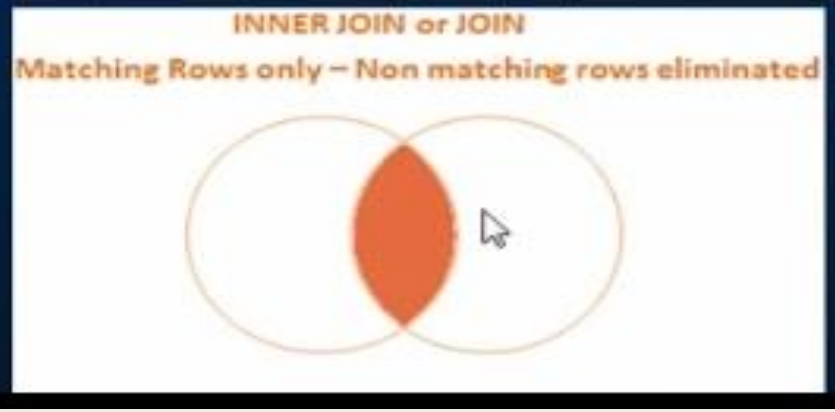
Inner Join or Join

ID	Name	Gender	Salary	DepartmentId
1	Tom	Male	4000	1
2	Pam	Female	3000	3
3	John	Male	3500	1
4	Sam	Male	4500	2
5	Todd	Male	2800	2
6	Ben	Male	7000	1
7	Sara	Female	4800	3
8	Valarie	Female	5500	1
9	James	Male	6500	NULL
10	Russell	Male	8800	NULL

Id	DepartmentName	Location	DepartmentHead
1	IT	London	Rick
2	Payroll	Delhi	Ron
3	HR	New York	Christie
4	Other Department	Sydney	Cindrella



Name	Gender	Salary	DepartmentName
Tom	Male	4000	IT
Pam	Female	3000	HR
John	Male	3500	IT
Sam	Male	4500	Payroll
Todd	Male	2800	Payroll
Ben	Male	7000	IT
Sara	Female	4800	HR
Valarie	Female	5500	IT

INNER JOIN returns only the matching rows between both the tables. Non matching rows are eliminated.

```
SELECT Name, Gender, Salary, DepartmentName
FROM tblEmployee
INNER JOIN tblDepartment
ON tblEmployee.DepartmentId = tblDepartment.Id
```

OR

```
SELECT Name, Gender, Salary, DepartmentName
FROM tblEmployee
JOIN tblDepartment
ON tblEmployee.DepartmentId = tblDepartment.Id
```

```
Select      ColumnList
From        LeftTable
JoinType    RightTable
ON          JoinCondition
```

Left Outer Join or Left Join

ID	Name	Gender	Salary	DepartmentId
1	Tom	Male	4000	1
2	Pam	Female	3000	3
3	John	Male	3500	1
4	Sam	Male	4500	2
5	Todd	Male	2800	2
6	Ben	Male	7000	1
7	Sara	Female	4800	3
8	Valarie	Female	5500	1
9	James	Male	6500	NULL
10	Russell	Male	8800	NULL

Id	DepartmentName	Location	DepartmentHead
1	IT	London	Rick
2	Payroll	Delhi	Ron
3	HR	New York	Christie
4	Other Department	Sydney	Cindrella

