Aron McDonald

Student Number: ST10291606

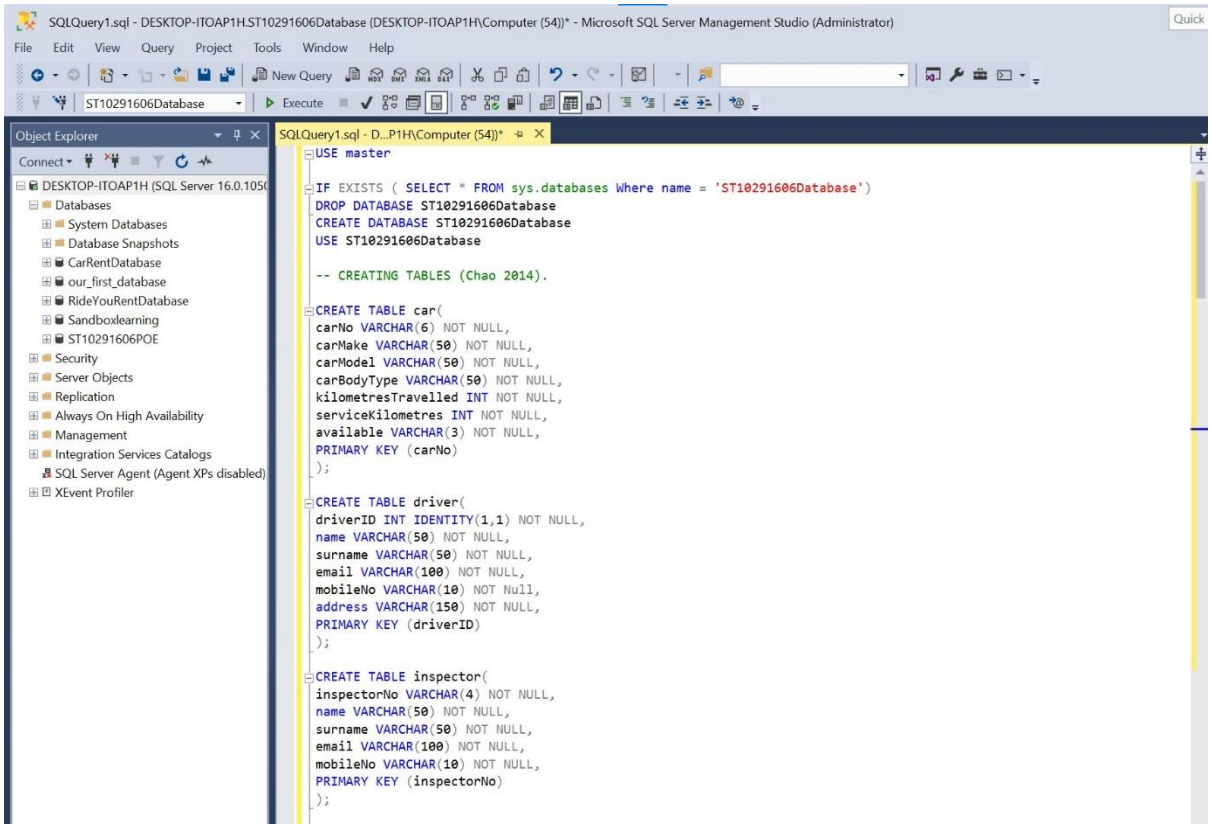
PATHWAY: CLDV6211

Lecturer: Wania Farshida

04 May 2023

POE Task 2

QUESTION 1 + 2


SQLQuery1.sql - DESKTOP-ITOAP1H.ST10291606Database (DESKTOP-ITOAP1H\Computer (54))* - Microsoft SQL Server Management Studio (Administrator)
File Edit View Query Project Tools Window Help
New Query
ST10291606Database
Execute
Object Explorer
Connect
DESKTOP-ITOAP1H (SQL Server 16.0.105(
Databases
System Databases
Database Snapshots
CarRentDatabase
our_first_database
