

ISS Lab 4 (SQL)

0. Original Database

Customers				
customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

Orders			
order_id	item	amount	customer_id
1	Keyboard	400	4
2	Mouse	300	4
3	Monitor	12000	3
4	Keyboard	400	1
5	Mousepad	250	2

Shippings		
shipping_id	status	customer
1	Pending	2
2	Pending	4
3	Delivered	3
4	Pending	5
5	Delivered	1

1. Retrieve all customer information

→ SELECT * FROM Customers;

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

2. Retrieve all order details

→ SELECT * FROM Orders;

order_id	item	amount	customer_id
1	Keyboard	400	4
2	Mouse	300	4
3	Monitor	12000	3
4	Keyboard	400	1
5	Mousepad	250	2

3. Retrieve all shipping details

→ SELECT * FROM Shippings;

shipping_id	status	customer
1	Pending	2
2	Pending	4
3	Delivered	3
4	Pending	5
5	Delivered	1

4. Find the total number of customers

→ SELECT COUNT(customer_id) FROM Customers;

COUNT(customer_id)
5

5. Find the average age of customers

→ SELECT AVG(age) FROM Customers;

AVG(age)
25.6

6. Find customers who have placed orders

→ SELECT Customers.customer_id, Customers.first_name, Customers.last_name, Orders.order_id, Orders.item, Orders.amount
FROM Orders, Customers where Customers.customer_id = Orders.customer_id ORDER BY Customers.customer_id;

customer_id	first_name	last_name	order_id	item	amount
1	John	Doe	4	Keyboard	400
2	Robert	Luna	5	Mousepad	250
3	David	Robinson	3	Monitor	12000
4	John	Reinhardt	1	Keyboard	400
4	John	Reinhardt	2	Mouse	300

7. Find customers who have not placed orders

→ SELECT CUSTOMERS.* FROM Customers WHERE NOT EXISTS(SELECT NULL FROM Orders WHERE Orders.customer_id = Customers.customer_id);

customer_id	first_name	last_name	age	country
5	Betty	Doe	28	UAE

8. Find the customer with the highest total order amount

→ SELECT CUSTOMERS.* FROM Customers, Orders WHERE Orders.amount = (SELECT MAX(amount) from (SELECT * FROM Orders GROUP BY customer_id)) and Customers.customer_id = Orders.customer_id;

customer_id	first_name	last_name	age	country
3	David	Robinson	22	UK

9. Retrieve the items ordered by customers from the UK

→ SELECT Orders.item FROM Customers, Orders WHERE Customers.country = "UK" and Customers.customer_id = Orders.customer_id;

item
Keyboard
Mouse
Monitor

10. Status of orders placed by customers aged 25 or below

→ SELECT Customers.customer_id, Customers.first_name, Customers.last_name, Shippings.status FROM Customers, Shippings WHERE Customers.age <= 25 and Customers.customer_id = Shippings.customer;

customer_id	first_name	last_name	status
2	Robert	Luna	Pending
4	John	Reinhardt	Pending
3	David	Robinson	Delivered