LEFT OUTER JOIN or LEFT JOIN

Matching Rows + Non matching rows from the left table

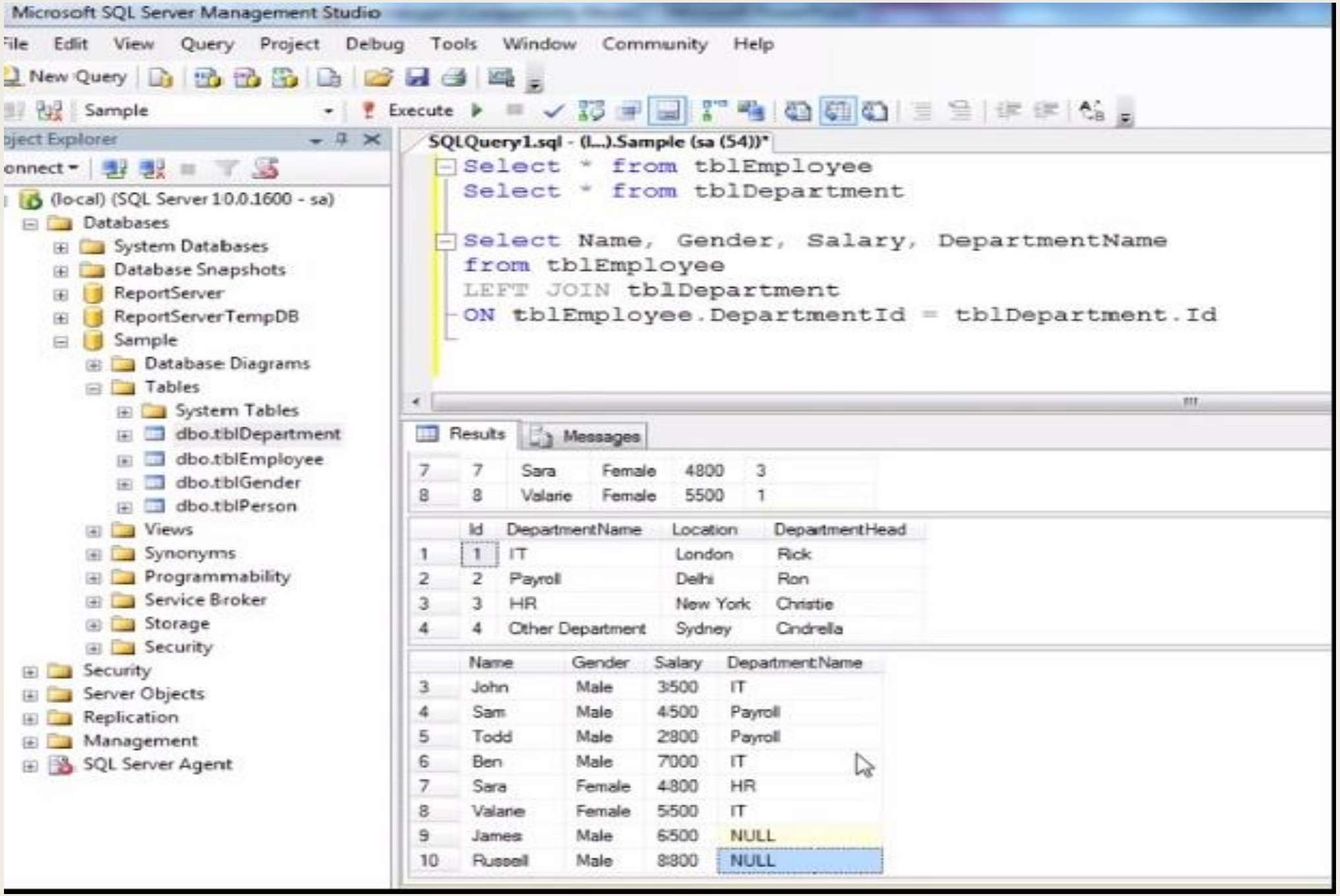
Name	Gender	Salary	DepartmentName
Name	Gender	Salary	DepartmentName
Tom	Male	4000	IT
Pam	Female	3000	HR
John	Male	3500	IT
Sam	Male	4500	Payroll
Todd	Male	2800	Payroll
Ben	Male	7000	IT
Sara	Female	4800	HR
Valarie	Female	5500	IT
James	Male	6500	NULL
Russell	Male	8800	NULL

LEFT JOIN returns all the matching rows + non matching rows from the left table.

```
SELECT Name, Gender, Salary, DepartmentName
FROM tblEmployee
LEFT OUTER JOIN tblDepartment
ON tblEmployee.DepartmentId = tblDepartment.Id
```

OR

```
SELECT Name, Gender, Salary, DepartmentName
FROM tblEmployee
LEFT JOIN tblDepartment
ON tblEmployee.DepartmentId = tblDepartment.Id
```


