Q.1. Write a SQL query to fetch the count of employees working in project 'P1'.

Ans. Here, we use aggregate function count() with the SQL where clause.

Query:select count(*) Count_of_Project

FROM [sampleDB].[dbo].[EmployeeSalary]

where Project='P1' ;

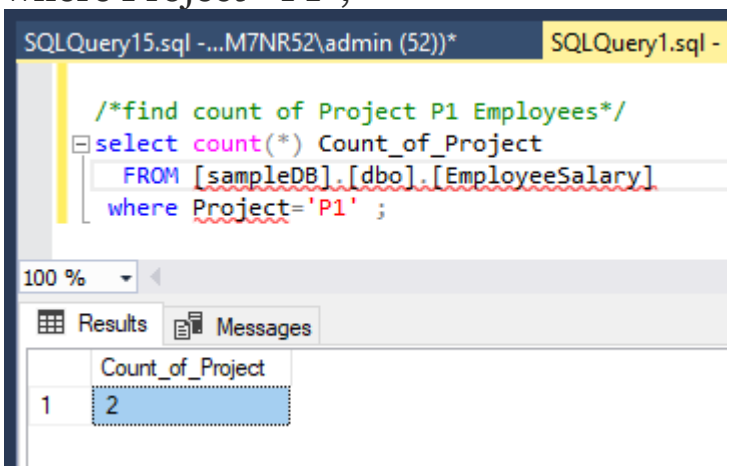


Fig 1

Q.2. Write a SQL query to fetch employee names having salary greater than or equal to 5000 and less than or equal 10000.

Ans. Here, we will use BETWEEN in the 'where' clause to return the empId of the employees with salary satifying the required criteria and then use it as subquery to find the fullName of the employee form EmployeeDetails table.

Query:

SELECT EmpFN

FROM [sampleDB].[dbo].[EmployeeDetails]

WHERE Empid IN

(SELECT Empsid FROM [sampleDB].[dbo].[EmployeeSalary]

WHERE Salary BETWEEN 5000 AND 10000);

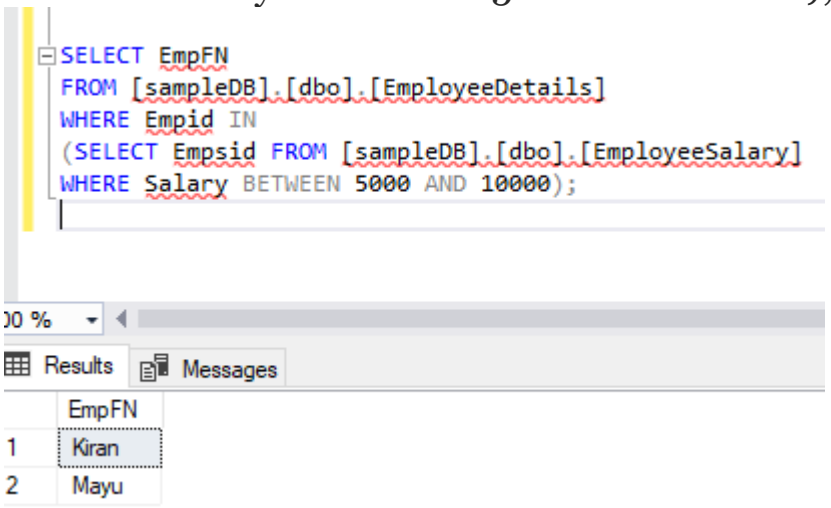


Fig 2

Q.3. Write a SQL query to fetch project-wise count of employees sorted by project's count in descending order.

Ans. The query has two requirements — first to fetch the project-wise count and then to sort the result by that count. For project wise count, we will be using GROUPBY clause and for sorting, we will use ORDER BY clause on the alias of the project-count.

