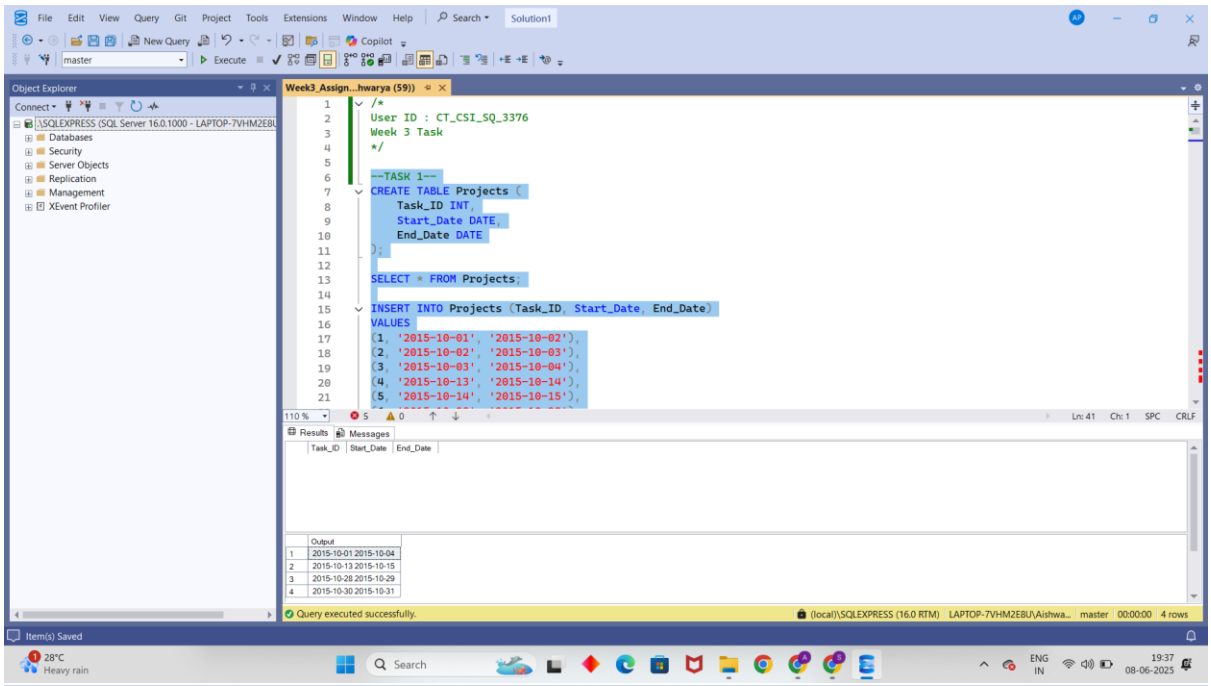
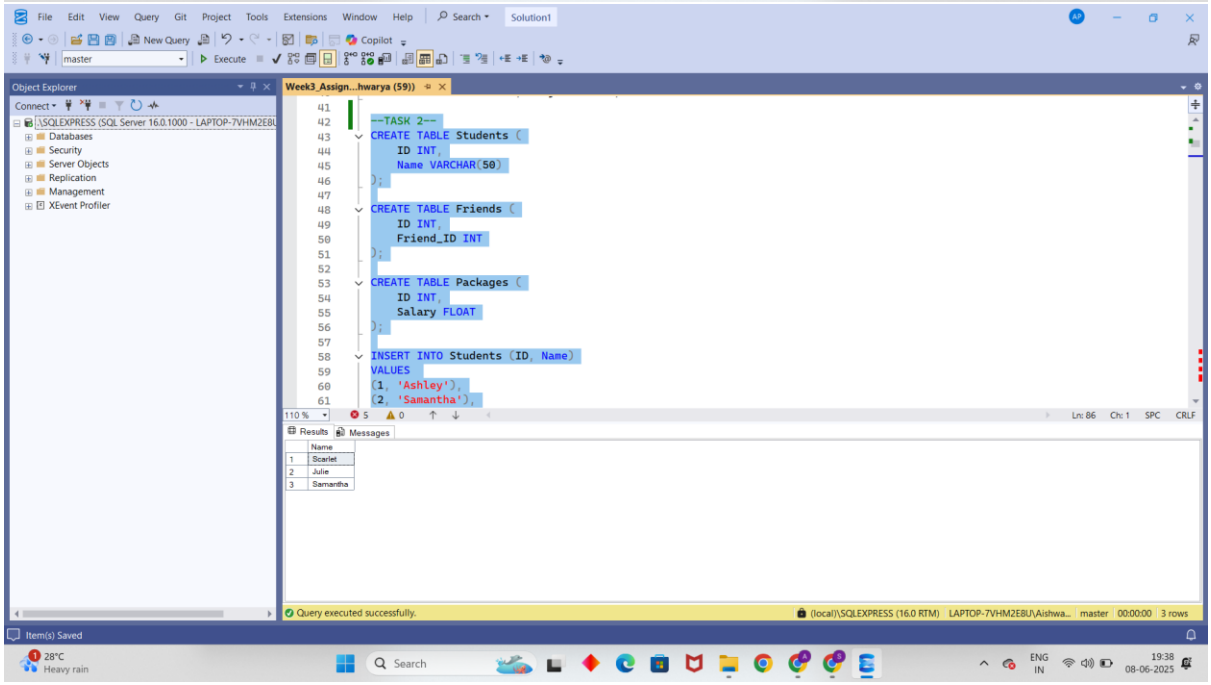
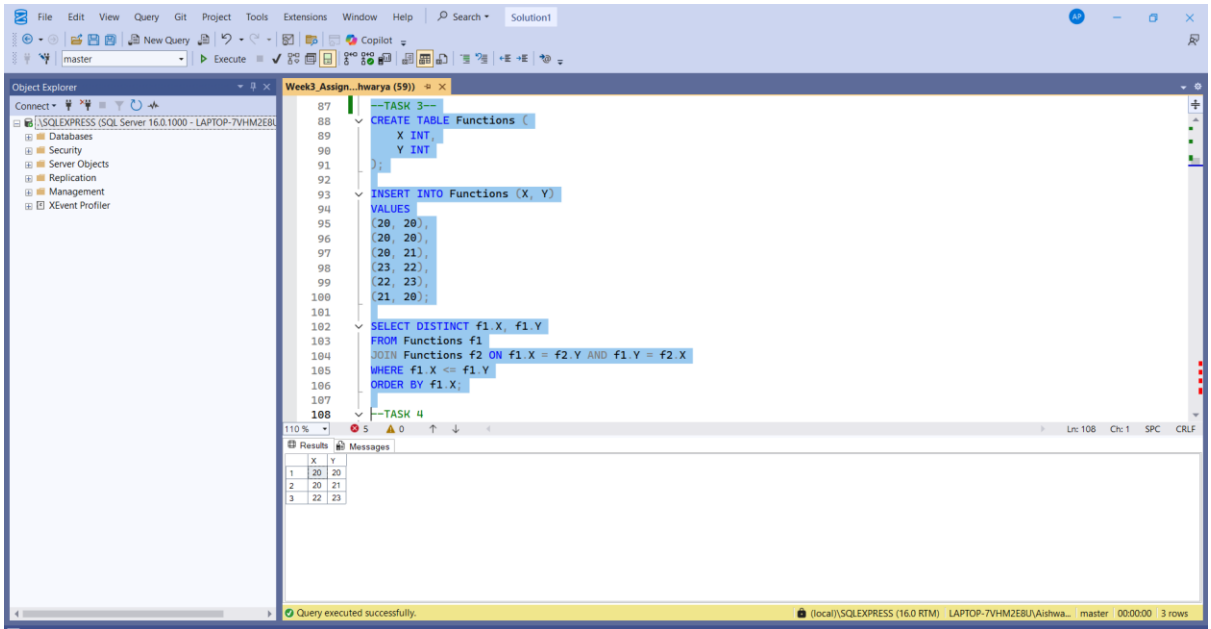
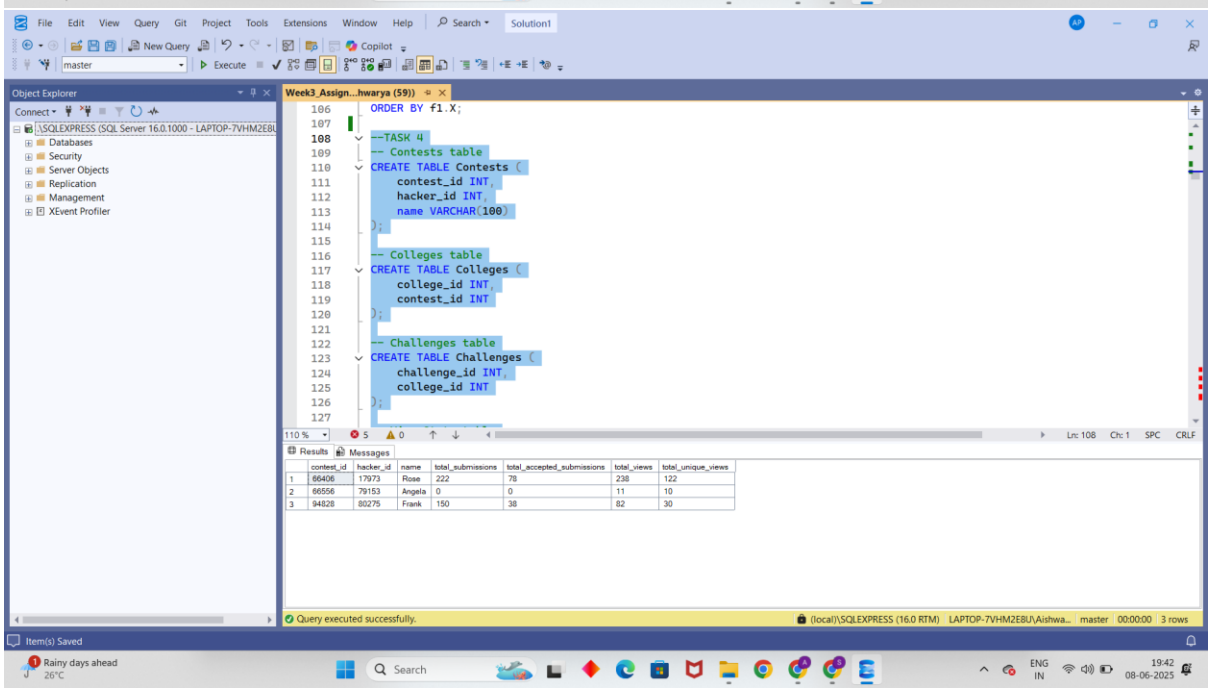
Week3 Assignment Output Screenshots

User ID : CT_CSI_SQ_3376






File Edit View Query Git Project Tools Extensions Window Help Search Solution1
New Query Copilot
master Execute
Object Explorer
Connect
.\SQLEXPRESS (SQL Server 16.0.1000 - LAPTOP-7VHM2E8L
Databases
Security
Server Objects
Replication
Management
XEvent Profiler
Week3_Assign...hwarya (59))
87 --TASK 3--
88 CREATE TABLE Functions (
89 X INT,
90 Y INT
91);
92
93 INSERT INTO Functions (X, Y)
94 VALUES
95 (20, 20),
96 (20, 20),
97 (20, 21),
98 (23, 22),
99 (22, 23),
100 (21, 20);
101
102 SELECT DISTINCT f1.X, f1.Y
103 FROM Functions f1
104 JOIN Functions f2 ON f1.X = f2.Y AND f1.Y = f2.X
105 WHERE f1.X <= f1.Y
106 ORDER BY f1.X;
107
108 --TASK 4
110 % 5 0 Ln: 108 Ch: 1 SPC CRLF
Results Messages
X Y
1 20 20
2 20 21
3 22 23
Query executed successfully.