Microsoft SQL Server Management Studio
File Edit View Query Project Debug Tools Window Community Help
New Query
Sample
Execute
Object Explorer
Connect
(local) (SQL Server 10.0.1600 - sa)
Databases
System Databases
Database Snapshots
ReportServer
ReportServerTempDB
Sample
Database Diagrams
Tables
System Tables
dbo.tblDepartment
dbo.tblEmployee
dbo.tblGender
dbo.tblPerson
Views
Synonyms
Programmability
Service Broker
Storage
Security
Security
Server Objects
Replication
Management
SQL Server Agent
SQLQuery1.sql - (l...).Sample (sa (54))*
Select * from tblEmployee
Select * from tblDepartment
Select Name, Gender, Salary, DepartmentName
from tblEmployee
LEFT JOIN tblDepartment
ON tblEmployee.DepartmentId = tblDepartment.Id
Results
Messages
7 7 Sara Female 4800 3
8 8 Valarie Female 5500 1
Id DepartmentName Location DepartmentHead
1 1 IT London Rick
2 2 Payroll Delhi Ron
3 3 HR New York Christie
4 4 Other Department Sydney Cindrella
Name Gender Salary DepartmentName
3 John Male 3500 IT
4 Sam Male 4500 Payroll
5 Todd Male 2800 Payroll
6 Ben Male 7000 IT
7 Sara Female 4800 HR
8 Valarie Female 5500 IT
9 James Male 6500 NULL
10 Russell Male 8800 NULL

Right Outer Join or Right Join

ID	Name	Gender	Salary	DepartmentId
1	Tom	Male	4000	1
2	Pam	Female	3000	3
3	John	Male	3500	1
4	Sam	Male	4500	2
5	Todd	Male	2800	2
6	Ben	Male	7000	1
7	Sara	Female	4800	3
8	Valarie	Female	5500	1
9	James	Male	6500	NULL
10	Russell	Male	8800	NULL

Id	DepartmentName	Location	DepartmentHead
1	IT	London	Rick
2	Payroll	Delhi	Ron
3	HR	New York	Christie
4	Other Department	Sydney	Cindrella

RIGHT OUTER JOIN or RIGHT JOIN

Matching Rows + Non matching rows from the right table

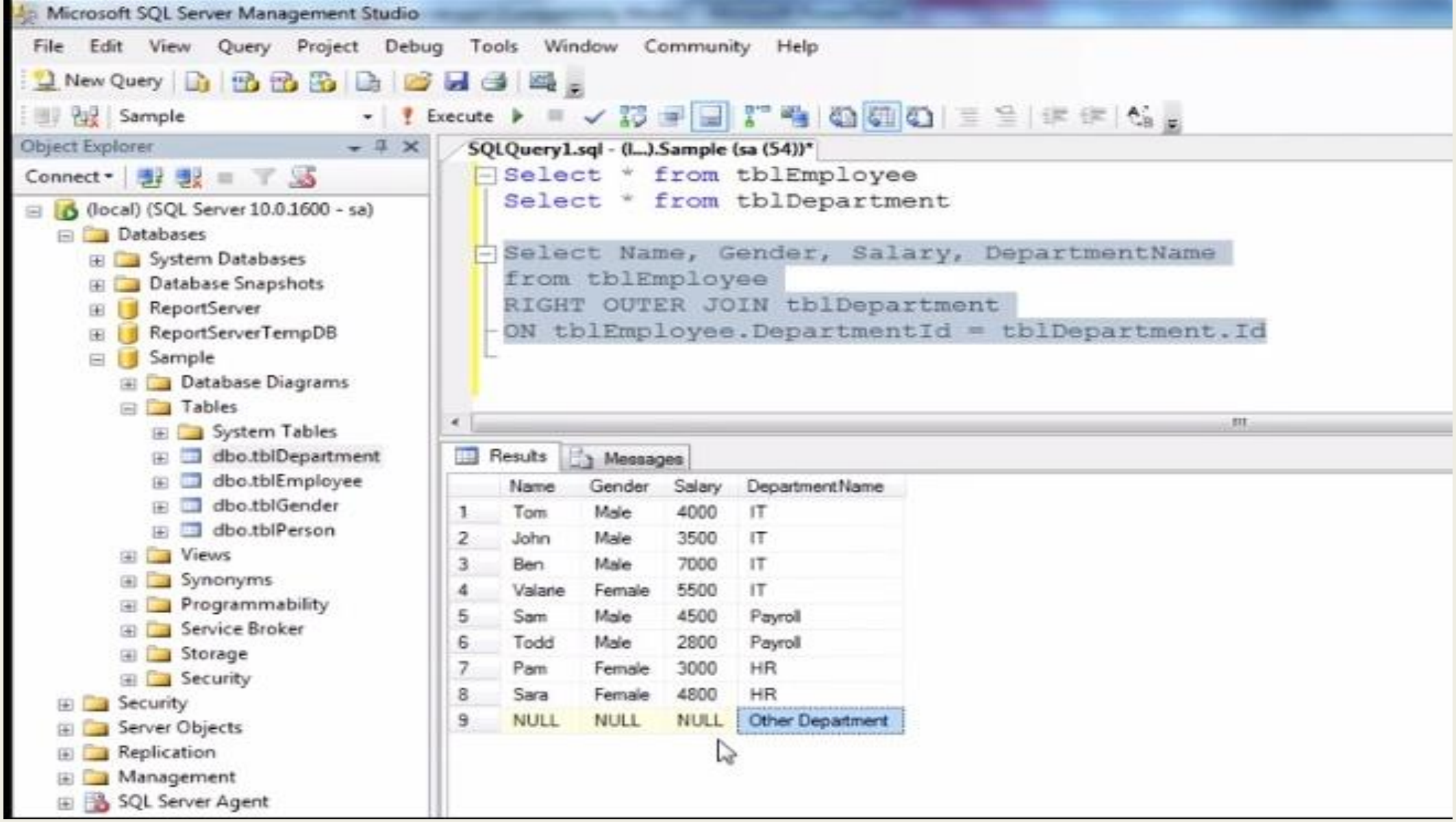
Name	Gender	Salary	DepartmentName
Tom	Male	4000	IT
John	Male	3500	IT
Ben	Male	7000	IT
Valarie	Female	5500	IT
Sam	Male	4500	Payroll
Todd	Male	2800	Payroll
Pam	Female	3000	HR
Sara	Female	4800	HR
NULL	NULL	NULL	Other Department