Query:

select Project, Count(Empsid) EmpProjectCount

FROM [sampleDB].[dbo].[EmployeeSalary]

Group By Project

Order By EmpProjectCount DESC;

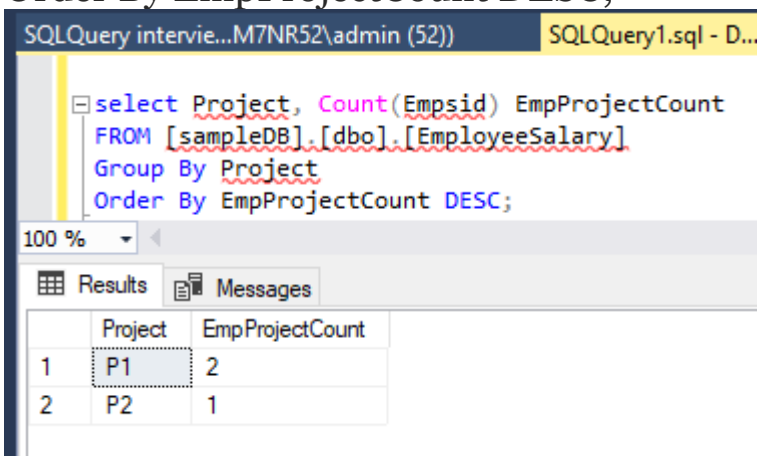


fig 3

Q.4. Write a query to fetch only the first name(string before space) from the FullName column of EmployeeDetails table.

Ans. In this question, we are required to first fetch the location of the space character in the FullName field and then extract the first name out of the FullName field. For finding the location we will use LOCATE method in mySQL and CHARINDEX in SQL SERVER and for fetching the string before space, we will use SUBSTRING OR MID method.

Query:

- SELECT SUBSTRING(EmpFN,0,CHARINDEX(' ',EmpFN))FirstName

FROM [sampleDB].[dbo].[EmployeeDetails];

- SELECT LEFT(EmpFN, CHARINDEX(‘ ‘,EmpFN) — 1) FirstName

FROM [sampleDB].[dbo].[EmployeeDetails];

// LEFT returns the left part of a string

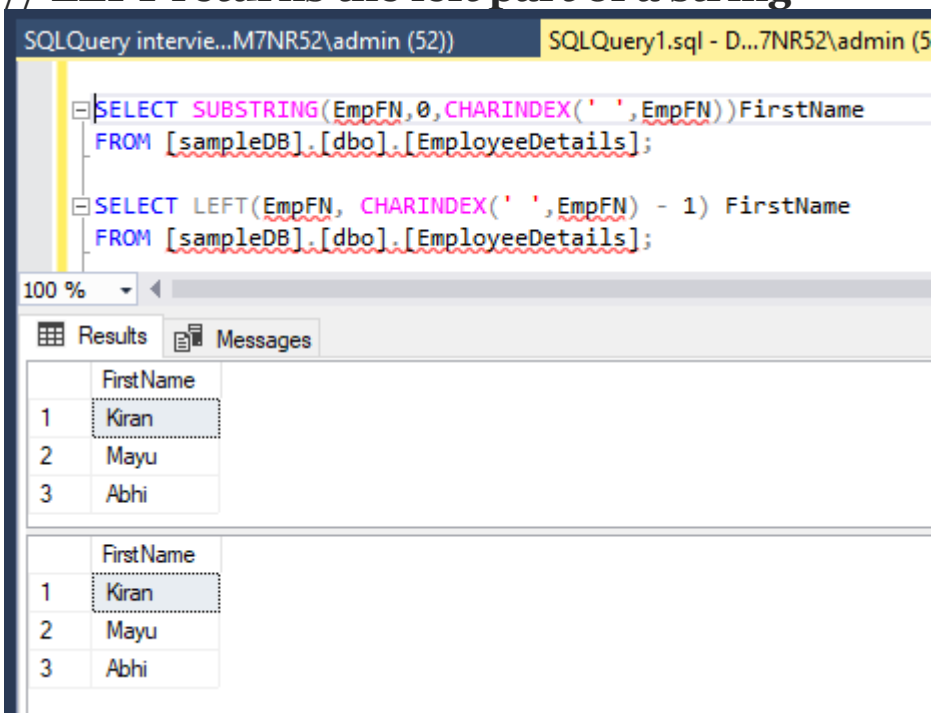


fig 4

Q.5. Write a query to fetch employee names and salary records. Return employee details even if the salary record is not present for the employee.