RideYouRentDatabase
Sandboxlearning
ST10291606POE
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Always On High Availability
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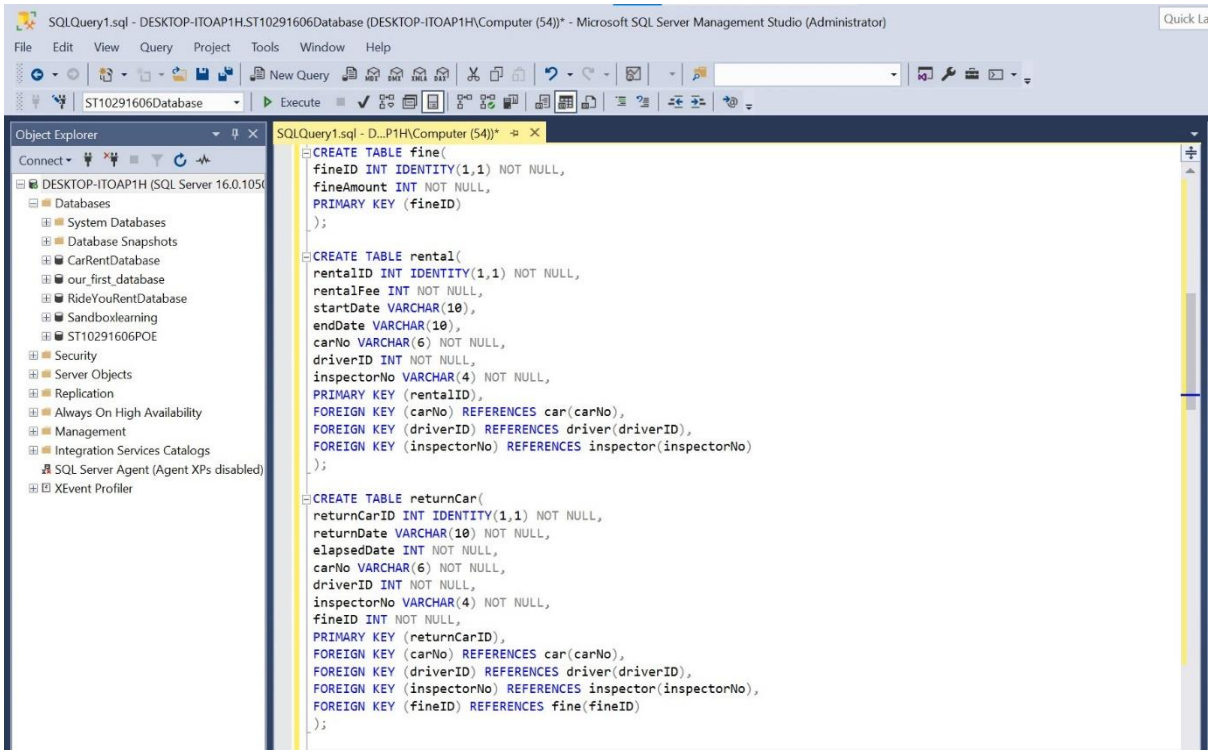
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler
SQLQuery1.sql - D...P1H\Computer (54))*
USE master
IF EXISTS (SELECT * FROM sys.databases Where name = 'ST10291606Database')
DROP DATABASE ST10291606Database
CREATE DATABASE ST10291606Database
USE ST10291606Database
-- CREATING TABLES (Chao 2014).