RIGHT JOIN returns all the matching rows + non matching rows from the right table

```
SELECT Name, Gender, Salary, DepartmentName
FROM tblEmployee
RIGHT OUTER JOIN tblDepartment
ON tblEmployee.DepartmentId = tblDepartment.Id
```

OR

```
SELECT Name, Gender, Salary, DepartmentName
FROM tblEmployee
RIGHT JOIN tblDepartment
ON tblEmployee.DepartmentId = tblDepartment.Id
```


Microsoft SQL Server Management Studio
File Edit View Query Project Debug Tools Window Community Help
New Query
Sample
Execute
Object Explorer
Connect
(local) (SQL Server 10.0.1600 - sa)
Databases
System Databases
Database Snapshots
ReportServer
ReportServerTempDB
Sample
Database Diagrams
Tables
System Tables
dbo.tblDepartment
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dbo.tblGender
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Views
Synonyms
Programmability
Service Broker
Storage
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Security
Server Objects
Replication
Management
SQL Server Agent
SQLQuery1.sql - (l...).Sample (sa (54))*
Select * from tblEmployee
Select * from tblDepartment
Select Name, Gender, Salary, DepartmentName
from tblEmployee
RIGHT OUTER JOIN tblDepartment
ON tblEmployee.DepartmentId = tblDepartment.Id
Results
Messages
Name Gender Salary DepartmentName
1 Tom Male 4000 IT
2 John Male 3500 IT
3 Ben Male 7000 IT
4 Valarie Female 5500 IT
5 Sam Male 4500 Payroll
6 Todd Male 2800 Payroll
7 Pam Female 3000 HR
8 Sara Female 4800 HR
9 NULL NULL NULL Other Department

Full Outer Join or Full Join

ID	Name	Gender	Salary	DepartmentId
1	Tom	Male	4000	1
2	Pam	Female	3000	3
3	John	Male	3500	1
4	Sam	Male	4500	2
5	Todd	Male	2800	2
6	Ben	Male	7000	1
7	Sara	Female	4800	3
8	Valarie	Female	5500	1
9	James	Male	6500	NULL
10	Russell	Male	8800	NULL

Id	DepartmentName	Location	DepartmentHead
1	IT	London	Rick
2	Payroll	Delhi	Ron
3	HR	New York	Christie
4	Other Department	Sydney	Cindrella