Ans. Here, we can use left join with EmployeeDetail table on the left side.

Query:

SELECT E.EmpFN, S.Salary

FROM [sampleDB].[dbo].[EmployeeDetails]

E LEFT JOIN [sampleDB].[dbo].[EmployeeSalary] S

ON E.Empid = S.Empsid;

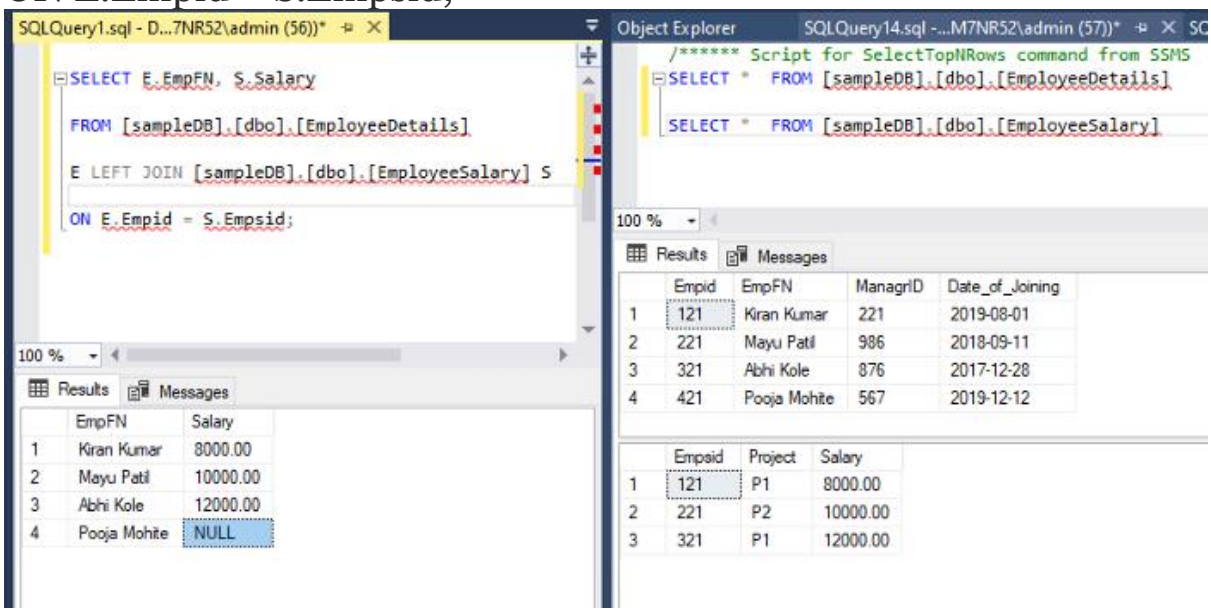


Fig 5

Q.6. Write a SQL query to fetch all the Employees who are also managers from EmployeeDetails table.

Ans. Here, we have to use Self-Join as the requirement wants us to analyze the EmployeeDetails table as two different tables, each for Employee and manager records.