(local)\SQLEXPRESS (16.0 RTM) LAPTOP-7VHM2E8L\Aishwa... master 00:00:00 3 rows
Item(s) Saved
26°C Heavy rain
Search
ENG IN
19:40 08-06-2025


File Edit View Query Git Project Tools Extensions Window Help Search Solution1
New Query Copilot
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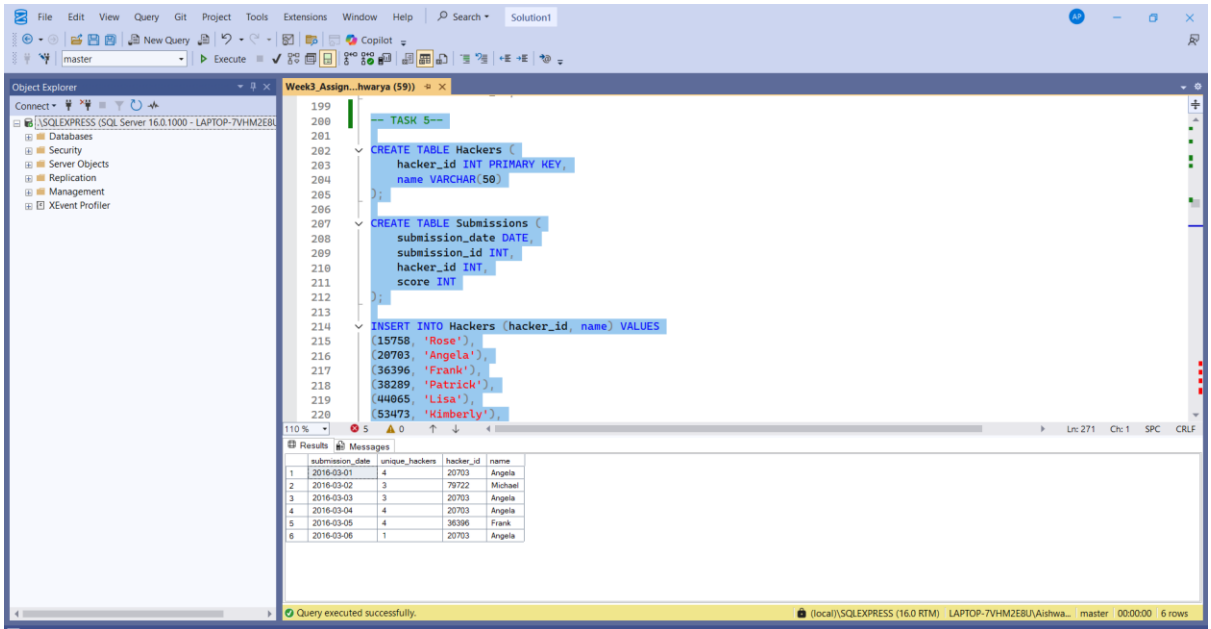
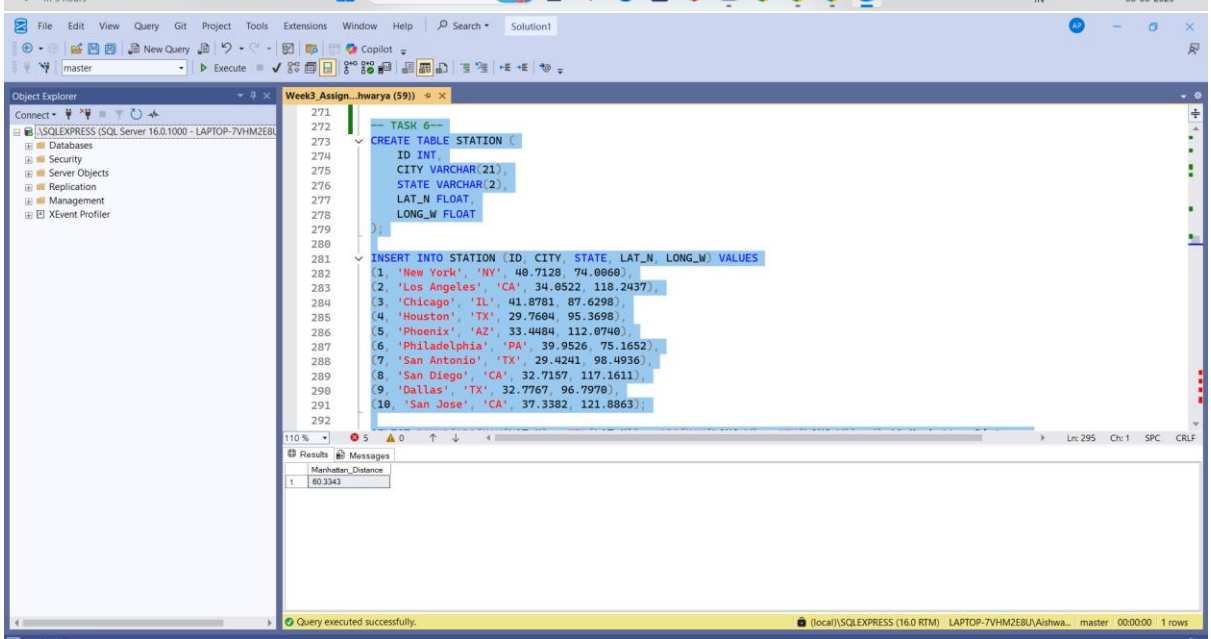
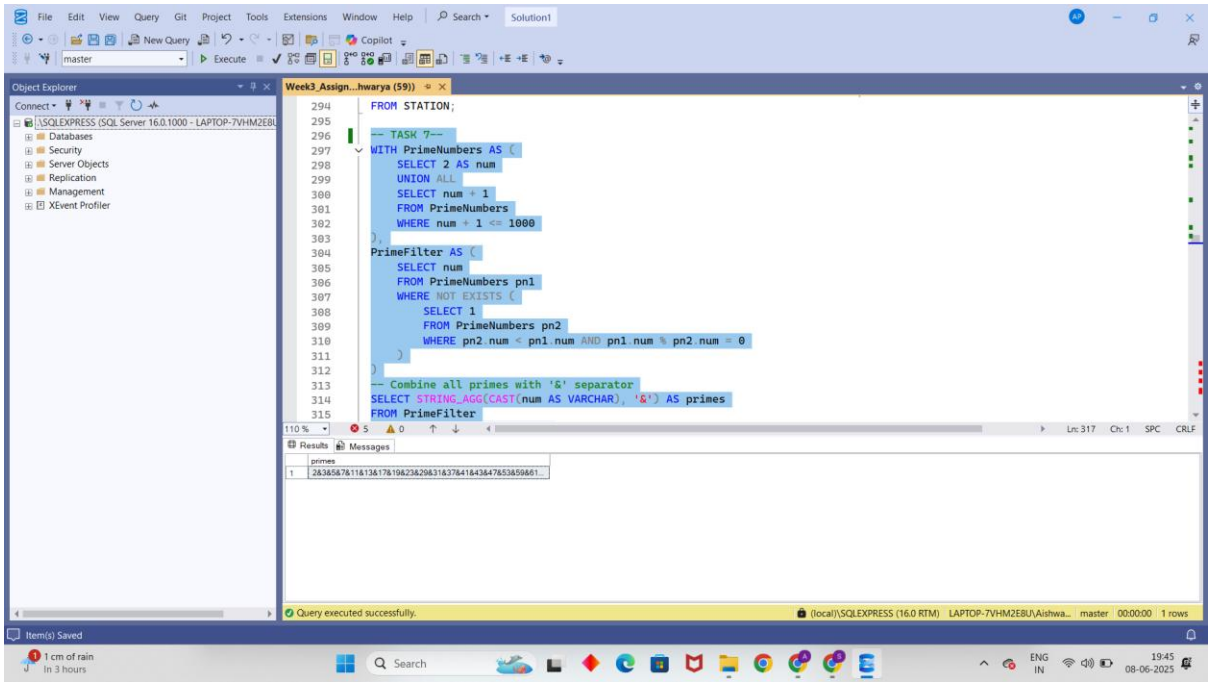
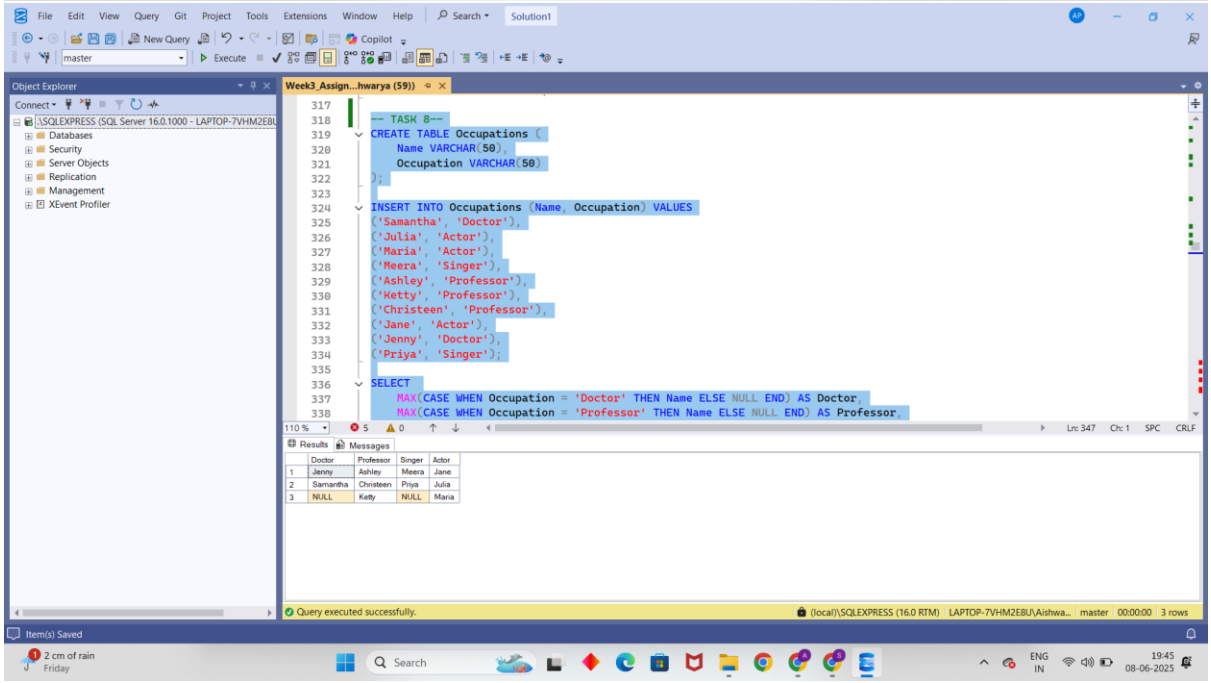
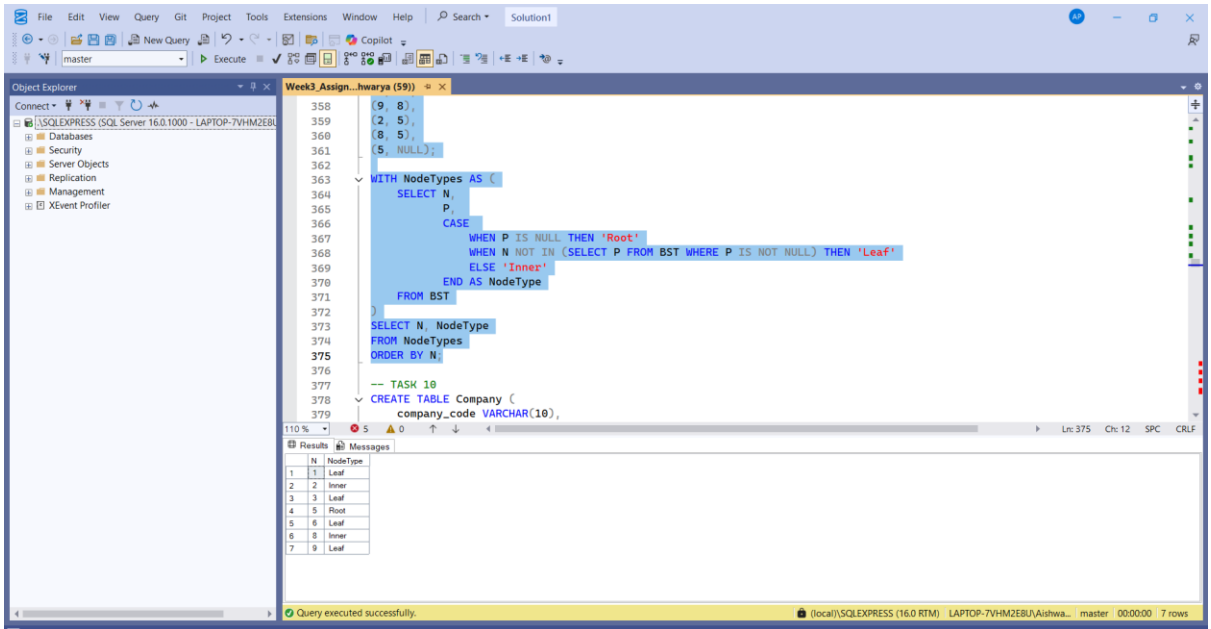
XEvent Profiler
Week3_Assign...hwarya (59))
106 ORDER BY f1.X;
107
108 --TASK 4
109 -- Contests table
110 CREATE TABLE Contests (
111 contest_id INT,
112 hacker_id INT,
113 name VARCHAR(100)
114);
115
116 -- Colleges table
117 CREATE TABLE Colleges (
118 college_id INT,
119 contest_id INT
120);
121
122 -- Challenges table
123 CREATE TABLE Challenges (
124 challenge_id INT,
125 college_id INT
126);
127
110 % 5 0 Ln: 108 Ch: 1 SPC CRLF
Results Messages
contest_id hacker_id name total_submissions total_accepted_submissions total_views total_unique_views
1 66406 17973 Rose 222 78 238 122
2 66556 79153 Angela 0 0 11 10
3 94828 80275 Frank 150 38 82 30
Query executed successfully.
(local)\SQLEXPRESS (16.0 RTM) LAPTOP-7VHM2E8L\Aishwa... master 00:00:00 3 rows
Item(s) Saved
Rainy days ahead 26°C
