SQL

1. Write a SQL query to Rename the column name.

```
ALTER TABLE table_name
RENAME COLUMN oldcolumn_name to newcolumn_name;
```

2. Write a SQL query to find duplicate records.

```
SELECT *FROM students
WHERE (name, age) IN (
SELECT name, age
FROM students
GROUP BY name, age
 HAVING COUNT(*) > 1
)
```

3. How do we use the DISTINCT statement? What are its use?

In SQL, the DISTINCT statement is used to remove duplicates from the result set of a SELECT query. The DISTINCT keyword is used before the column names in the SELECT statement to indicate that the query should return only unique values for those columns.

sql query for DISTINCT statement:

SELECT DISTINCT city FROM Table name;

Uses:

The DISTINCT statement can be useful in various scenarios where you want to filter out duplicate values from the result set. For example:

- To get a list of unique product names from a table of products.
- To count the number of unique users who have visited a website.
- To find the unique categories of items sold by an online store.
- To retrieve a list of unique email addresses from a table of customers.

4.Explain joins with example and output.

In SQL, joins are used to combine data from two or more tables based on a common column between them. The common column is typically a foreign key in one table that refers to the primary key in another table. There are several types of joins, including inner join, left join, right join, and full outer join.

Let's consider two tables, labour and dept with the following data:

Table 1 labour

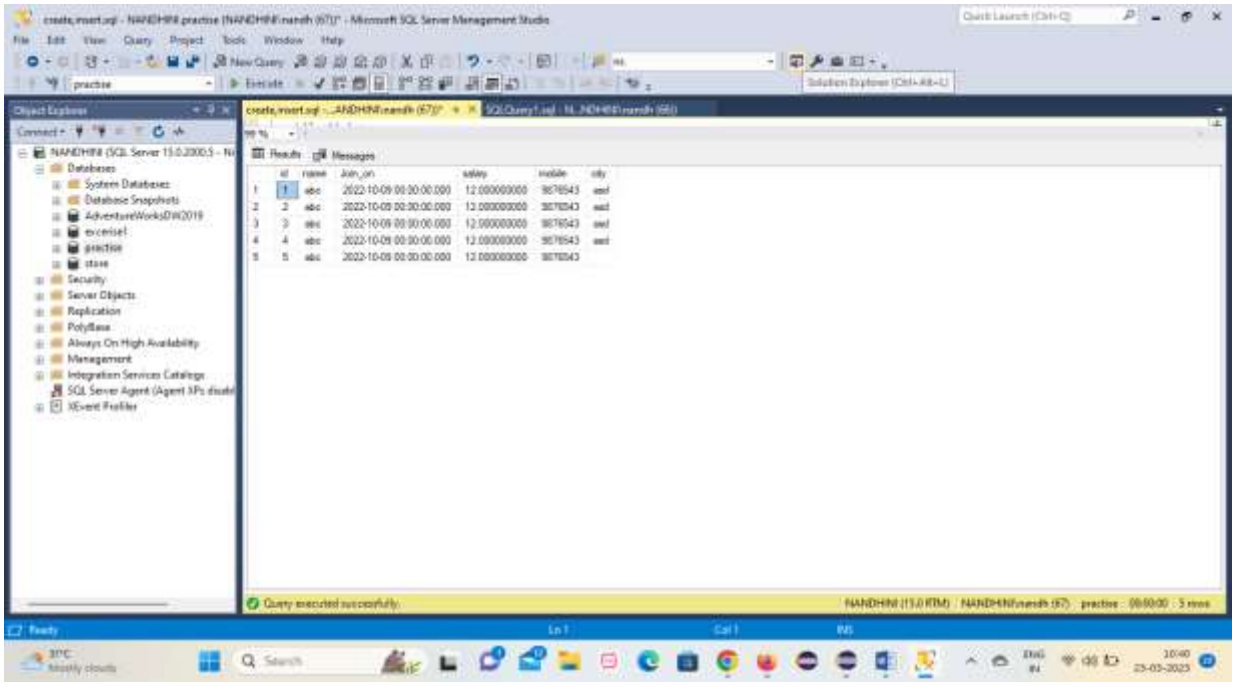
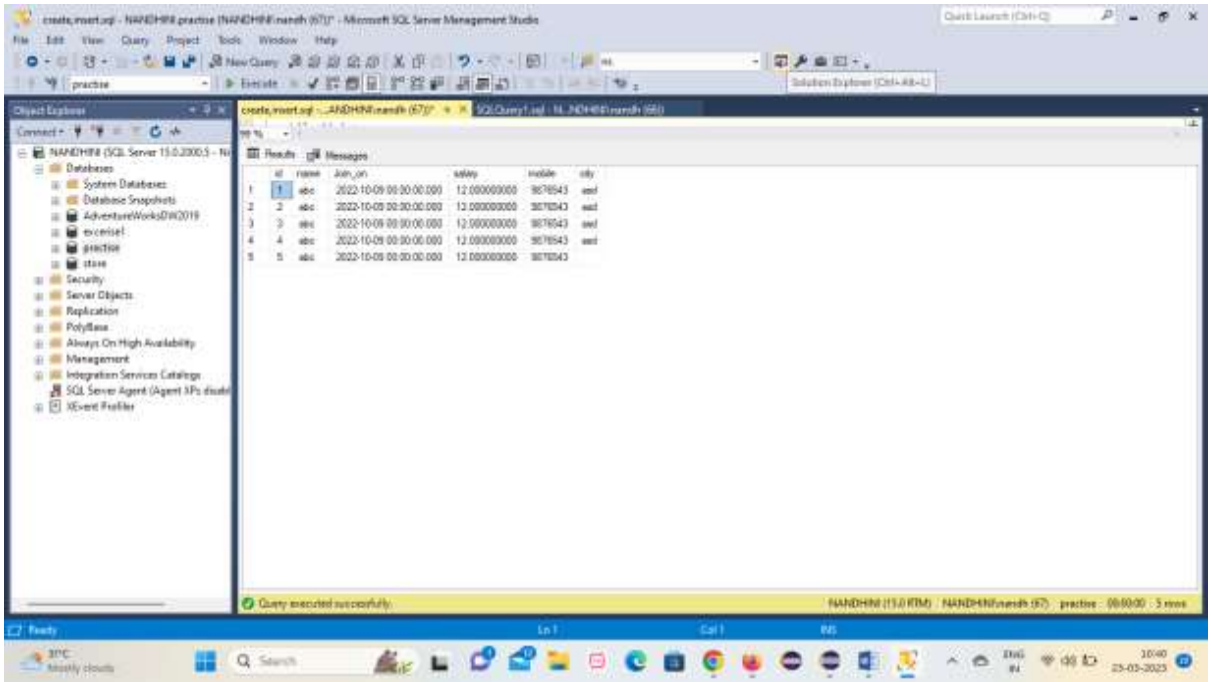