Query:

SELECT E.EmpFN

FROM [sampleDB].[dbo].[EmployeeDetails] E

INNER JOIN [sampleDB].[dbo].[EmployeeDetails] M

ON E.EmpiD = M.ManagrID;

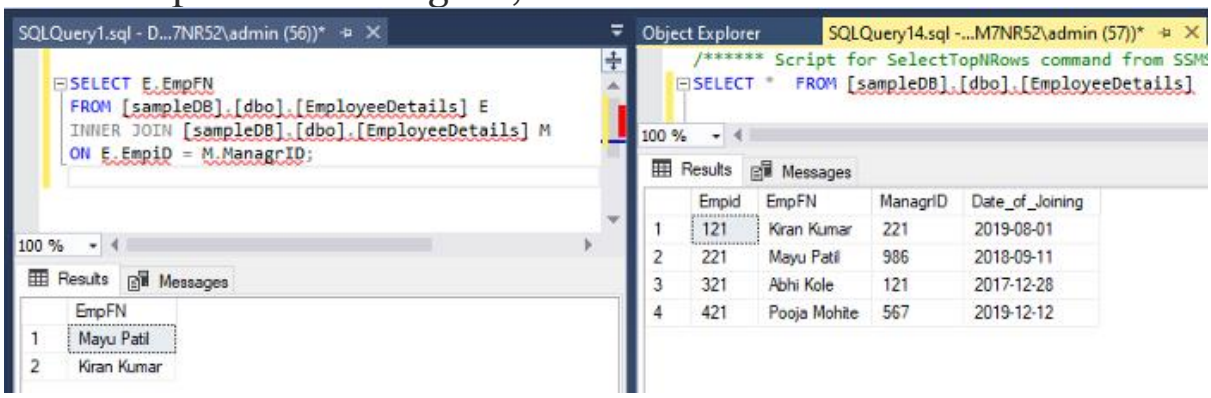


Fig 6

Q.7. Write a SQL query to fetch all employee records from EmployeeDetails table who have a salary record in EmployeeSalary table.

Ans. Using ‘Exists’-

Query:

SELECT * FROM [sampleDB].[dbo].[EmployeeDetails] E

WHERE EXISTS

(SELECT * FROM [sampleDB].[dbo].[EmployeeSalary] S

WHERE E.Empid = S.Empsid);

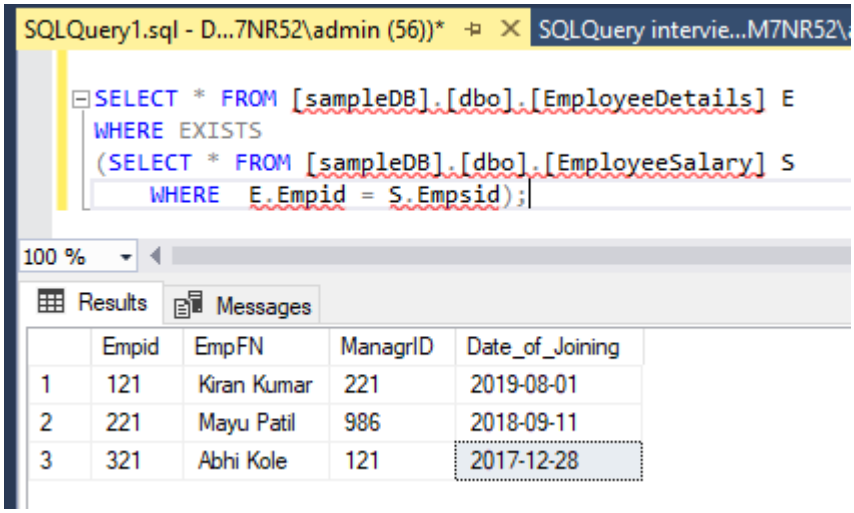


Fig 7

//Refer Fig 5 for Understanding.

Q.8. Write a SQL query to fetch duplicate records from a table.

Ans. In order to find duplicate records from table we can use GROUP BY on all the fields and then use HAVING clause to return only those fields whose count is greater than 1 i.e. the rows having duplicate records.