Search
ENG IN
19:42 08-06-2025


-- TASK 5--
CREATE TABLE Hackers (
hacker_id INT PRIMARY KEY,
name VARCHAR(50)
);
CREATE TABLE Submissions (
submission_date DATE,
submission_id INT,
hacker_id INT,
score INT
);
INSERT INTO Hackers (hacker_id, name) VALUES
(15758, 'Rose'),
(20703, 'Angela'),
(36396, 'Frank'),
(38289, 'Patrick'),
(44065, 'Lisa'),
(53473, 'Kimberly');
Results
Messages
submission_date unique_hackers hacker_id name
1 2016-03-01 4 20703 Angela
2 2016-03-02 3 79722 Michael
3 2016-03-03 3 20703 Angela
4 2016-03-04 4 20703 Angela
5 2016-03-05 4 36396 Frank
6 2016-03-06 1 20703 Angela
Query executed successfully.


-- TASK 6--
CREATE TABLE STATION (
ID INT,
CITY VARCHAR(21),
STATE VARCHAR(2),
LAT_N FLOAT,
LONG_W FLOAT
);
INSERT INTO STATION (ID, CITY, STATE, LAT_N, LONG_W) VALUES
(1, 'New York', 'NY', 40.7128, 74.0060),
(2, 'Los Angeles', 'CA', 34.0522, 118.2437),
(3, 'Chicago', 'IL', 41.8781, 87.6298),
(4, 'Houston', 'TX', 29.7604, 95.3698),
(5, 'Phoenix', 'AZ', 33.4484, 112.0740),
(6, 'Philadelphia', 'PA', 39.9526, 75.1652),
(7, 'San Antonio', 'TX', 29.4241, 98.4936),
(8, 'San Diego', 'CA', 32.7157, 117.1611),
(9, 'Dallas', 'TX', 32.7767, 96.7970),
(10, 'San Jose', 'CA', 37.3382, 121.8863);
Results
Messages
Manhattan_Distance
1 60.3343
Query executed successfully.