CREATE TABLE car(
carNo VARCHAR(6) NOT NULL,
carMake VARCHAR(50) NOT NULL,
carModel VARCHAR(50) NOT NULL,
carBodyType VARCHAR(50) NOT NULL,
kilometresTravelled INT NOT NULL,
serviceKilometres INT NOT NULL,
available VARCHAR(3) NOT NULL,
PRIMARY KEY (carNo)
);
CREATE TABLE driver(
driverID INT IDENTITY(1,1) NOT NULL,
name VARCHAR(50) NOT NULL,
surname VARCHAR(50) NOT NULL,
email VARCHAR(100) NOT NULL,
mobileNo VARCHAR(10) NOT Null,
address VARCHAR(150) NOT NULL,
PRIMARY KEY (driverID)
);
CREATE TABLE inspector(
inspectorNo VARCHAR(4) NOT NULL,
name VARCHAR(50) NOT NULL,
surname VARCHAR(50) NOT NULL,
email VARCHAR(100) NOT NULL,
mobileNo VARCHAR(10) NOT NULL,
PRIMARY KEY (inspectorNo)
);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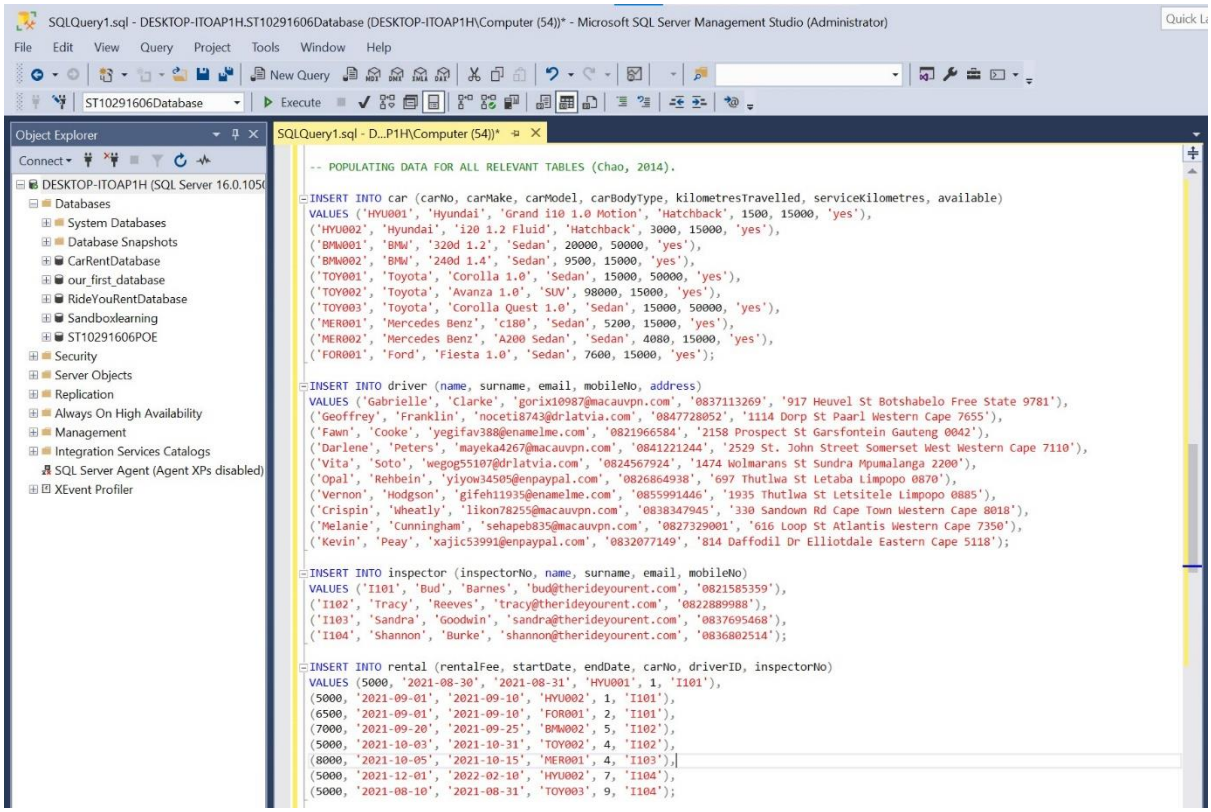
SQLQuery1.sql - D...P1H\Computer (54))*
CREATE TABLE fine(
fineID INT IDENTITY(1,1) NOT NULL,
fineAmount INT NOT NULL,
PRIMARY KEY (fineID)
);
CREATE TABLE rental(
rentalID INT IDENTITY(1,1) NOT NULL,