FULL OUTER JOIN or FULL JOIN

Matching Rows + Non matching rows from both the tables

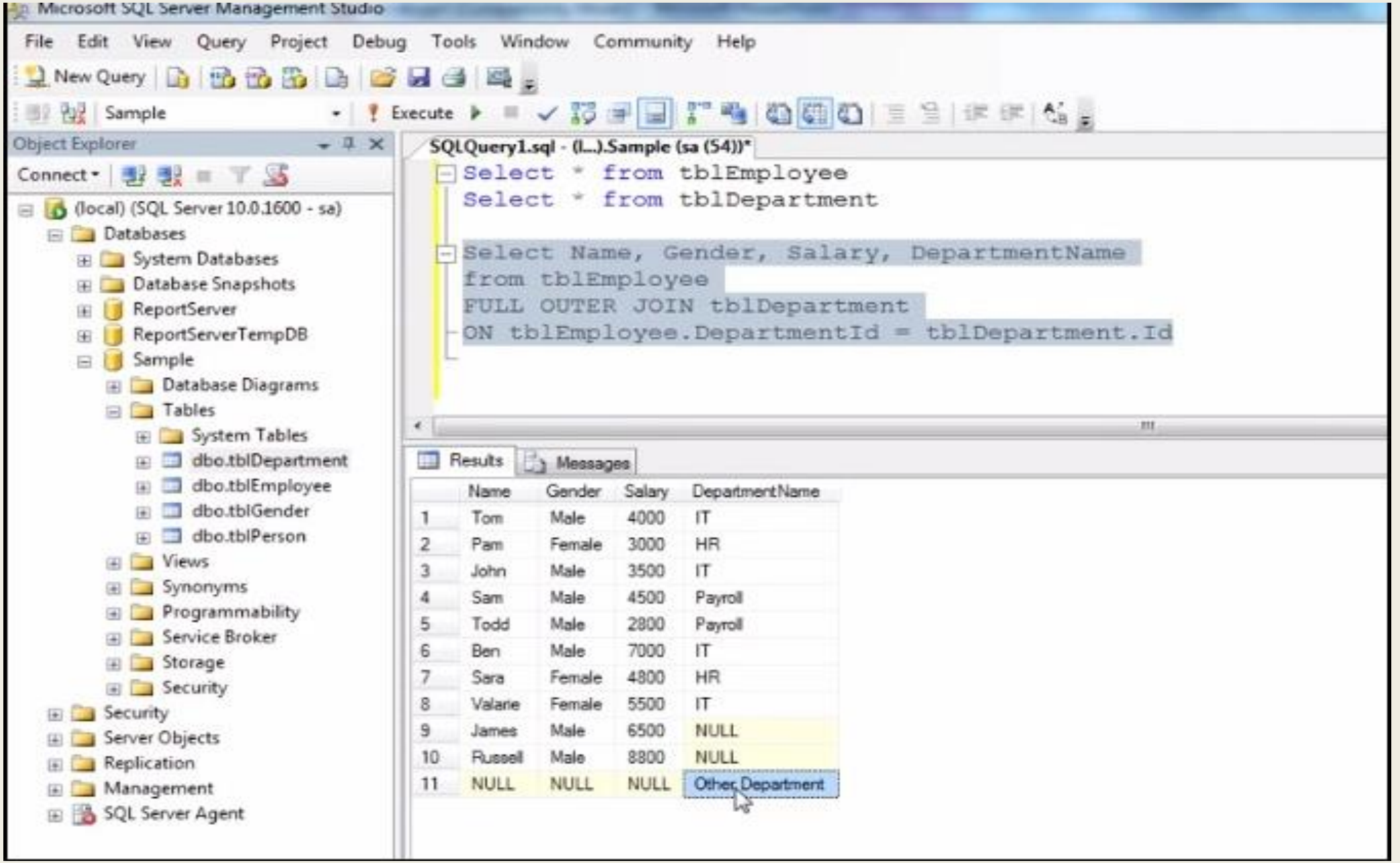
Name	Gender	Salary	DepartmentName
Tom	Male	4000	IT
Pam	Female	3000	HR
John	Male	3500	IT
Sam	Male	4500	Payroll
Todd	Male	2800	Payroll
Ben	Male	7000	IT
Sara	Female	4800	HR
Valarie	Female	5500	IT
James	Male	6500	NULL
Russell	Male	8800	NULL
NULL	NULL	NULL	Other Department

FULL JOIN returns all rows from both the left and right tables, including the non matching rows.

```
SELECT Name, Gender, Salary, DepartmentName
FROM tblEmployee
FULL OUTER JOIN tblDepartment
ON tblEmployee.DepartmentId = tblDepartment.Id
```

OR

```
SELECT Name, Gender, Salary, DepartmentName
FROM tblEmployee
FULL JOIN tblDepartment
ON tblEmployee.DepartmentId = tblDepartment.Id
```