FROM STATION;
-- TASK 7--
WITH PrimeNumbers AS (
SELECT 2 AS num
UNION ALL
SELECT num + 1
FROM PrimeNumbers
WHERE num + 1 <= 1000
),
PrimeFilter AS (
SELECT num
FROM PrimeNumbers pn1
WHERE NOT EXISTS (
SELECT 1
FROM PrimeNumbers pn2
WHERE pn2.num < pn1.num AND pn1.num % pn2.num = 0
)
)
-- Combine all primes with '&' separator
SELECT STRING_AGG(CAST(num AS VARCHAR), '&') AS primes
FROM PrimeFilter
Query executed successfully.


-- TASK 8--
CREATE TABLE Occupations (
Name VARCHAR(50),
Occupation VARCHAR(50)
);
INSERT INTO Occupations (Name, Occupation) VALUES
('Samantha', 'Doctor'),
('Julia', 'Actor'),
('Maria', 'Actor'),
('Meera', 'Singer'),
('Ashley', 'Professor'),
('Ketty', 'Professor'),
('Christeen', 'Professor'),
('Jane', 'Actor'),
('Jenny', 'Doctor'),
('Priya', 'Singer');
SELECT
MAX(CASE WHEN Occupation = 'Doctor' THEN Name ELSE NULL END) AS Doctor,
MAX(CASE WHEN Occupation = 'Professor' THEN Name ELSE NULL END) AS Professor,
Query executed successfully.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New Query Copilot
master Execute
Object Explorer
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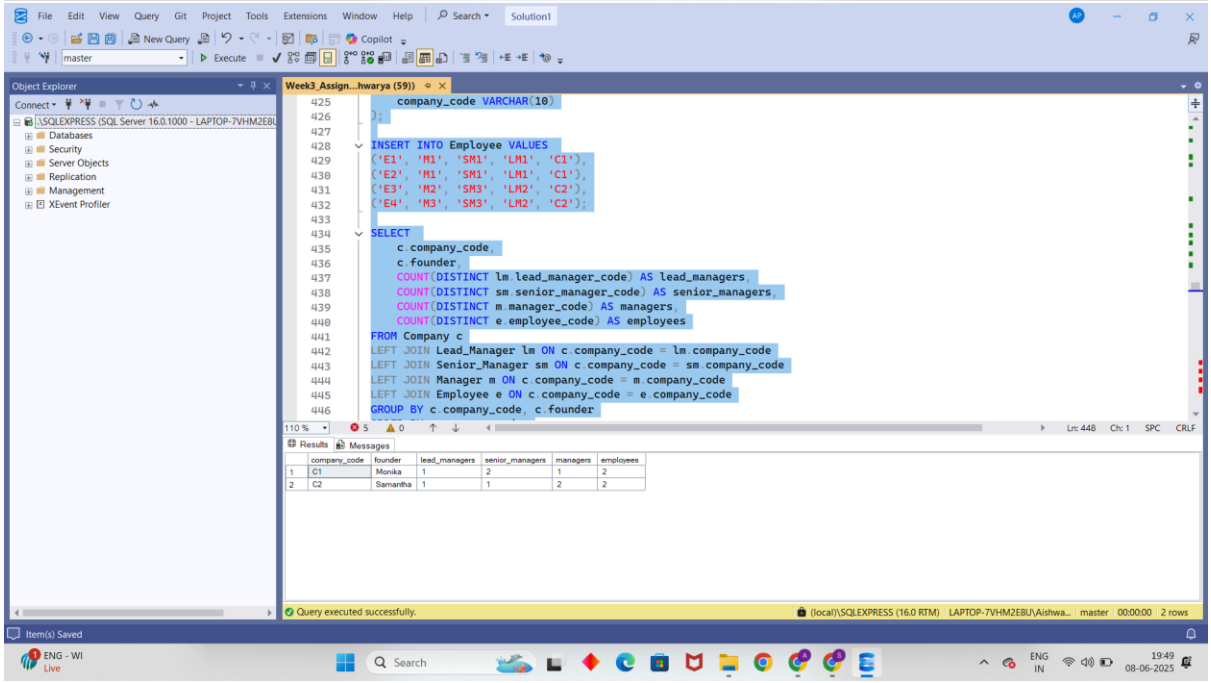
Week3_Assign...hwarya (59))
(9, 8),
(2, 5),
(8, 5),
(5, NULL);
WITH NodeTypes AS (
SELECT N,
P,
CASE
WHEN P IS NULL THEN 'Root'
WHEN N NOT IN (SELECT P FROM BST WHERE P IS NOT NULL) THEN 'Leaf'
ELSE 'Inner'
END AS NodeType
FROM BST
)
SELECT N, NodeType
FROM NodeTypes
ORDER BY N;
-- TASK 10
CREATE TABLE Company (
company_code VARCHAR(10),
Ln: 375 Ch: 12 SPC CRLF
Results Messages
N NodeType
1 1 Leaf
2 2 Inner
3 3 Leaf
4 5 Root
5 6 Leaf
6 8 Inner
7 9 Leaf
Query executed successfully.
(local)\SQLEXPRESS (16.0 RTM) LAPTOP-7VHM2E8L\Aishwa... master 00:00:00 7 rows
Item(s) Saved
ENG - WI Live
Search
ENG IN 19:47 08-06-2025


File Edit View Query Git Project Tools Extensions Window Help Search Solution1
New Query Copilot
master Execute
Object Explorer
Connect
.\SQLEXPRESS (SQL Server 16.0.1000 - LAPTOP-7VHM2E8L
Databases
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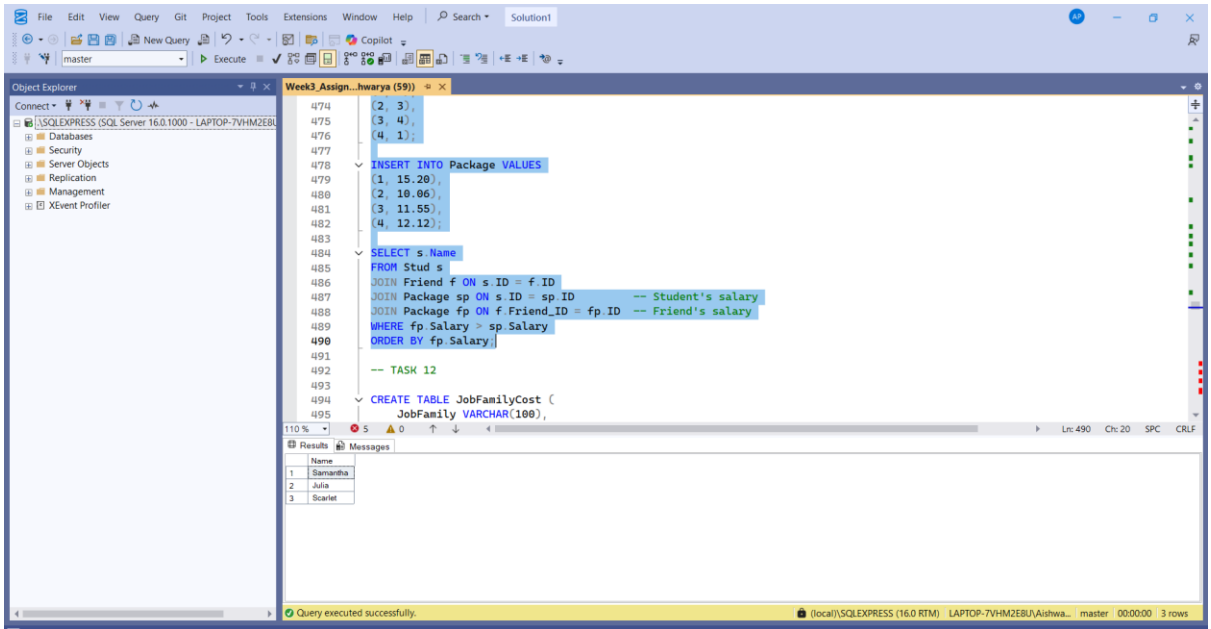
XEvent Profiler
Week3_Assign...hwarya (59))
company_code VARCHAR(10)
);
INSERT INTO Employee VALUES
('E1', 'M1', 'SM1', 'LM1', 'C1'),
('E2', 'M1', 'SM1', 'LM1', 'C1'),
('E3', 'M2', 'SM3', 'LM2', 'C2'),
('E4', 'M3', 'SM3', 'LM2', 'C2');
SELECT
c.company_code,
c.founder,
COUNT(DISTINCT lm.lead_manager_code) AS lead_managers,
COUNT(DISTINCT sm.senior_manager_code) AS senior_managers,
COUNT(DISTINCT m.manager_code) AS managers,
COUNT(DISTINCT e.employee_code) AS employees
FROM Company c
LEFT JOIN Lead_Manager lm ON c.company_code = lm.company_code
LEFT JOIN Senior_Manager sm ON c.company_code = sm.company_code
LEFT JOIN Manager m ON c.company_code = m.company_code
LEFT JOIN Employee e ON c.company_code = e.company_code
GROUP BY c.company_code, c.founder
Ln: 448 Ch: 1 SPC CRLF
Results Messages
company_code founder lead_managers senior_managers managers employees
1 C1 Monika 1 2 1 2
2 C2 Samantha 1 1 2 2
Query executed successfully.