rentalFee INT NOT NULL,
startDate VARCHAR(10),
endDate VARCHAR(10),
carNo VARCHAR(6) NOT NULL,
driverID INT NOT NULL,
inspectorNo VARCHAR(4) NOT NULL,
PRIMARY KEY (rentalID),
FOREIGN KEY (carNo) REFERENCES car(carNo),
FOREIGN KEY (driverID) REFERENCES driver(driverID),
FOREIGN KEY (inspectorNo) REFERENCES inspector(inspectorNo)
);
CREATE TABLE returnCar(
returnCarID INT IDENTITY(1,1) NOT NULL,
returnDate VARCHAR(10) NOT NULL,
elapsedDate INT NOT NULL,
carNo VARCHAR(6) NOT NULL,
driverID INT NOT NULL,
inspectorNo VARCHAR(4) NOT NULL,
fineID INT NOT NULL,
PRIMARY KEY (returnCarID),
FOREIGN KEY (carNo) REFERENCES car(carNo),
FOREIGN KEY (driverID) REFERENCES driver(driverID),
FOREIGN KEY (inspectorNo) REFERENCES inspector(inspectorNo),
FOREIGN KEY (fineID) REFERENCES fine(fineID)
);

QUESTION 3 + 4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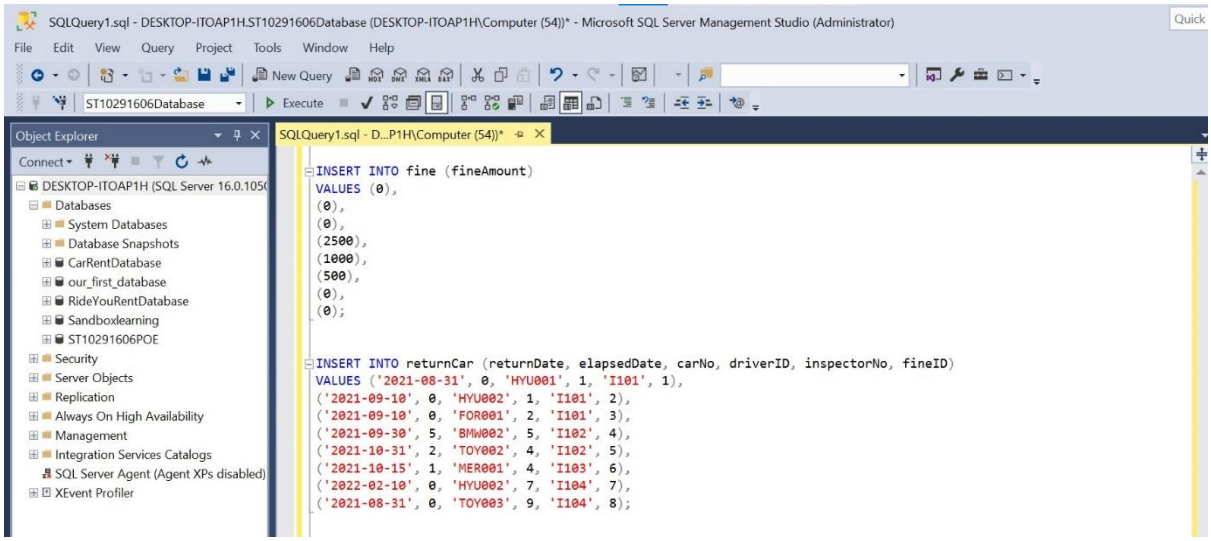
SQLQuery1.sql - D...P1H\Computer (54))*
-- POPULATING DATA FOR ALL RELEVANT TABLES (Chao, 2014).
