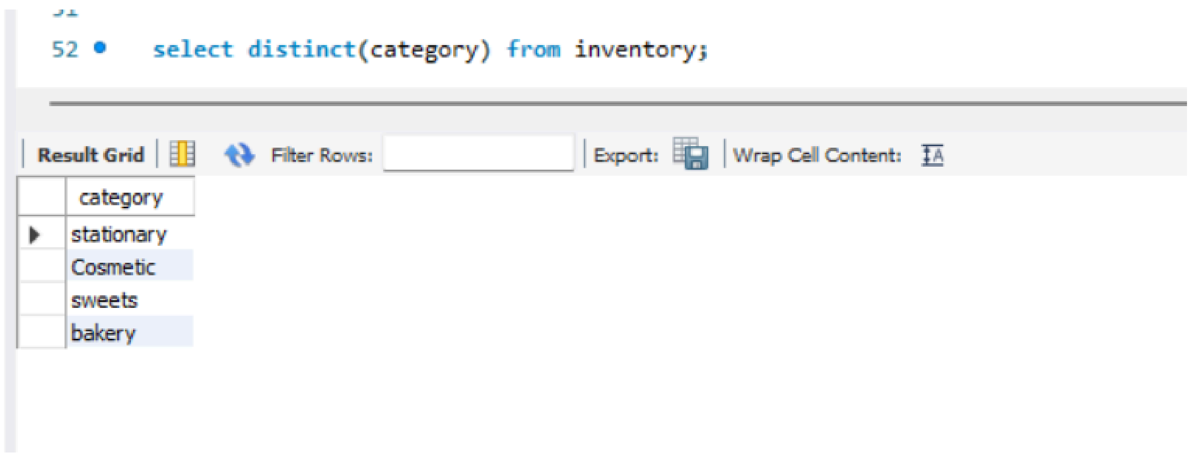
	product_id	name	price	category	quantity
▶	1	soap	45.00	stationary	100
	2	Rice	55.00	stationary	500
	3	Lipstick	545.00	Cosmetic	250
	4	Snickers	10.00	sweets	1000
	5	Bisuits	45.00	bakery	500
	6	Ghee	845.00	stationary	75
	7	Meat Masala	55.00	stationary	100
	8	Chicken Masala	55.00	stationary	100
	9	Sugar	45.00	stationary	100
	10	Dal	125.00	stationary	100



```
insert into orders (product_id,quantity_ordered,order_date) values(1,10,"2024-06-10");
insert into orders (product_id,quantity_ordered,order_date) values(2,10,"2024-06-10");
insert into orders (product_id,quantity_ordered,order_date) values(4,1,"2024-06-10");
insert into orders (product_id,quantity_ordered,order_date) values(5,5,"2024-06-15");
insert into orders (product_id,quantity_ordered,order_date) values(6,1,"2024-06-19");
insert into orders (product_id,quantity_ordered,order_date) values(7,10,"2024-06-20");
insert into orders (product_id,quantity_ordered,order_date) values(1,10,"2024-06-28");
insert into orders (product_id,quantity_ordered,order_date) values(2,10,"2024-06-29");
insert into orders (product_id,quantity_ordered,order_date) values(4,1,"2024-06-30");
insert into orders (product_id,quantity_ordered,order_date) values(5,5,"2024-06-16");
insert into orders (product_id,quantity_ordered,order_date) values(6,1,"2024-06-21");
insert into orders (product_id,quantity_ordered,order_date) values(7,10,"2024-06-22");
select * from orders;
```

order_id	product_id	quantity_ordered	order_date
1	1	10	2024-06-10
2	2	10	2024-06-10
3	2	10	2024-06-10
4	4	1	2024-06-10
5	5	5	2024-06-15
6	6	1	2024-06-19
7	7	10	2024-06-20
8	1	10	2024-06-28