(local)\SQLEXPRESS (16.0 RTM) LAPTOP-7VHM2E8L\Aishwa... master 00:00:00 2 rows
Item(s) Saved
ENG - WI Live
Search
ENG IN 19:49 08-06-2025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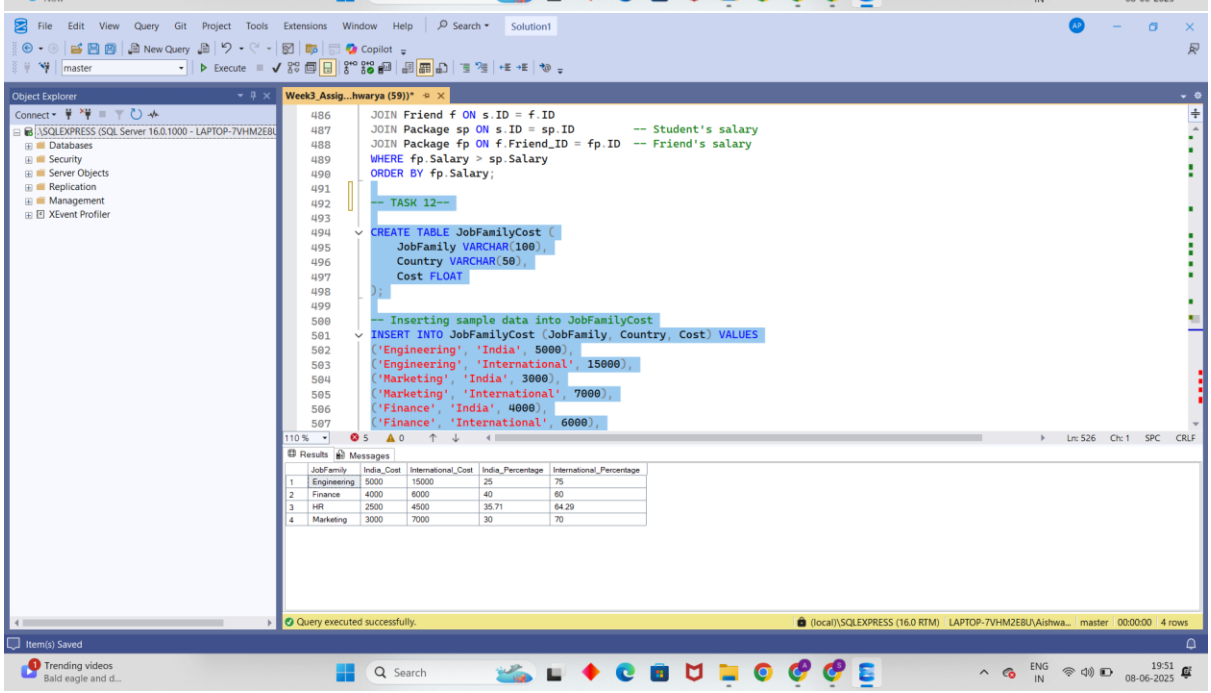
Week3_Assign...hwarya (59))
474 (2, 3),
475 (3, 4),
476 (4, 1);
477
478 INSERT INTO Package VALUES
479 (1, 15.20),
480 (2, 10.06),
481 (3, 11.55),
482 (4, 12.12);
483
484 SELECT s.Name
485 FROM Stud s
486 JOIN Friend f ON s.ID = f.ID
487 JOIN Package sp ON s.ID = sp.ID -- Student's salary
488 JOIN Package fp ON f.Friend_ID = fp.ID -- Friend's salary
489 WHERE fp.Salary > sp.Salary
490 ORDER BY fp.Salary;
491
492 -- TASK 12
493
494 CREATE TABLE JobFamilyCost (
495 JobFamily VARCHAR(100),
110 %
Ln: 490 Ch: 20 SPC CRLF
Results Messages
Name
1 Samantha
2 Julia
3 Scarlet
Query executed successfully.
(local)\SQLEXPRESS (16.0 RTM) LAPTOP-7VHM2E8L\Aishwa... master 00:00:00 3 rows
Item(s) Saved
Very humid
Now
Search
ENG
IN
19:50
08-06-2025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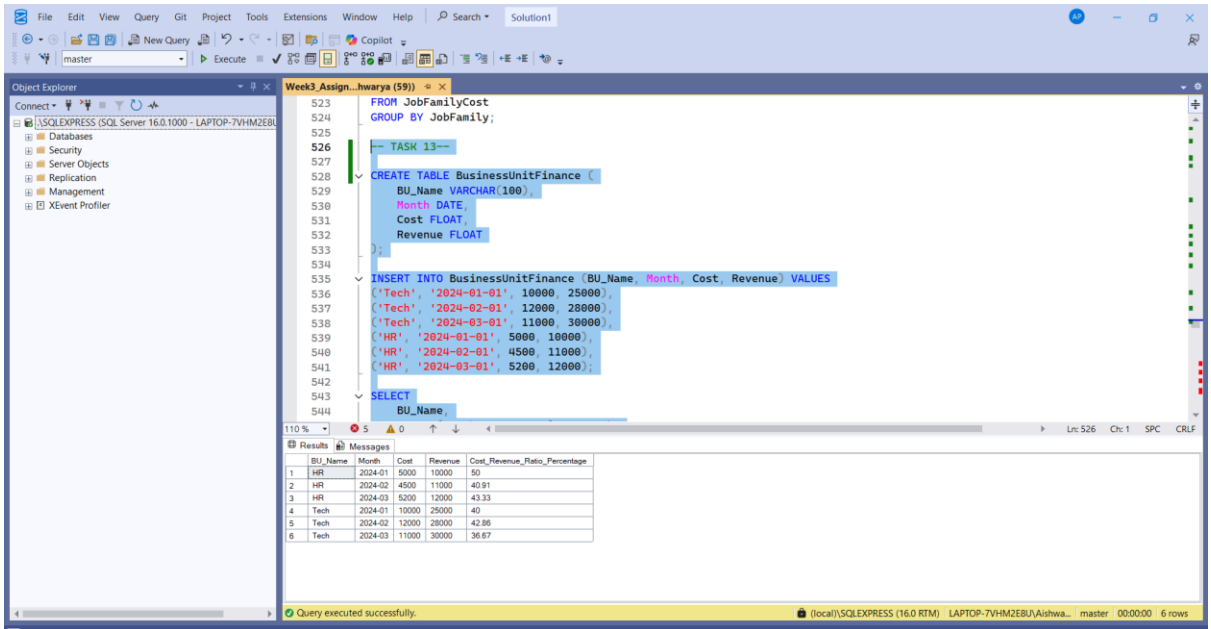
Week3_Assig...hwarya (59))*
486 JOIN Friend f ON s.ID = f.ID
487 JOIN Package sp ON s.ID = sp.ID -- Student's salary
488 JOIN Package fp ON f.Friend_ID = fp.ID -- Friend's salary
489 WHERE fp.Salary > sp.Salary
490 ORDER BY fp.Salary;
491
492 -- TASK 12--
493
494 CREATE TABLE JobFamilyCost (
495 JobFamily VARCHAR(100),
496 Country VARCHAR(50),
497 Cost FLOAT
498);
499
500 -- Inserting sample data into JobFamilyCost
501 INSERT INTO JobFamilyCost (JobFamily, Country, Cost) VALUES
502 ('Engineering', 'India', 5000),
503 ('Engineering', 'International', 15000),
504 ('Marketing', 'India', 3000),
505 ('Marketing', 'International', 7000),
506 ('Finance', 'India', 4000),
507 ('Finance', 'International', 6000),
110 %
Ln: 526 Ch: 1 SPC CRLF
Results Messages
JobFamily India_Cost International_Cost India_Percentage International_Percentage
1 Engineering 5000 15000 25 75
2 Finance 4000 6000 40 60
3 HR 2500 4500 35.71 64.29
4 Marketing 3000 7000 30 70
Query executed successfully.
(local)\SQLEXPRESS (16.0 RTM) LAPTOP-7VHM2E8L\Aishwa... master 00:00:00 4 rows
Item(s) Saved
Trending videos
Bald eagle and d...