Query:

```
SELECT Project, COUNT(*) CountDup

FROM [sampleDB].[dbo].[EmployeeSalary]

GROUP BY Project

HAVING COUNT(*) > 1;
```

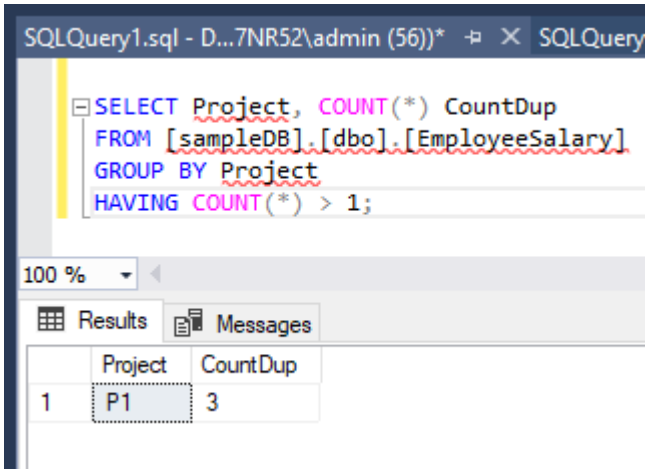


Fig 8

Q.9. Write a SQL query to remove duplicates from a table without using temporary table.

Ans. Using Group By and Having clause-

Query:

DELETE FROM [sampleDB].[dbo].[EmployeeSalary] HERE Project IN

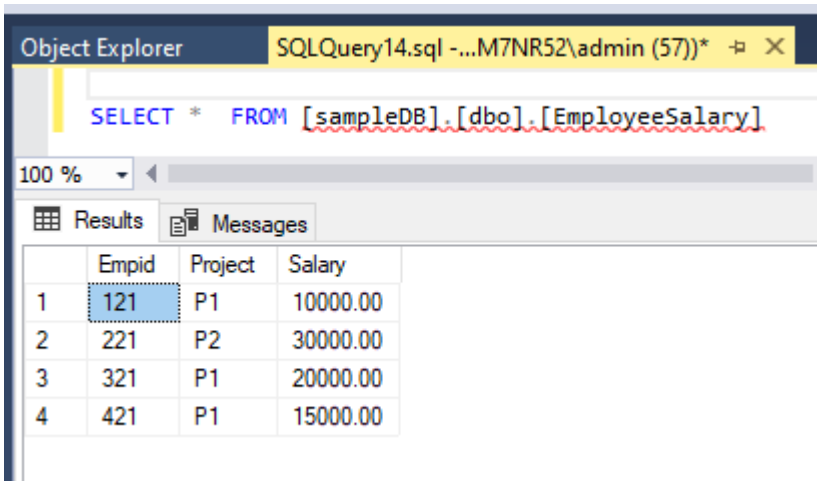
(SELECT Project FROM [sampleDB].[dbo].[EmployeeSalary]

GROUP BY Project HAVING COUNT(*) > 1)

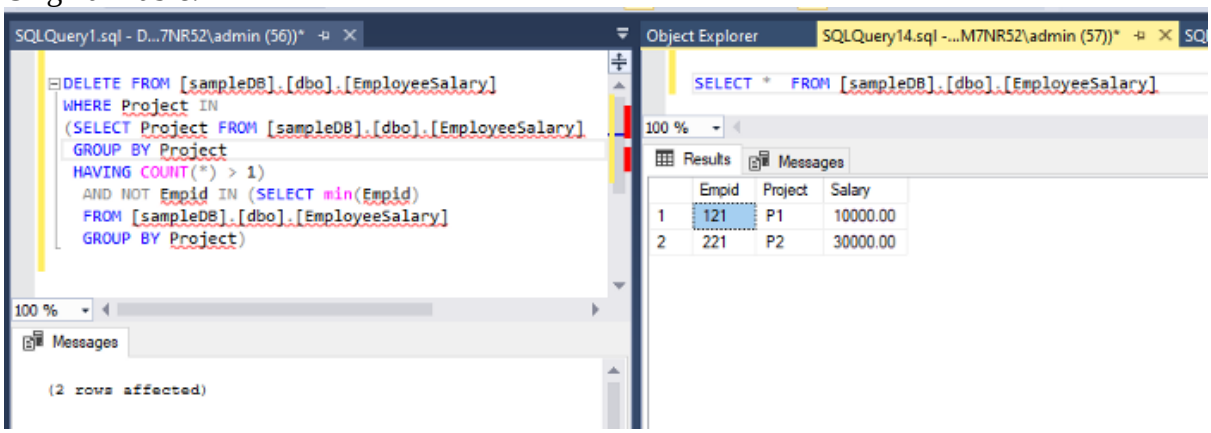
AND NOT Empid IN (SELECT min(Empid)