Microsoft SQL Server Management Studio
File Edit View Query Project Debug Tools Window Community Help
New Query
Sample
Execute
Object Explorer
Connect
(local) (SQL Server 10.0.1600 - sa)
Databases
System Databases
Database Snapshots
ReportServer
ReportServerTempDB
Sample
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dbo.tblPerson
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Synonyms
Programmability
Service Broker
Storage
Security
Security
Server Objects
Replication
Management
SQL Server Agent
SQLQuery1.sql - (l...).Sample (sa (54))*
Select * from tblEmployee
Select * from tblDepartment
Select Name, Gender, Salary, DepartmentName
from tblEmployee
FULL OUTER JOIN tblDepartment
ON tblEmployee.DepartmentId = tblDepartment.Id
Results
Messages
Name Gender Salary DepartmentName
1 Tom Male 4000 IT
2 Pam Female 3000 HR
3 John Male 3500 IT
4 Sam Male 4500 Payroll
5 Todd Male 2800 Payroll
6 Ben Male 7000 IT
7 Sara Female 4800 HR
8 Valarie Female 5500 IT
9 James Male 6500 NULL
10 Russell Male 8800 NULL
11 NULL NULL NULL Other Department

EmployeeID	Name	ManagerID
1	Mike	3
2	Rob	1
3	Todd	NULL
4	Ben	1
5	Sam	1

Employee	Manager
Mike	Todd
Rob	Mike
Todd	NULL
Ben	Mike
Sam	Mike

```
-- Left Outer Self Join
SELECT      E.Name AS Employee, M.Name AS Manager
FROM        tblEmployee E
LEFT JOIN   tblEmployee M
ON          E.ManagerId = M.EmployeeId
```

```
-- Inner Self Join
SELECT      E.Name AS Employee, M.Name AS Manager
FROM        tblEmployee E
INNER JOIN tblEmployee M
ON          E.ManagerId = M.EmployeeId
```

```
-- Cross Self Join
SELECT      E.Name AS Employee, M.Name AS Manager
FROM        tblEmployee E
CROSS JOIN tblEmployee M
```

Joining a table with itself is called as SELF JOIN.

SELF JOIN is not a different type of JOIN.

It can be classified under any type of JOIN:

1. INNER,
2. OUTER (Left, Right, Full)
3. CROSS Joins.

How cross joining happend into two tables

```
SELECT foods.item_name,foods.item_unit,
company.company_name,company.company_city
FROM foods
CROSS JOIN company;
```

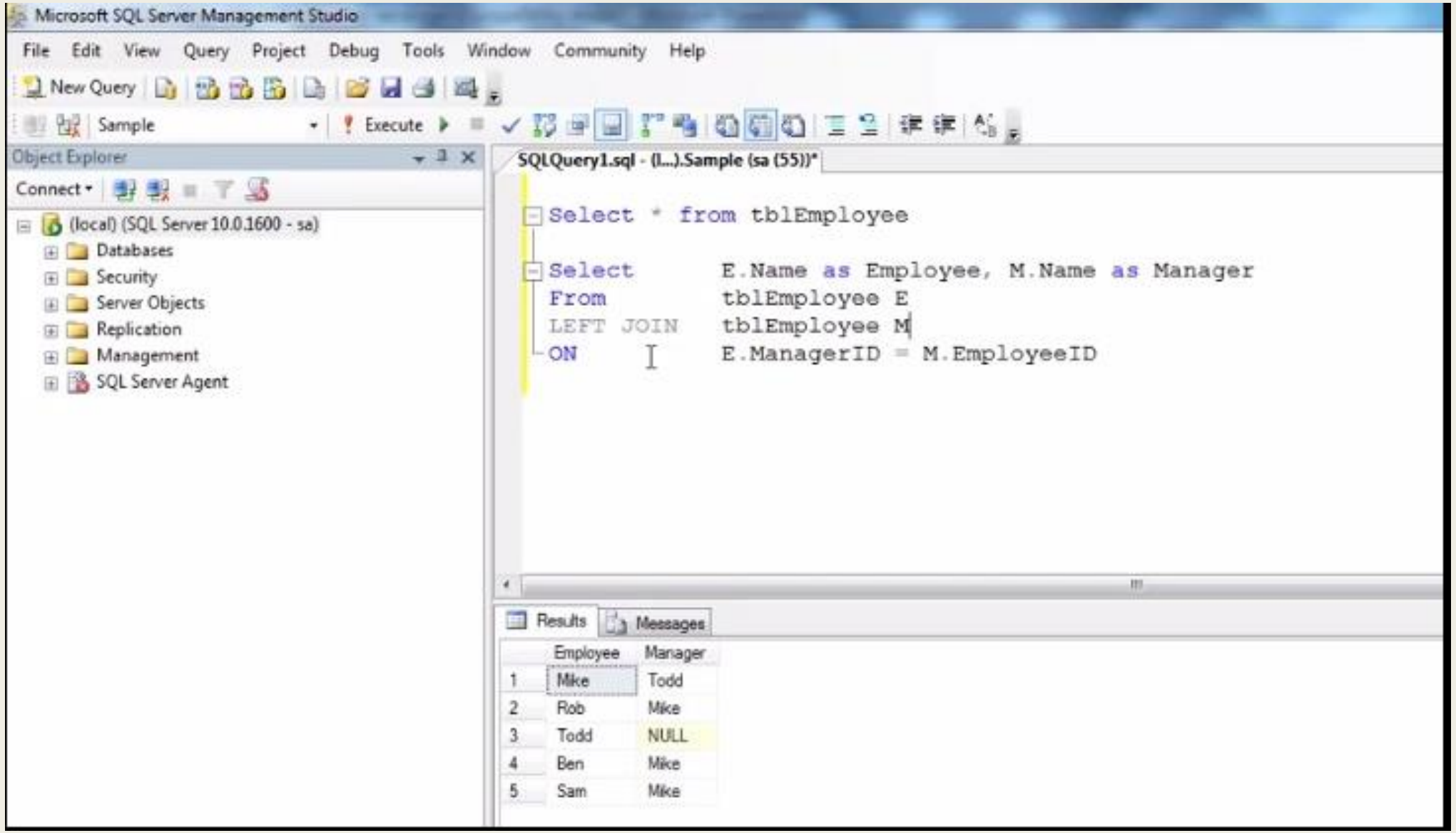
Co.ID	Co.Name	Co.City
18	Order All	Boston
15	Jack Hill Ltd	London
16	Akas Foods	Delhi
17	Foodies.	London
19	sip-n-Bite.	New York