Search
ENG
IN
19:51
08-06-2025


File Edit View Query Git Project Tools Extensions Window Help Search Solution1
New Query Copilot
master Execute
Object Explorer
Connect
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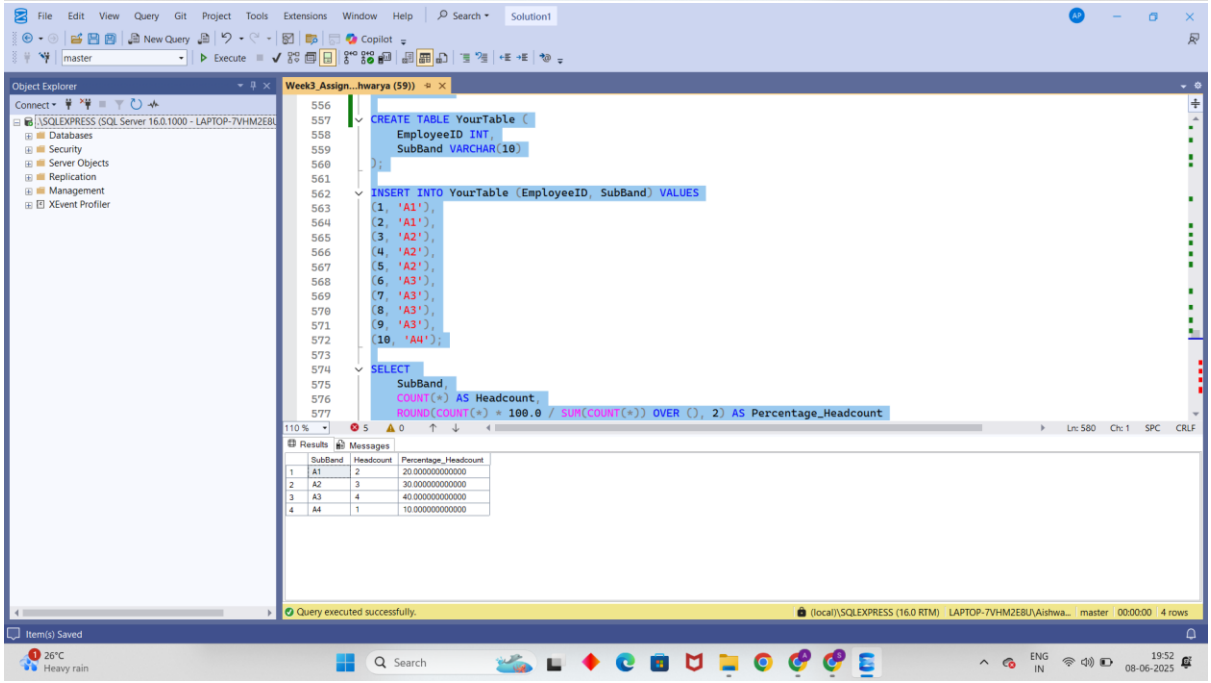
Week3_Assign...hwarya (59))
FROM JobFamilyCost
GROUP BY JobFamily;
-- TASK 13--
CREATE TABLE BusinessUnitFinance (
BU_Name VARCHAR(100),
Month DATE,
Cost FLOAT,
Revenue FLOAT
);
INSERT INTO BusinessUnitFinance (BU_Name, Month, Cost, Revenue) VALUES
('Tech', '2024-01-01', 10000, 25000),
('Tech', '2024-02-01', 12000, 28000),
('Tech', '2024-03-01', 11000, 30000),
('HR', '2024-01-01', 5000, 10000),
('HR', '2024-02-01', 4500, 11000),
('HR', '2024-03-01', 5200, 12000);
SELECT
BU_Name,
Ln: 526 Ch: 1 SPC CRLF
Results Messages
BU_Name Month Cost Revenue Cost_Revenue_Ratio_Percentage
1 HR 2024-01 5000 10000 50
2 HR 2024-02 4500 11000 40.91
3 HR 2024-03 5200 12000 43.33
4 Tech 2024-01 10000 25000 40
5 Tech 2024-02 12000 28000 42.86
6 Tech 2024-03 11000 30000 36.67
Query executed successfully.
(local)\SQLEXPRESS (16.0 RTM) LAPTOP-7VHM2E8L\Aishwa... master 00:00:00 6 rows
Item(s) Saved
26°C Heavy rain
Search
ENG IN
19:51 08-06-2025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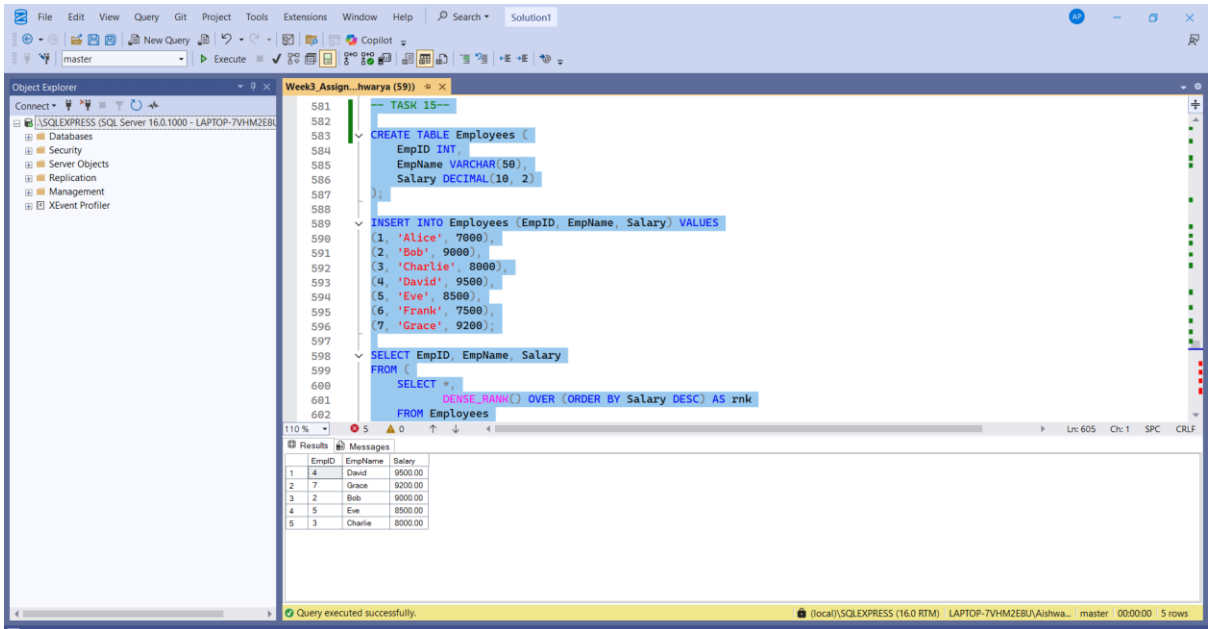
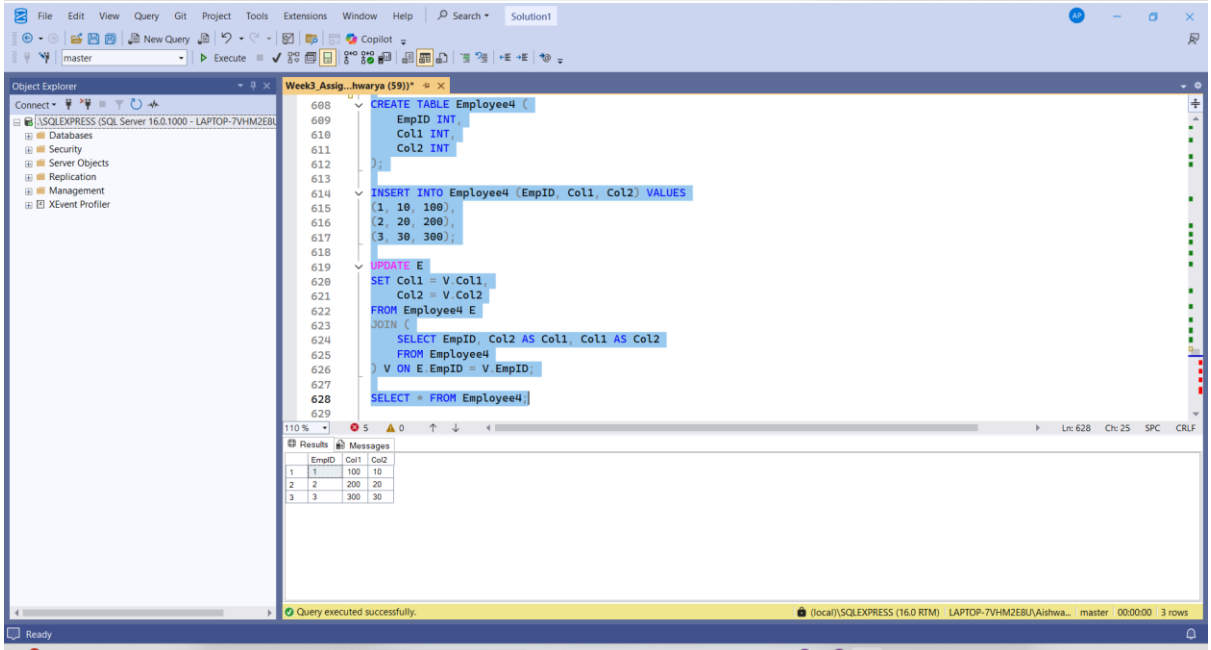
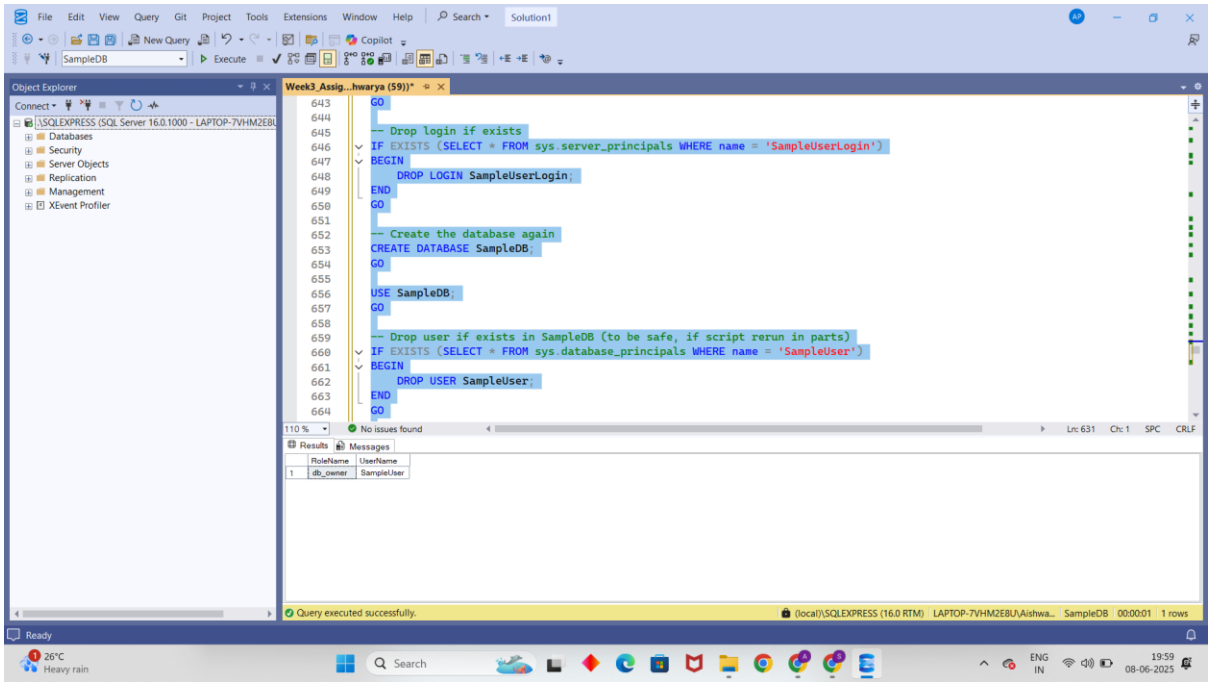
Week3_Assign...hwarya (59))
CREATE TABLE YourTable (
EmployeeID INT,
SubBand VARCHAR(10)
);
INSERT INTO YourTable (EmployeeID, SubBand) VALUES
(1, 'A1'),
(2, 'A1'),
(3, 'A2'),
(4, 'A2'),
(5, 'A2'),
(6, 'A3'),
(7, 'A3'),
(8, 'A3'),
(9, 'A3'),
(10, 'A4');
SELECT
SubBand,
COUNT(*) AS Headcount,
ROUND(COUNT(*) * 100.0 / SUM(COUNT(*)) OVER (), 2) AS Percentage_Headcount
Ln: 580 Ch: 1 SPC CRLF
Results Messages
SubBand Headcount Percentage_Headcount
1 A1 2 20.000000000000
2 A2 3 30.000000000000
3 A3 4 40.000000000000
4 A4 1 10.000000000000
Query executed successfully.