FROM [sampleDB].[dbo].[EmployeeSalary]

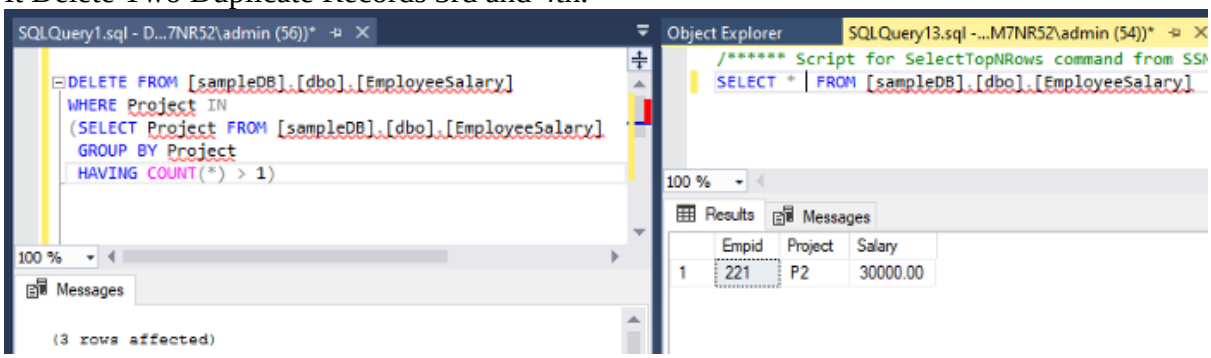
GROUP BY Project)



Original Table.



It Delete Two Duplicate Records 3rd and 4th.



It Delete All Duplicate Records 1st, 3rd and 4th.

Q.10. Write a SQL query to fetch only odd and even rows from the table.

Ans. This can be achieved by using Row_number in SQL server.

Query:

/* fetch ODD rows*/

SELECT E.EmpsId, E.Project, E.Salary

FROM (SELECT *, Row_Number() OVER(ORDER BY EmpsId) AS RowNumber FROM EmployeeSalary) E