INSERT INTO car (carNo, carMake, carModel, carBodyType, kilometresTravelled, serviceKilometres, available)
VALUES ('HYU001', 'Hyundai', 'Grand i10 1.0 Motion', 'Hatchback', 1500, 15000, 'yes'),
('HYU002', 'Hyundai', 'i20 1.2 Fluid', 'Hatchback', 3000, 15000, 'yes'),
('BMW001', 'BMW', '320d 1.2', 'Sedan', 20000, 50000, 'yes'),
('BMW002', 'BMW', '240d 1.4', 'Sedan', 9500, 15000, 'yes'),
('TOY001', 'Toyota', 'Corolla 1.0', 'Sedan', 15000, 50000, 'yes'),
('TOY002', 'Toyota', 'Avanza 1.0', 'SUV', 98000, 15000, 'yes'),
('TOY003', 'Toyota', 'Corolla Quest 1.0', 'Sedan', 15000, 50000, 'yes'),
('MER001', 'Mercedes Benz', 'c180', 'Sedan', 5200, 15000, 'yes'),
('MER002', 'Mercedes Benz', 'A200 Sedan', 'Sedan', 4080, 15000, 'yes'),
('FOR001', 'Ford', 'Fiesta 1.0', 'Sedan', 7600, 15000, 'yes');
INSERT INTO driver (name, surname, email, mobileNo, address)
VALUES ('Gabrielle', 'Clarke', 'gorix10987@macauvpn.com', '0837113269', '917 Heuvel St Botshabelo Free State 9781'),