(local)\SQLEXPRESS (16.0 RTM) LAPTOP-7VHM2E8L\Aishwa... master 00:00:00 4 rows
Item(s) Saved
26°C Heavy rain
Search
ENG IN
19:52 08-06-2025


-- TASK 15--
CREATE TABLE Employees (
EmpID INT,
EmpName VARCHAR(50),
Salary DECIMAL(10, 2)
);
INSERT INTO Employees (EmpID, EmpName, Salary) VALUES
(1, 'Alice', 7000),
(2, 'Bob', 9000),
(3, 'Charlie', 8000),
(4, 'David', 9500),
(5, 'Eve', 8500),
(6, 'Frank', 7500),
(7, 'Grace', 9200);
SELECT EmpID, EmpName, Salary
FROM (
SELECT *,
DENSE_RANK() OVER (ORDER BY Salary DESC) AS rnk
FROM Employees
EmpID EmpName Salary
4 David 9500.00
7 Grace 9200.00
2 Bob 9000.00
5 Eve 8500.00
3 Charlie 8000.00
Query executed successfully.


CREATE TABLE Employee4 (
EmpID INT,
Col1 INT,
Col2 INT
);
INSERT INTO Employee4 (EmpID, Col1, Col2) VALUES
(1, 10, 100),
(2, 20, 200),
(3, 30, 300);
UPDATE E
SET Col1 = V.Col1,
Col2 = V.Col2
FROM Employee4 E
JOIN (
SELECT EmpID, Col2 AS Col1, Col1 AS Col2
FROM Employee4
) V ON E.EmpID = V.EmpID;
SELECT * FROM Employee4;
EmpID Col1 Col2
1 100 10
2 200 20
3 300 30
Query executed successfully.


File Edit View Query Git Project Tools Extensions Window Help Search Solution1
New Query Copilot
SampleDB Execute
Object Explorer
Connect
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Databases
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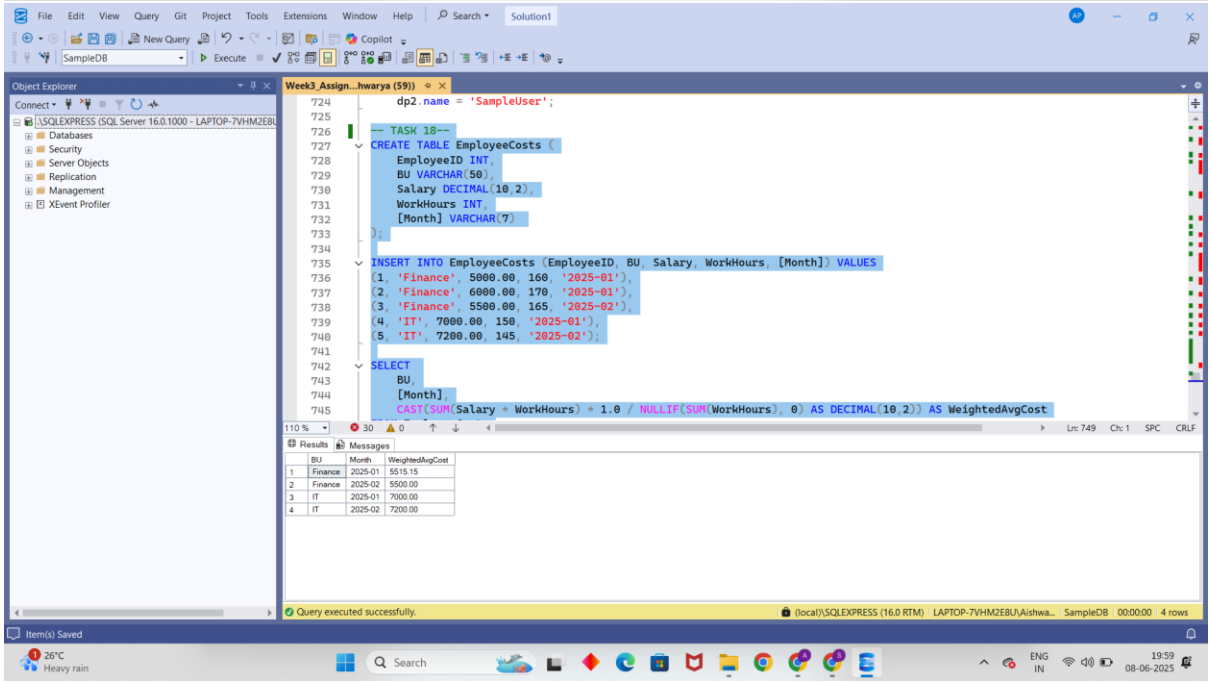
Week3_Assig...hwarya (59))*
643 GO
644
645 -- Drop login if exists
646 IF EXISTS (SELECT * FROM sys.server_principals WHERE name = 'SampleUserLogin')
647 BEGIN
648 DROP LOGIN SampleUserLogin;
649 END
650 GO
651
652 -- Create the database again
653 CREATE DATABASE SampleDB;
654 GO
655
656 USE SampleDB;
657 GO
658
659 -- Drop user if exists in SampleDB (to be safe, if script rerun in parts)
660 IF EXISTS (SELECT * FROM sys.database_principals WHERE name = 'SampleUser')
661 BEGIN
662 DROP USER SampleUser;
663 END
664 GO
110 % No issues found Ln: 631 Ch: 1 SPC CRLF
Results Messages
RoleName UserName
1 db_owner SampleUser
Query executed successfully.