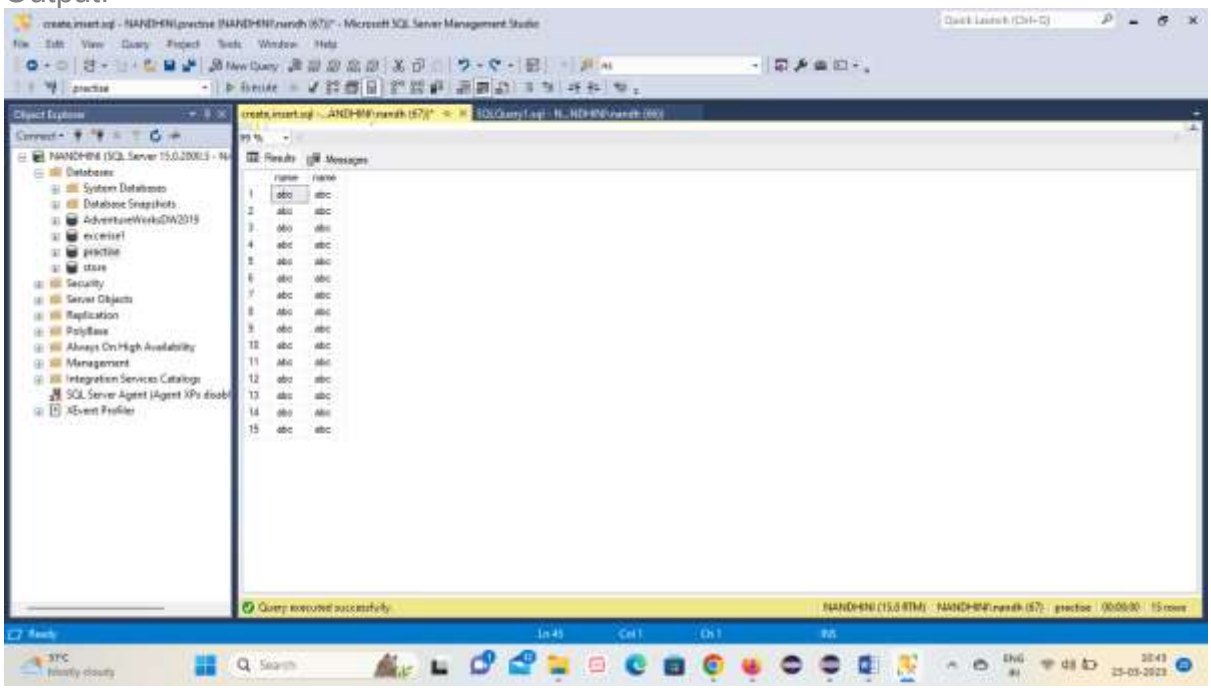
Table 2 dept



Inner join

```
SELECT labour.name, dept.name
FROM labour
INNER JOIN dept ON labour.id = dept. id;
```