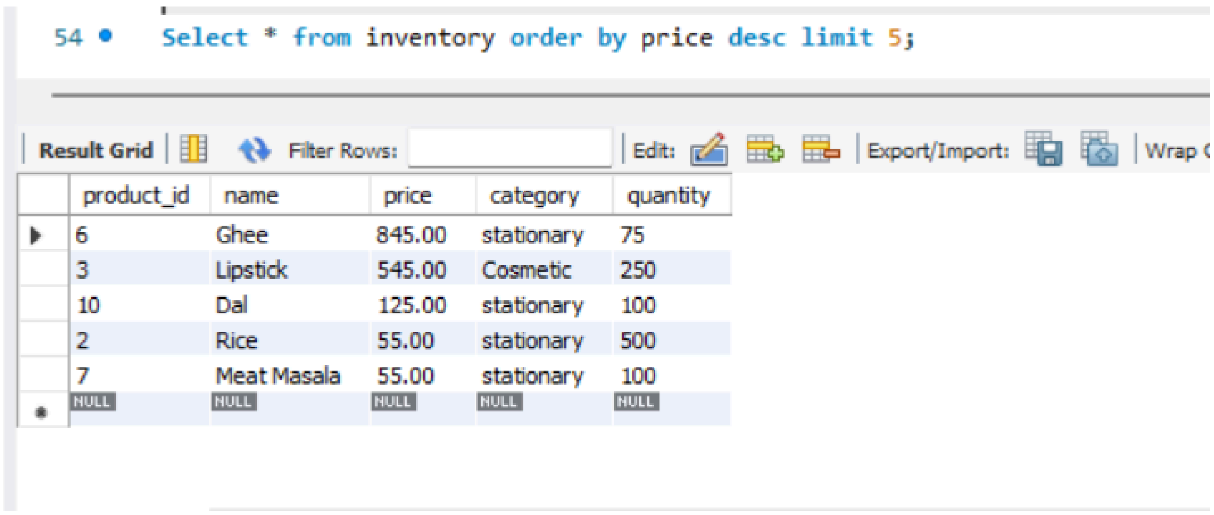
5. Write queries for the following : (Score :3)
a) Write a query to display distinct categories from the inventory table.



```
select distinct(category) from inventory;
```

category
stationary
Cosmetic
sweets
bakery

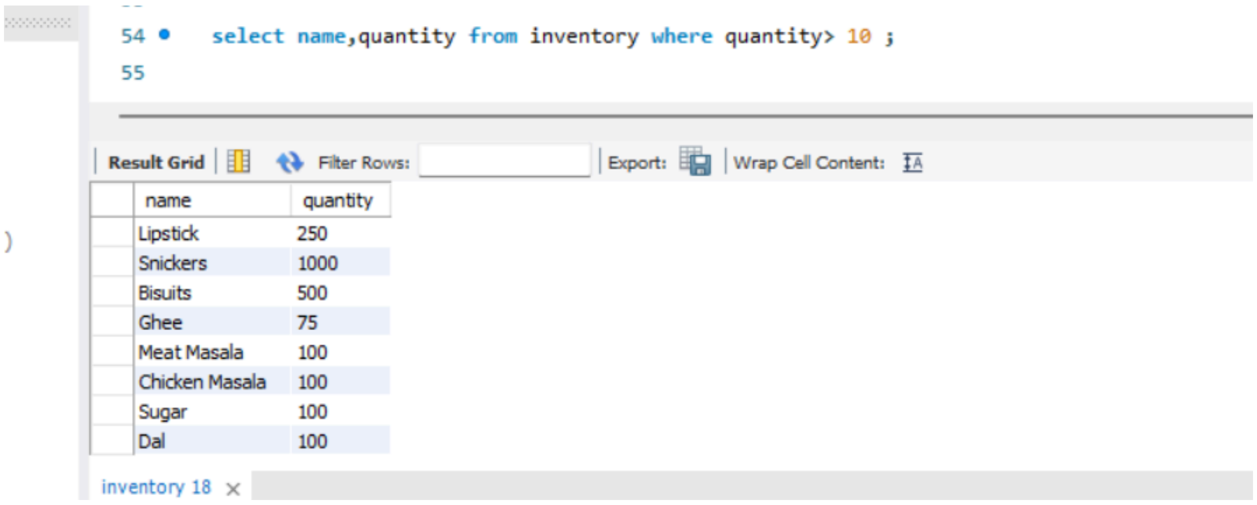
b) Select the top 5 products by their prices in descending order from the inventory table.



```
Select * from inventory order by price desc limit 5;
```

product_id	name	price	category	quantity
6	Ghee	845.00	stationary	75
3	Lipstick	545.00	Cosmetic	250
10	Dal	125.00	stationary	100
2	Rice	55.00	stationary	500
7	Meat Masala	55.00	stationary	100
NULL	NULL	NULL	NULL	NULL

c) Display the names of products with a quantity greater than 10 from the inventory table.