(local)\SQLEXPRESS (16.0 RTM) LAPTOP-7VHM2E8U\Aishwa... SampleDB 00:00:01 1 rows
Ready
26°C Heavy rain
Search
ENG IN
19:59 08-06-2025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SampleDB Execute
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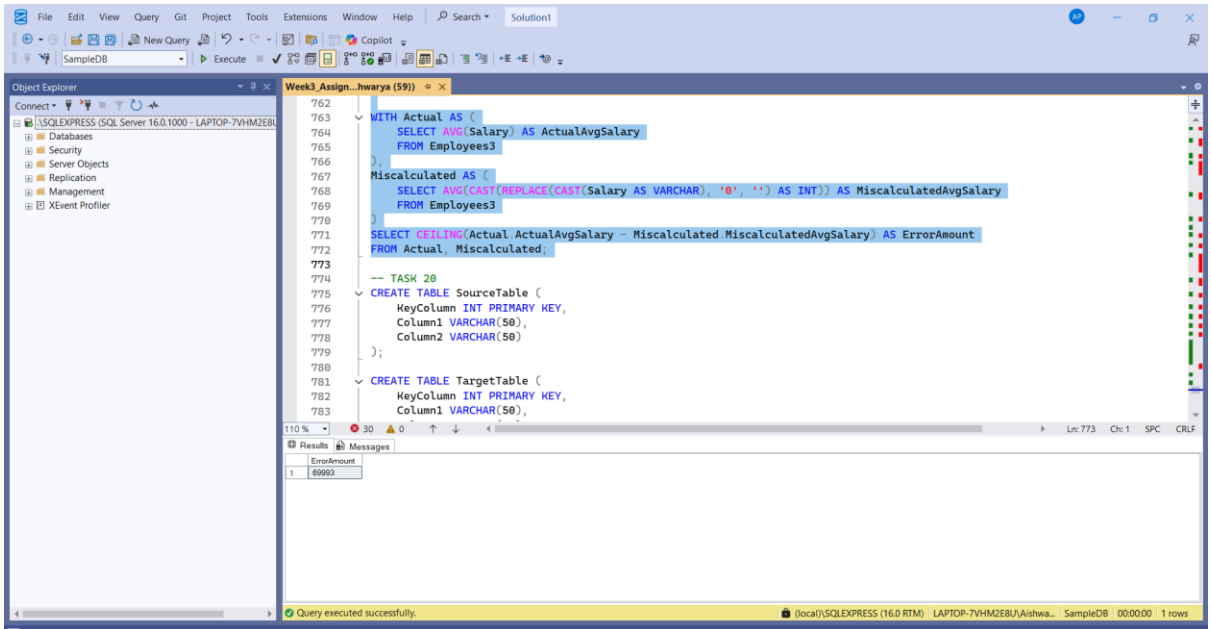
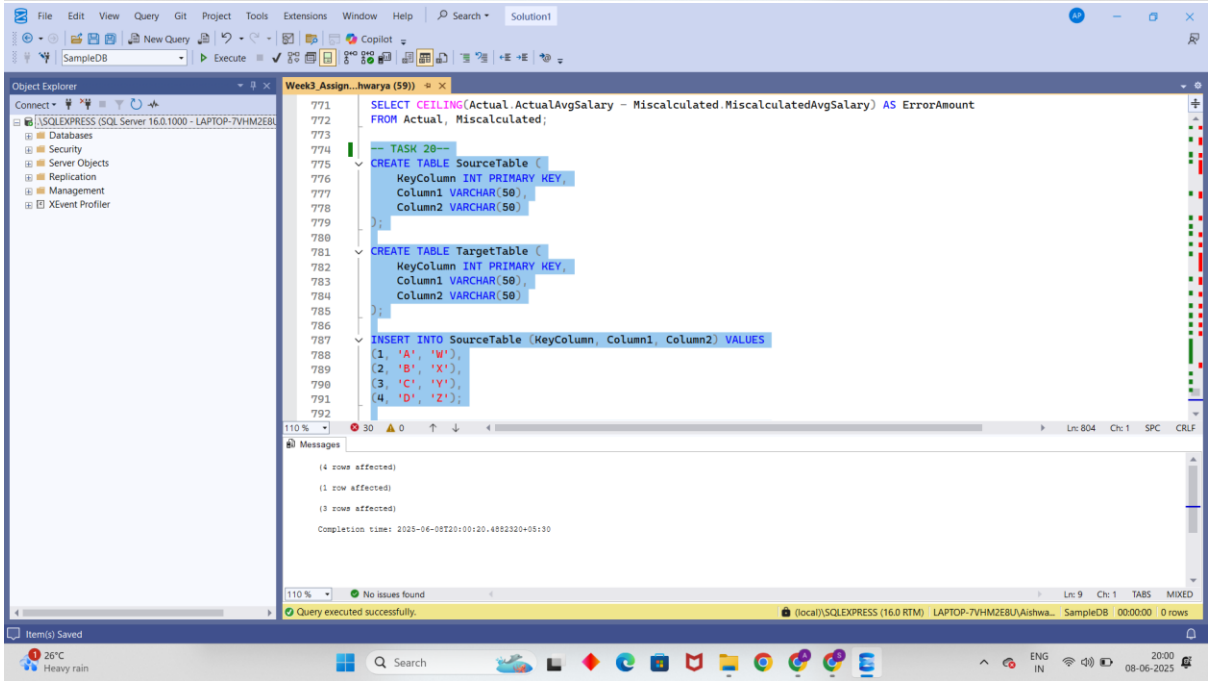
724 dp2.name = 'SampleUser';
725
726 -- TASK 18--
727 CREATE TABLE EmployeeCosts (
728 EmployeeID INT,
729 BU VARCHAR(50),
730 Salary DECIMAL(10,2),
731 WorkHours INT,
732 [Month] VARCHAR(7)
733);
734
735 INSERT INTO EmployeeCosts (EmployeeID, BU, Salary, WorkHours, [Month]) VALUES
736 (1, 'Finance', 5000.00, 160, '2025-01'),
737 (2, 'Finance', 6000.00, 170, '2025-01'),
738 (3, 'Finance', 5500.00, 165, '2025-02'),
739 (4, 'IT', 7000.00, 150, '2025-01'),
740 (5, 'IT', 7200.00, 145, '2025-02');
741
742 SELECT
743 BU,
744 [Month],
745 CAST(SUM(Salary * WorkHours) * 1.0 / NULLIF(SUM(WorkHours), 0) AS DECIMAL(10,2)) AS WeightedAvgCost
110 % 30 0 Ln: 749 Ch: 1 SPC CRLF
Results Messages
BU Month WeightedAvgCost
1 Finance 2025-01 5515.15
2 Finance 2025-02 5500.00
3 IT 2025-01 7000.00
4 IT 2025-02 7200.00
Query executed successfully.
(local)\SQLEXPRESS (16.0 RTM) LAPTOP-7VHM2E8U\Aishwa... SampleDB 00:00:00 4 rows
Item(s) Saved
26°C Heavy rain
Search
ENG IN
19:59 08-06-2025


File Edit View Query Git Project Tools Extensions Window Help
Search
Solution1
New Query
Copilot
SampleDB
Execute
Object Explorer
Connect
\SQLEXPRESS (SQL Server 16.0.1000 - LAPTOP-7VHM2E8U
Databases
Security
Server Objects
Replication
Management
XEvent Profiler
Week3_Assign...hwarya (59))
762
763 WITH Actual AS (
764 SELECT AVG(Salary) AS ActualAvgSalary
765 FROM Employees3
766),
767 Miscalculated AS (
768 SELECT AVG(CAST(REPLACE(CAST(Salary AS VARCHAR), '0', '') AS INT)) AS MiscalculatedAvgSalary
769 FROM Employees3
770)
771 SELECT CEILING(Actual.ActualAvgSalary - Miscalculated.MiscalculatedAvgSalary) AS ErrorAmount
772 FROM Actual, Miscalculated;
773
774 -- TASK 20
775 CREATE TABLE SourceTable (
776 KeyColumn INT PRIMARY KEY,
777 Column1 VARCHAR(50),
778 Column2 VARCHAR(50)
779);
780
781 CREATE TABLE TargetTable (
782 KeyColumn INT PRIMARY KEY,
783 Column1 VARCHAR(50),
110 %
30
0
Ln: 773 Ch: 1 SPC CRLF
Results
Messages
ErrorAmount
1 69993
Query executed successfully.
(local)\SQLEXPRESS (16.0 RTM) LAPTOP-7VHM2E8U\Aishwa... SampleDB 00:00:00 1 rows
Item(s) Saved
26°C
Heavy rain
Search
ENG
IN
20:00
08-06-2025


File Edit View Query Git Project Tools Extensions Window Help
Search
Solution1
New Query
Copilot
SampleDB
Execute
Object Explorer
Connect
\SQLEXPRESS (SQL Server 16.0.1000 - LAPTOP-7VHM2E8U
Databases
Security
Server Objects
Replication
Management
XEvent Profiler
Week3_Assign...hwarya (59))
771 SELECT CEILING(Actual.ActualAvgSalary - Miscalculated.MiscalculatedAvgSalary) AS ErrorAmount
772 FROM Actual, Miscalculated;
773
774 -- TASK 20--
775 CREATE TABLE SourceTable (
776 KeyColumn INT PRIMARY KEY,
777 Column1 VARCHAR(50),
778 Column2 VARCHAR(50)
779);
780
781 CREATE TABLE TargetTable (
782 KeyColumn INT PRIMARY KEY,
783 Column1 VARCHAR(50),
784 Column2 VARCHAR(50)
785);
786
787 INSERT INTO SourceTable (KeyColumn, Column1, Column2) VALUES
788 (1, 'A', 'W'),
789 (2, 'B', 'X'),
790 (3, 'C', 'Y'),
791 (4, 'D', 'Z');
792
110 %
30
0
Ln: 804 Ch: 1 SPC CRLF
Messages
(4 rows affected)
(1 row affected)
(3 rows affected)
Completion time: 2025-06-08T20:00:20.4852320+05:30
110 %
No issues found
Ln: 9 Ch: 1 TABS MIXED
Query executed successfully.
(local)\SQLEXPRESS (16.0 RTM) LAPTOP-7VHM2E8U\Aishwa... SampleDB 00:00:00 0 rows
Item(s) Saved
26°C
Heavy rain
Search
ENG
IN
20:00
08-06-2025