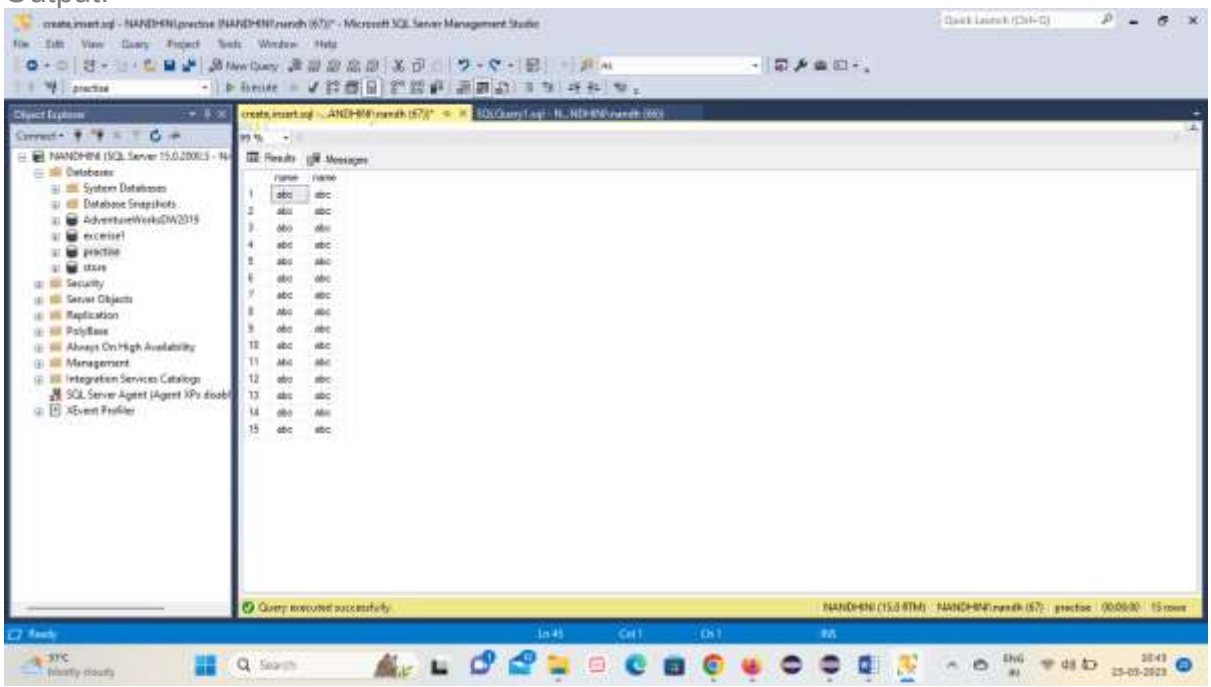
Output:



Left Join

```
SELECT labour.name, dept.name
FROM labour
LEFT JOIN dept ON labour.id = dept.id;
```

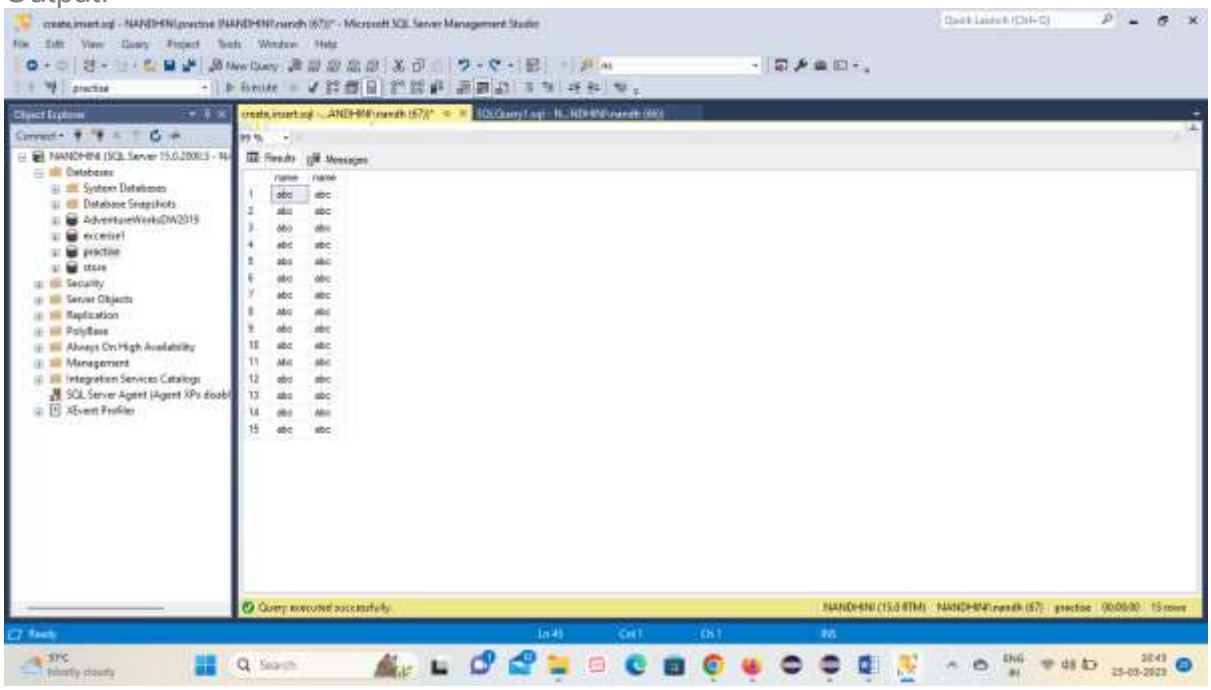
Output:



Right Join

```
SELECT labour.name, dept.name
FROM labour
RIGHT JOIN dept ON labour.id = dept.id;
```

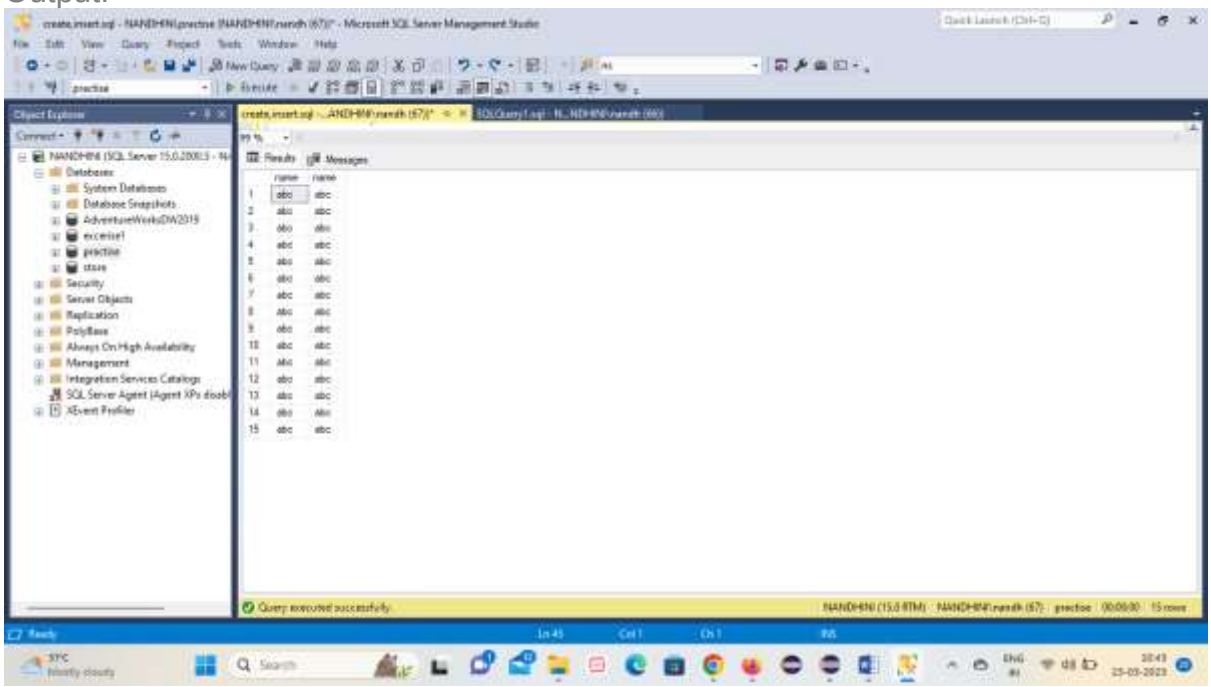
Output:



Outer Join

```
SELECT labour.name, dept.name
FROM labour
FULL OUTER JOIN dept ON labour.id = dept.id;
```

Output:



5 .How to fetch 3rd highest salary using Rank Function

```
SELECT id, name, salary
FROM (
SELECT id,name, salary, RANK() OVER (ORDER BY salary DESC) as rank
FROM workers
) as ranked_workers
WHERE rank = 3;
```

6. Write a SQL query to find duplicate records

```
SELECT OrderID, COUNT(OrderID)
FROM Orders
GROUP BY OrderID
HAVING COUNT(OrderID) > 1
```