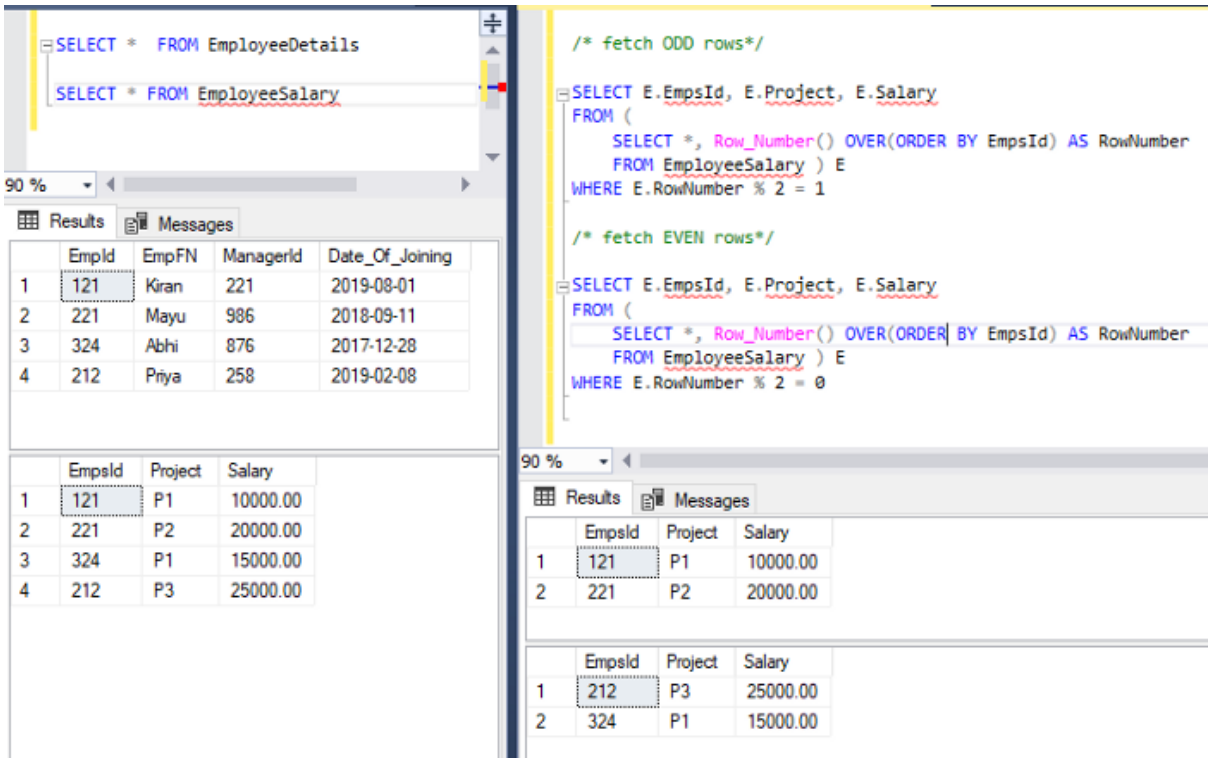
WHERE E.RowNumber % 2 = 1

/* fetch EVEN rows*/

SELECT E.EmpsId, E.Project, E.Salary

FROM (SELECT *, Row_Number() OVER(ORDER BY EmpsId) AS RowNumber FROM EmployeeSalary) E