Company

I.ID	ITEM_NAME	I.Unit	Co.ID
1	Chex Mix	Pcs	16
6	Cheez-It	Pcs	15
2	BN Biscuit	Pcs	15
3	Mighty Munch	Pcs	17
4	Pot Rice	Pcs	15
5	Jaffa Cakes	Pcs	18
7	Salt n Shake	Pcs	-

Foods

ITEM_NAME	ITEM_UNIT	COMPANY_NAME	COMPANY_CITY
Chex Mix	Pcs	Order All	Boston
Cheez-It	Pcs	Order All	Boston
BN Biscuit	Pcs	Order All	Boston
Mighty Munch	Pcs	Order All	Boston
Pot Rice	Pcs	Order All	Boston
Jaffa Cakes	Pcs	Order All	Boston
Salt n Shake	Pcs	Order All	Boston
Chex Mix	Pcs	Jack Hill Ltd	London
Cheez-It	Pcs	Jack Hill Ltd	London
BN Biscuit	Pcs	Jack Hill Ltd	London
Mighty Munch	Pcs	Jack Hill Ltd	London
Pot Rice	Pcs	Jack Hill Ltd	London
Jaffa Cakes	Pcs	Jack Hill Ltd	London
Salt n Shake	Pcs	Jack Hill Ltd	London
Chex Mix	Pcs	Akas Foods	Delhi
Cheez-It	Pcs	Akas Foods	Delhi
BN Biscuit	Pcs	Akas Foods	Delhi
Mighty Munch	Pcs	Akas Foods	Delhi
Pot Rice	Pcs	Akas Foods	Delhi
Jaffa Cakes	Pcs	Akas Foods	Delhi
Salt n Shake	Pcs	Akas Foods	Delhi
Chex Mix	Pcs	Foodies.	London
.....			
.....			


