

LAB 4

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1. Retrieve all customer information.

```
select * from Customers;
```

```
mysql> 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 |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

2. Retrieve all order details.

```
select * from Orders;
```

```
mysql> 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 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

3. Retrieve all shipping details.

```
select * from Shippings;
```

```
mysql> select * from Shippings;
+-----+-----+-----+
| shipping_id | status   | customer |
+-----+-----+-----+
|          1 | Pending |         2 |
|          2 | Pending |         4 |
|          3 | Delivered |         3 |
|          4 | Pending |         5 |
|          5 | Delivered |         1 |
+-----+-----+-----+
5 rows in set (0.00 sec)
```

4. Find the total number of customers.

```
select count(*) as total_customers from Customers;
```

```
mysql> select count(*) as total_customers from Customers;
+-----+
| total_customers |
+-----+
|                5 |
+-----+
1 row in set (0.03 sec)
```

5. Find the average age of customers.

```
select avg(age) as average_age from Customers;
```

```
mysql> select avg(age) as average_age from Customers;
+-----+
| average_age |
+-----+
|    25.6000 |
+-----+
1 row in set (0.01 sec)
```

6. Find customers who have placed orders and their order details.

```
select c.*, o.order_id, o.item, o.amount
from Customers as c, Orders as o
where c.customer_id = o.customer_id;
```

```
mysql> select c.*, o.order_id, o.item, o.amount
→ from Customers as c, Orders as o
→ where c.customer_id = o.customer_id;
```

customer_id	first_name	last_name	age	country	order_id	item	amount
4	John	Reinhardt	25	UK	1	Keyboard	400
4	John	Reinhardt	25	UK	2	Mouse	300
3	David	Robinson	22	UK	3	Monitor	12000
1	John	Doe	31	USA	4	Keyboard	400
2	Robert	Luna	22	USA	5	Mousepad	250

```
5 rows in set (0.00 sec)
```

7. Retrieve customers who have not placed any orders.

```
select *
from Customers
where customer_id not in (select customer_id from Orders);
```

```
mysql> select *
→ from Customers
→ where customer_id not in (select customer_id from Orders);
```

customer_id	first_name	last_name	age	country
5	Betty	Doe	28	UAE

```
1 row in set (0.00 sec)
```

8. Find the customer with the highest total order amount.

```
select c.*, t1.x as highest_total
from (
    select customer_id, sum(amount) as x
    from Orders
    group by customer_id
) as t1, Customers as c
where t1.customer_id = c.customer_id
and x = (
    select max(x)
    from (
        select sum(amount) as x
        from Orders
        group by customer_id
    ) as t2
);
```

```
mysql> select c.*, t1.x as highest_total
→ from (
→     select customer_id, sum(amount) as x
→     from Orders
→     group by customer_id
→ ) as t1, Customers as c
→ where t1.customer_id = c.customer_id
→ and x = (
→     select max(x)
→     from (
→         select sum(amount) as x
→         from Orders
→         group by customer_id
→     ) as t2
→ );
```

customer_id	first_name	last_name	age	country	highest_total
3	David	Robinson	22	UK	12000

1 row in set (0.00 sec)

9. Retrieve the items ordered by customers from the UK.

```
select o.item
from Customers as c, Orders as o
where c.country = 'UK'
and c.customer_id = o.customer_id;
```

```
mysql> select o.item
→ from Customers as c, Orders as o
→ where c.country = 'UK'
→ and c.customer_id = o.customer_id;
```

item
Monitor
Keyboard
Mouse

3 rows in set (0.00 sec)

10. Find the status of orders placed by customers aged 25 or below.

Only the shipping details:

```
select s.*
from Shippings as s, Customers as c
where c.age <= 25
and c.customer_id = s.customer;
```

```
mysql> select s.*
→ from Shippings as s, Customers as c
→ where c.age ≤ 25
→ and c.customer_id = s.customer;
+-----+-----+-----+
| shipping_id | status | customer |
+-----+-----+-----+
|          1 | Pending |         2 |
|          3 | Delivered |         3 |
|          2 | Pending |         4 |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

Customer details are also visible:

```
select s.shipping_id, s.status, c.*
from Shippings as s, Customers as c
where c.age <= 25
and c.customer_id = s.customer;
```

```
mysql> select s.shipping_id, s.status, c.*
→ from Shippings as s, Customers as c
→ where c.age ≤ 25
→ and c.customer_id = s.customer;
+-----+-----+-----+-----+-----+-----+-----+
| shipping_id | status | customer_id | first_name | last_name | age | country |
+-----+-----+-----+-----+-----+-----+-----+
|          1 | Pending |         2 | Robert | Luna | 22 | USA |
|          3 | Delivered |         3 | David | Robinson | 22 | UK |
|          2 | Pending |         4 | John | Reinhardt | 25 | UK |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)
```