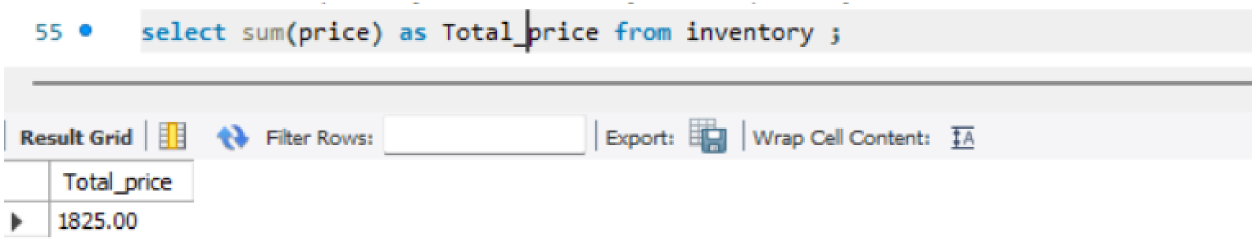


```
select name,quantity from inventory where quantity> 10 ;
```

name	quantity
Lipstick	250
Snickers	1000
Bisuits	500
Ghee	75
Meat Masala	100
Chicken Masala	100
Sugar	100
Dal	100

inventory 18

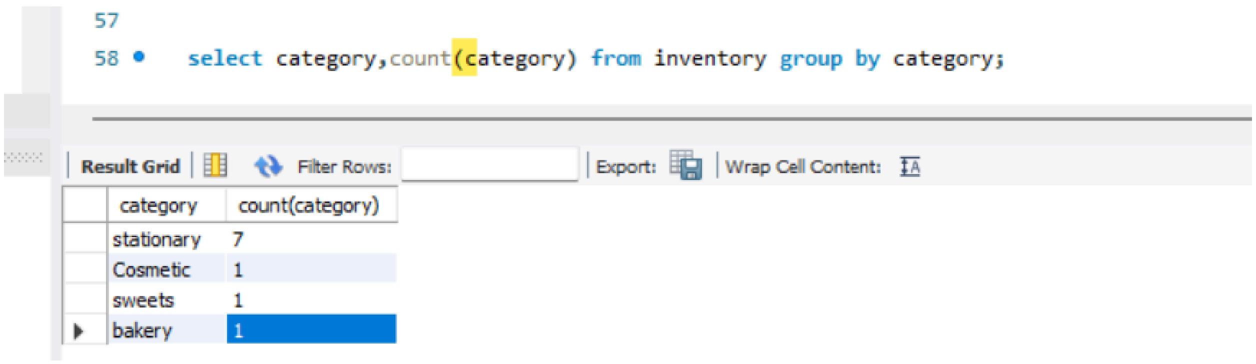
d) Use the SUM() function to calculate the total price of all products in the inventory table.



```
select sum(price) as Total_price from inventory ;
```

Total_price
1825.00

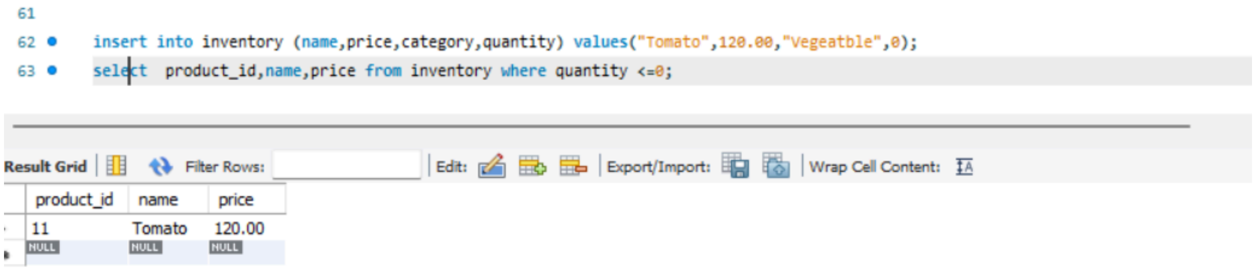
e)Group products by their categories and display the count of products in each category.



```sql
select category,count(category) from inventory group by category;
```