Microsoft SQL Server Management Studio
File Edit View Query Project Debug Tools Window Community Help
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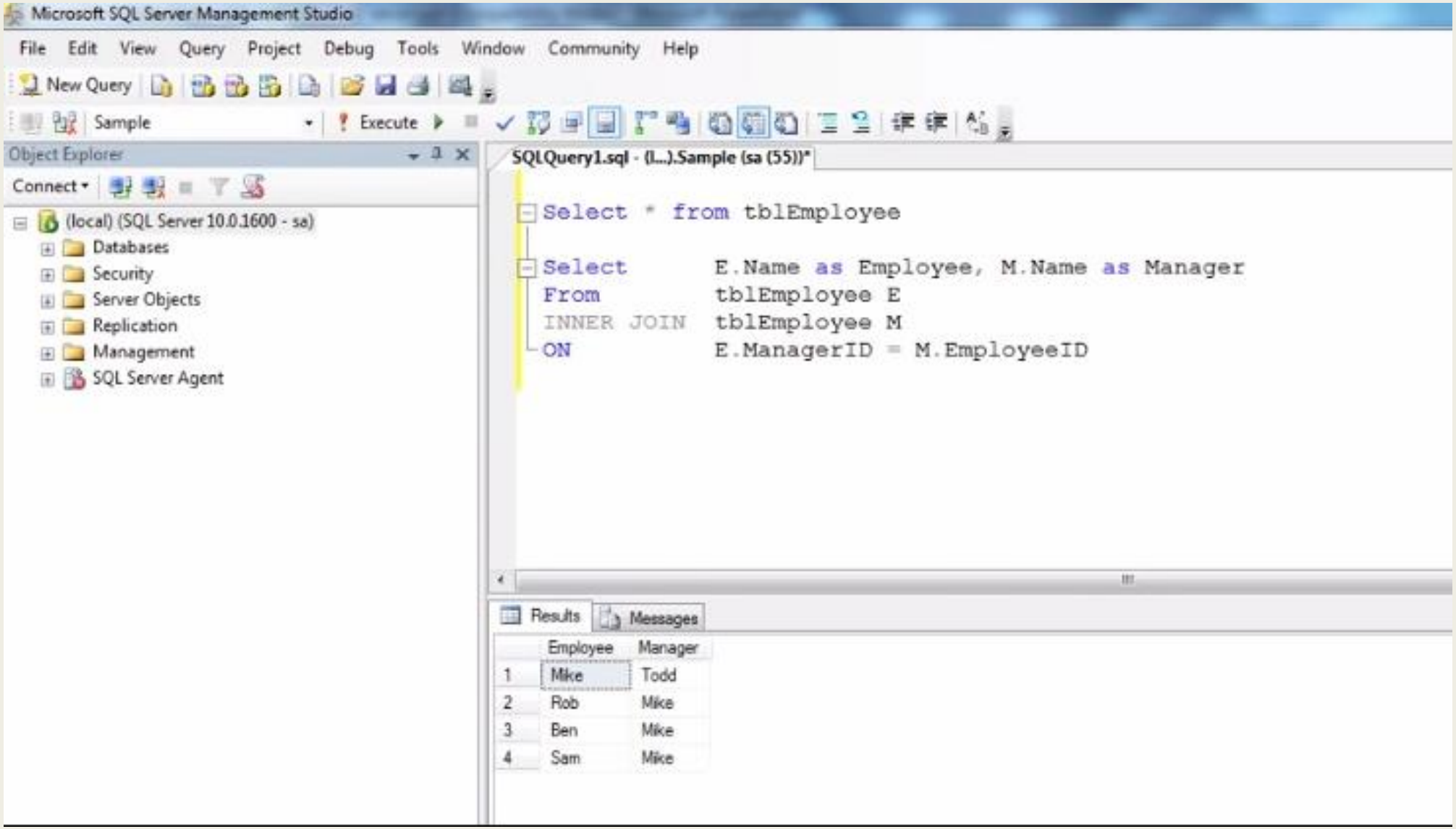
Sample
Execute
Object Explorer
Connect
(local) (SQL Server 10.0.1600 - sa)
Databases
Security
Server Objects
Replication
Management
SQL Server Agent
SQLQuery1.sql - (l...).Sample (sa (55))*
Select * from tblEmployee
Select E.Name as Employee, M.Name as Manager
From tblEmployee E
LEFT JOIN tblEmployee M
ON E.ManagerID = M.EmployeeID
Results
Messages
Employee Manager
1 Mike Todd
2 Rob Mike
3 Todd NULL
4 Ben Mike
5 Sam Mike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Connect
(local) (SQL Server 10.0.1600 - sa)
Databases
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Server Objects
Replication
Management
SQL Server Agent
SQLQuery1.sql - (l...).Sample (sa (55))*
Select * from tblEmployee
Select E.Name as Employee, M.Name as Manager
From tblEmployee E
INNER JOIN tblEmployee M
ON E.ManagerID = M.EmployeeID
Results
Messages
Employee Manager
1 Mike Todd
2 Rob Mike
3 Ben Mike
4 Sam Mike