('Geoffrey', 'Franklin', 'noceti8743@drlatvia.com', '0847728052', '1114 Dorp St Paarl Western Cape 7655'),
('Fawn', 'Cooke', 'yegifav388@enamelme.com', '0821966584', '2158 Prospect St Garsfontein Gauteng 0042'),
('Darlene', 'Peters', 'mayeka4267@macauvpn.com', '0841221244', '2529 St. John Street Somerset West Western Cape 7110'),
('Vita', 'Soto', 'wegog55107@drlatvia.com', '0824567924', '1474 Wolmarans St Sundra Mpumalanga 2200'),
('Opal', 'Rehbein', 'yiyow34505@enpaypal.com', '0826864938', '697 Thutlwa St Letaba Limpopo 0870'),
('Vernon', 'Hodgson', 'gifeh11935@enamelme.com', '0855991446', '1935 Thutlwa St Letsitele Limpopo 0885'),
('Crispin', 'Wheatly', 'likon78255@macauvpn.com', '0838347945', '330 Sandown Rd Cape Town Western Cape 8018'),
('Melanie', 'Cunningham', 'sehapeb835@macauvpn.com', '0827329001', '616 Loop St Atlantis Western Cape 7350'),
('Kevin', 'Peay', 'xajic53991@enpaypal.com', '0832077149', '814 Daffodil Dr Elliotdale Eastern Cape 5118');