category	count(category)
stationary	7
Cosmetic	1
sweets	1
bakery	1

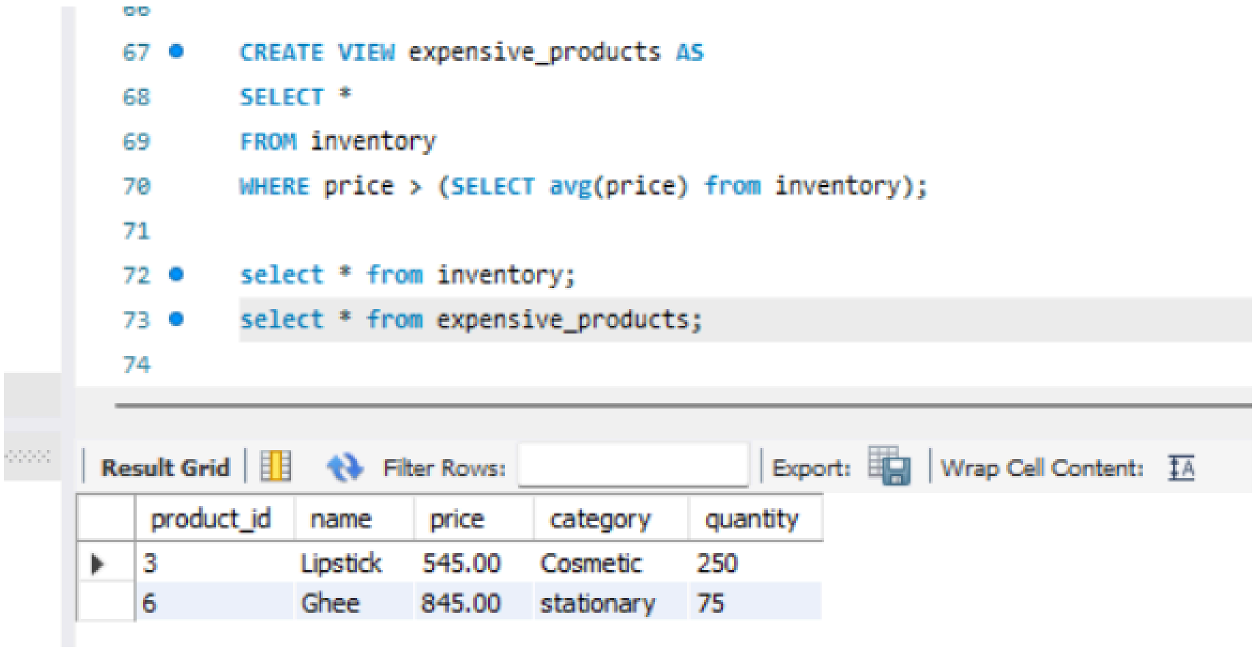
f) Write a query to identify products that are currently out of stock (i.e., quantity is zero). Display the product details including the product name and price.



```sql
insert into inventory (name,price,category,quantity) values("Tomato",120.00,"Vegeatble",0);
select  product_id,name,price from inventory where quantity <=0;
```

product_id	name	price
11	Tomato	120.00
NULL	NULL	NULL

6. Create a view named expensive_products that displays the details of products with a price above the average price of all products. (score : 1)

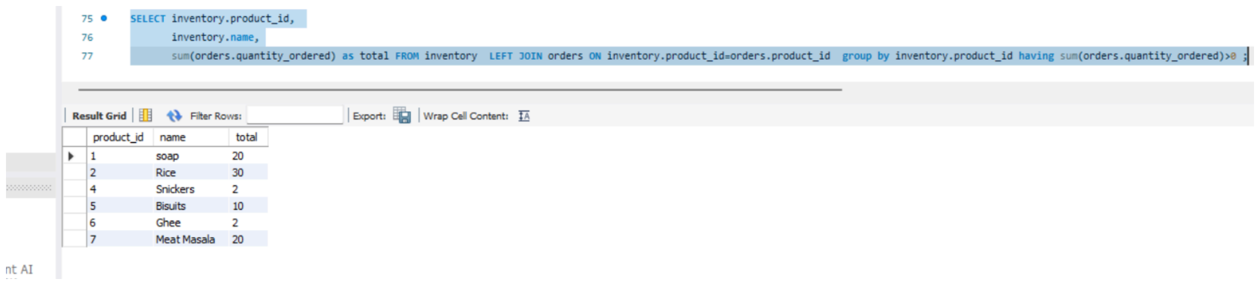


```sql
CREATE VIEW expensive_products AS
SELECT *
FROM inventory
WHERE price > (SELECT avg(price) from inventory);

select * from inventory;
select * from expensive_products;
```

product_id	name	price	category	quantity
3	Lipstick	545.00	Cosmetic	250
6	Ghee	845.00	stationary	75