WHERE E.RowNumber % 2 = 0

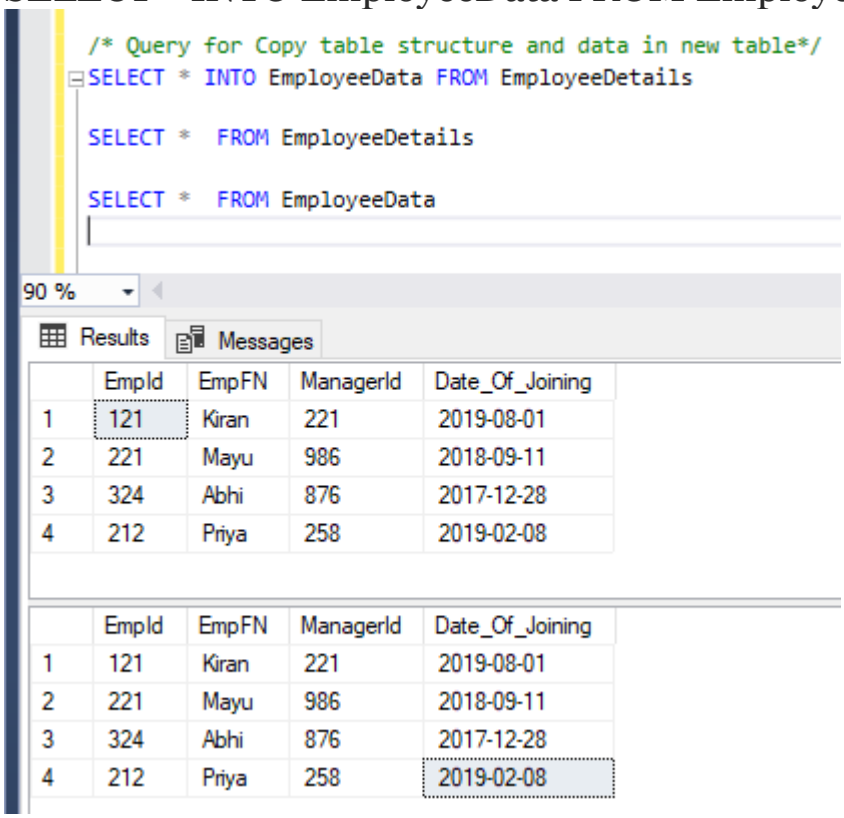


Q.11. Write a SQL query to create a new table with data and structure copied from another table.

Ans. Using SELECT INTO command.

Query:

SELECT * INTO EmployeeData FROM EmployeeDetails



```
/* Query for Copy table structure and data in new table*/
SELECT * INTO EmployeeData FROM EmployeeDetails

SELECT *  FROM EmployeeDetails

SELECT *  FROM EmployeeData
```

90 %

Results | Messages

	EmpId	EmpFN	ManagerId	Date_Of_Joining
1	121	Kiran	221	2019-08-01
2	221	Mayu	986	2018-09-11
3	324	Abhi	876	2017-12-28
4	212	Priya	258	2019-02-08

	EmpId	EmpFN	ManagerId	Date_Of_Joining
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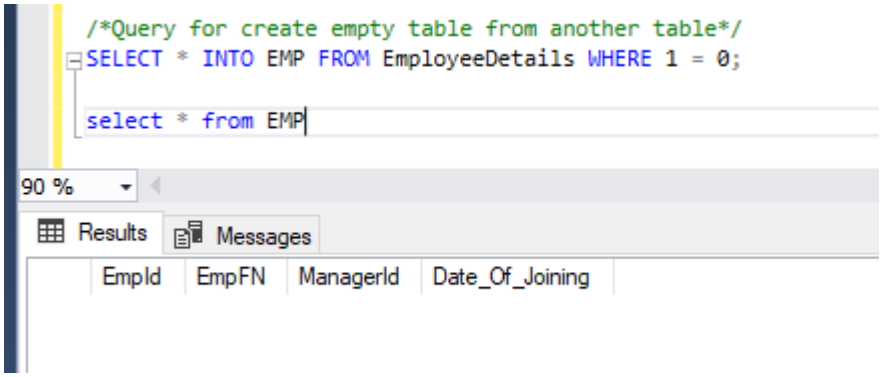
3	324	Abhi	876	2017-12-28
4	212	Priya	258	2019-02-08

Q.12. Write a SQL query to create an empty table with the same structure as some other table.

Ans. Using SELECT INTO command with False 'WHERE' condition.

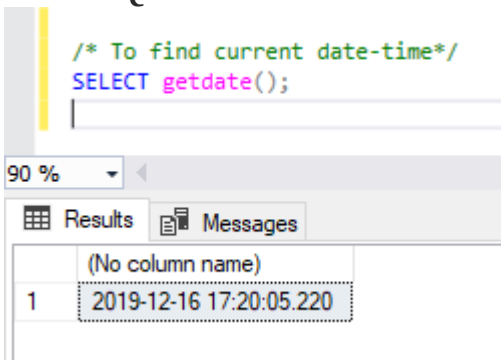
Query:

SELECT * INTO EMP FROM EmployeeDetails WHERE 1 = 0;



Q.13. Write a SQL query to find the current date-time.

Ans: SQL Server-



Q.14. Write a SQL query to fetch top n records?

Ans:In SQL server using TOP command.

Query: SELECT TOP(3) * FROM EmployeeSalary ORDER BY Salary DESC