7. Write a join query to display the names of products along with the corresponding order quantities from the inventory and orders tables. (score : 1)



```
SELECT inventory.product_id,
       inventory.name,
       sum(orders.quantity_ordered) as total FROM inventory  LEFT JOIN orders ON inventory.product_id=orders.product_id  group by inventory.product_id having sum(orders.quantity_ordered)>0 ;
```

product_id	name	total
1	soap	20
2	Rice	30
4	Snickers	2
5	Bisuits	10
6	Ghee	2
7	Meat Masala	20

Total Score : 10

Queries Used

#Formative Assessment 1
Create database global_store_db;
use global_store_db;
create table products (
product_id INT auto_increment primary key,
name VARCHAR(100),
price DECIMAL(10,2),
quantity INT
);
describe products;

create table orders (
order_id INT auto_increment primary key,
product_id INT ,
quantity_ordered INT,
order_date DATE,
FOREIGN KEY (product_id) REFERENCES products(product_id)
);
describe orders;

alter table products add category VARCHAR(50) after price ;
describe products;

alter table products rename to inventory;

```
describe products;
describe inventory;
insert into inventory (name,price,category,quantity)
values("soap",45.00,"stationary",100);
insert into inventory (name,price,category,quantity)
values("Sugar",45.00,"stationary",100);
insert into inventory (name,price,category,quantity)
values("Rice",55.00,"stationary",500);
insert into inventory (name,price,category,quantity)
values("Lipstick",545.00,"Cosmetic",250);
insert into inventory (name,price,category,quantity)
values("Snickers",10.00,"sweets",1000);
insert into inventory (name,price,category,quantity)
values("Bisuits",45.00,"bakery",500);
insert into inventory (name,price,category,quantity)
values("Dal",125.00,"stationary",100);
insert into inventory (name,price,category,quantity)
values("Ghee",845.00,"stationary",75);
insert into inventory (name,price,category,quantity) values("Meat
Masala",55.00,"stationary",100);
insert into inventory (name,price,category,quantity) values("Chicken
Masala",55.00,"stationary",100);
select * from inventory;
insert into orders (product_id,quantity_ordered,order_date)
values(1,10,"2024-06-10");
insert into orders (product_id,quantity_ordered,order_date)
values(2,10,"2024-06-10");
insert into orders (product_id,quantity_ordered,order_date)
values(4,1,"2024-06-10");
insert into orders (product_id,quantity_ordered,order_date)
values(5,5,"2024-06-15");
insert into orders (product_id,quantity_ordered,order_date)
values(6,1,"2024-06-19");
insert into orders (product_id,quantity_ordered,order_date)
values(7,10,"2024-06-20");
```

```
insert into orders (product_id,quantity_ordered,order_date)
values(1,10,"2024-06-28");
insert into orders (product_id,quantity_ordered,order_date)
values(2,10,"2024-06-29");
insert into orders (product_id,quantity_ordered,order_date)
values(4,1,"2024-06-30");
insert into orders (product_id,quantity_ordered,order_date)
values(5,5,"2024-06-16");
insert into orders (product_id,quantity_ordered,order_date)
values(6,1,"2024-06-21");
insert into orders (product_id,quantity_ordered,order_date)
values(7,10,"2024-06-22");
select * from orders;
select distinct(category) from inventory;
Select * from inventory order by price desc limit 5;

select name,quantity from inventory where quantity> 10 ;
select sum(price) as Total_price from inventory ;
#Group products by their categories and display the count of products in each
category.

select category,count(category) from inventory group by category;

#f) Write a query to identify products that are currently out of stock (i.e.,
quantity is zero). Display the product details including the product name and
price.

insert into inventory (name,price,category,quantity)
values("Tomato",120.00,"Vegeatble",0);
select  product_id,name,price from inventory where quantity <=0;

Create view expensive_products as SELECT  name,price from inventory where
price>=avg(price);

CREATE VIEW expensive_products AS
SELECT *
```

```
FROM inventory
WHERE price > (SELECT avg(price) from inventory);

select * from inventory;
select * from expensive_products;

SELECT inventory.product_id,
            inventory.name,
            sum(orders.quantity_ordered) as total FROM inventory  LEFT JOIN
orders ON inventory.product_id=orders.product_id  group by
inventory.product_id having sum(orders.quantity_ordered)>0 ;
```