INSERT INTO inspector (inspectorNo, name, surname, email, mobileNo)
VALUES ('I101', 'Bud', 'Barnes', 'bud@therideyourent.com', '0821585359'),
('I102', 'Tracy', 'Reeves', 'tracy@therideyourent.com', '0822889988'),
('I103', 'Sandra', 'Goodwin', 'sandra@therideyourent.com', '0837695468'),
('I104', 'Shannon', 'Burke', 'shannon@therideyourent.com', '0836802514');
INSERT INTO rental (rentalFee, startDate, endDate, carNo, driverID, inspectorNo)
VALUES (5000, '2021-08-30', '2021-08-31', 'HYU001', 1, 'I101'),
(5000, '2021-09-01', '2021-09-10', 'HYU002', 1, 'I101'),
(6500, '2021-09-01', '2021-09-10', 'FOR001', 2, 'I101'),
(7000, '2021-09-20', '2021-09-25', 'BMW002', 5, 'I102'),
(5000, '2021-10-03', '2021-10-31', 'TOY002', 4, 'I102'),
(8000, '2021-10-05', '2021-10-15', 'MER001', 4, 'I103'),
(5000, '2021-12-01', '2022-02-10', 'HYU002', 7, 'I104'),
(5000, '2021-08-10', '2021-08-31', 'TOY003', 9, 'I104');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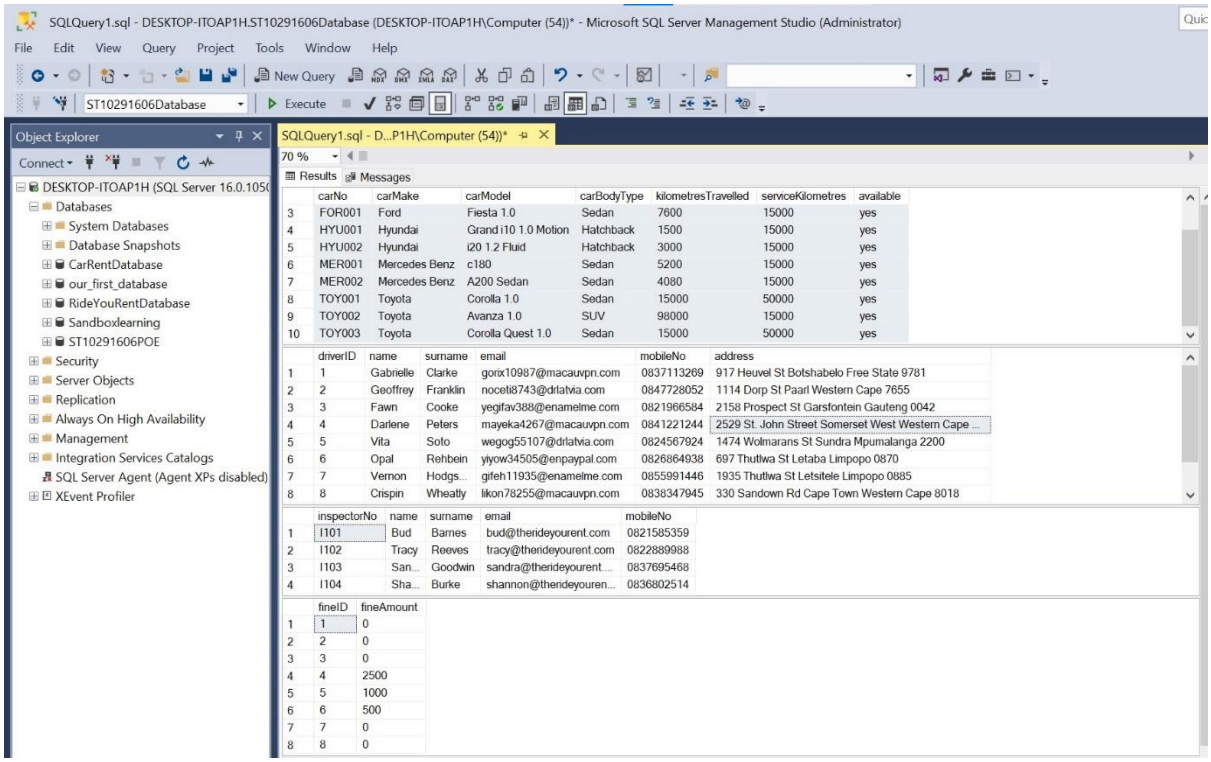
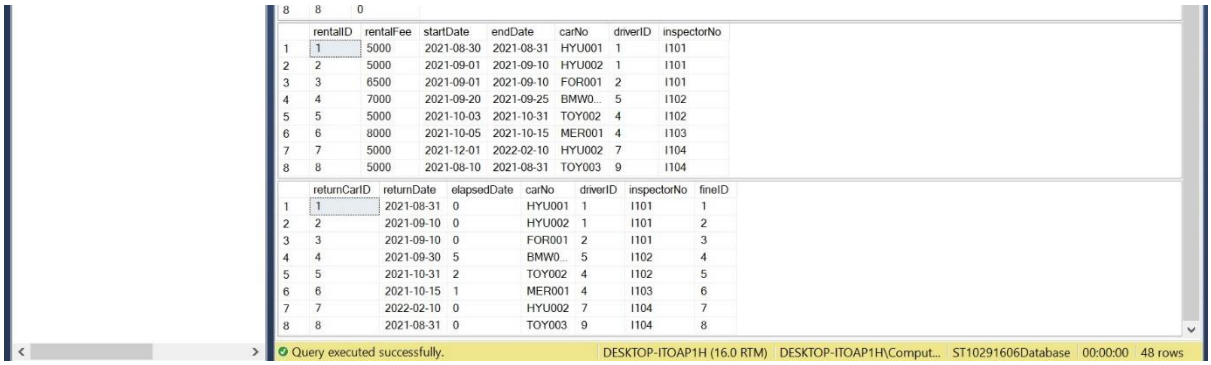
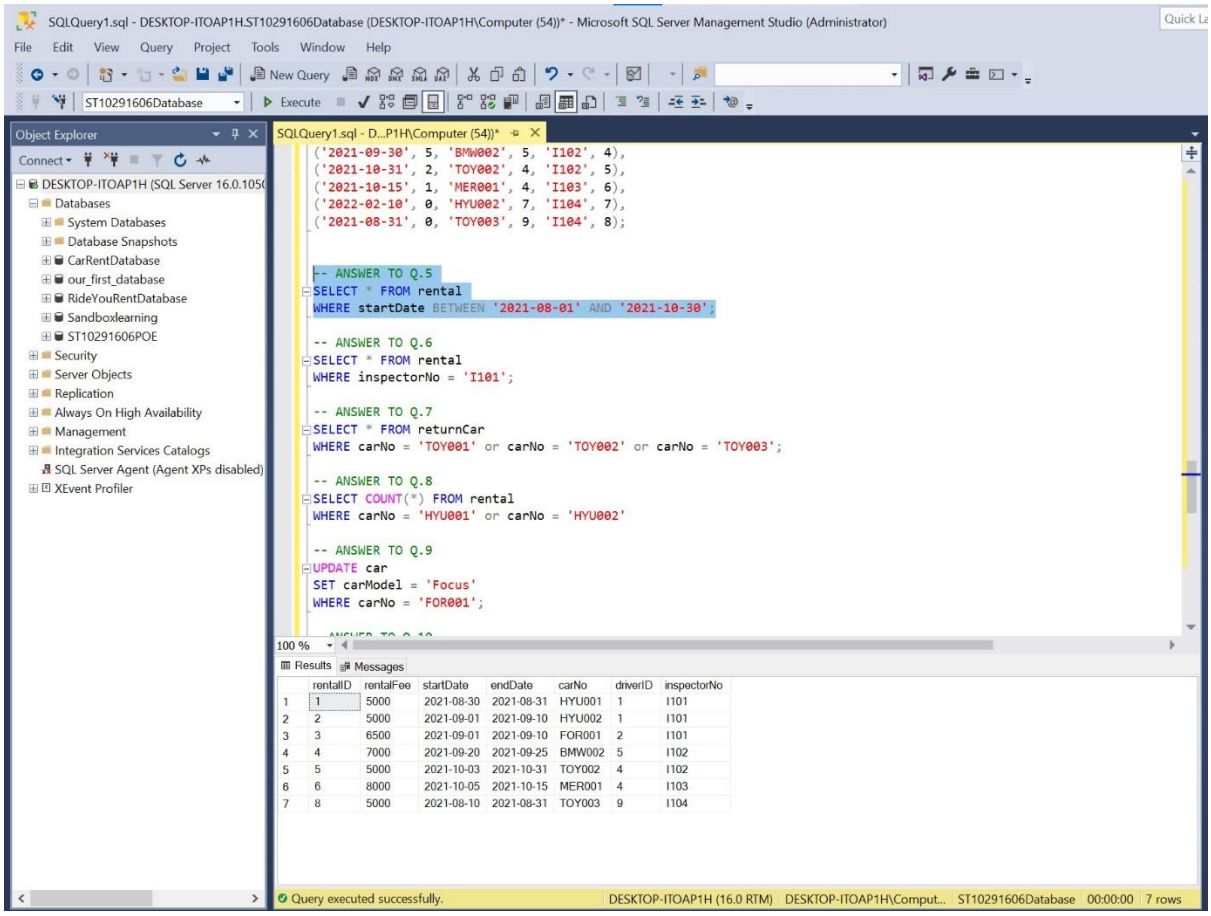
SQLQuery1.sql - D...P1H\Computer (54))*
INSERT INTO fine (fineAmount)
VALUES (0),
(0),
(0),
(2500),
(1000),
(500),
(0),
(0);
INSERT INTO returnCar (returnDate, elapsedDate, carNo, driverID, inspectorNo, fineID)
VALUES ('2021-08-31', 0, 'HYU001', 1, 'I101', 1),
('2021-09-10', 0, 'HYU002', 1, 'I101', 2),
('2021-09-10', 0, 'FOR001', 2, 'I101', 3),
('2021-09-30', 5, 'BMW002', 5, 'I102', 4),
('2021-10-31', 2, 'TOY002', 4, 'I102', 5),
('2021-10-15', 1, 'MER001', 4, 'I103', 6),
('2022-02-10', 0, 'HYU002', 7, 'I104', 7),
('2021-08-31', 0, 'TOY003', 9, 'I104', 8);

QUESTION 3 + 4 RESULTS





QUESTION 5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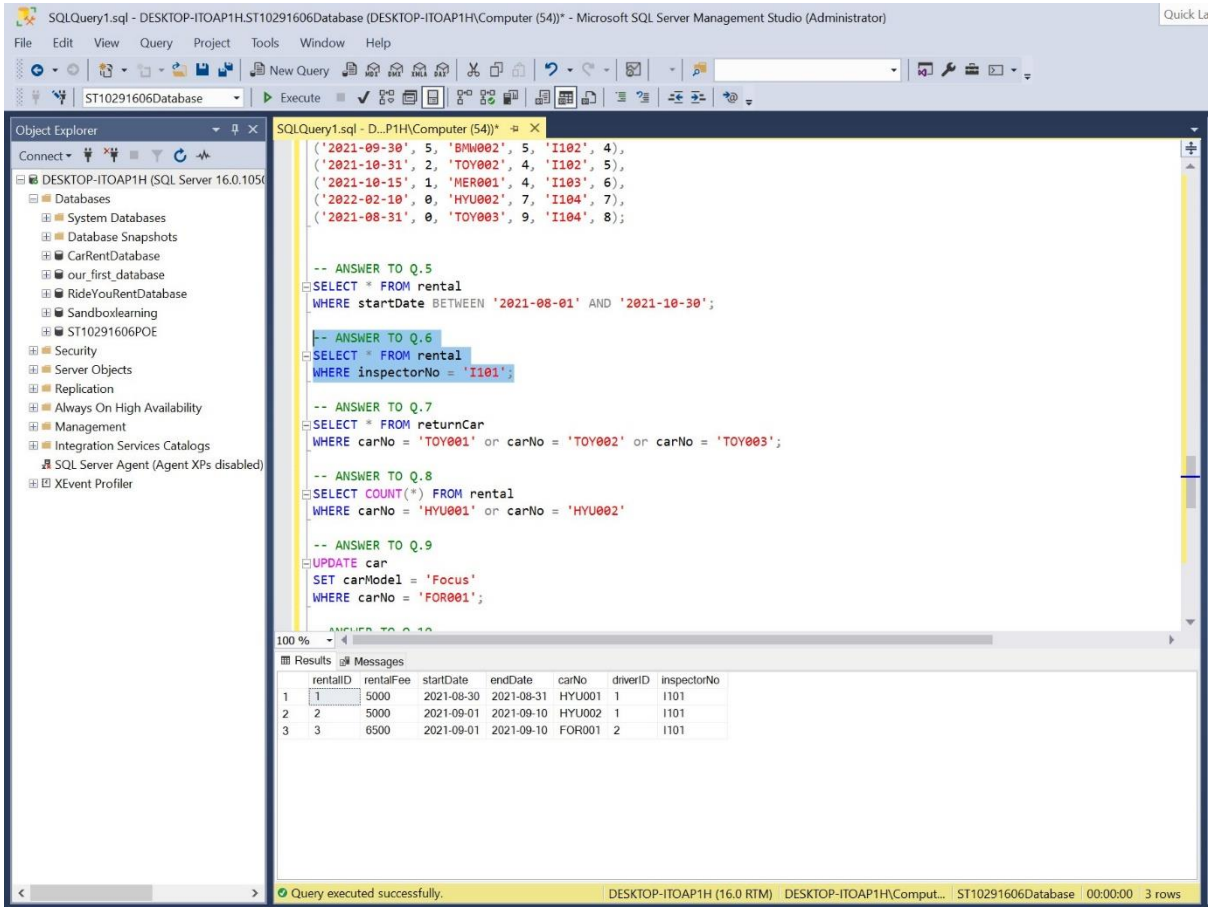
SQLQuery1.sql - D...P1H\Computer (54))*
('2021-09-30', 5, 'BMW002', 5, 'I102', 4),
('2021-10-31', 2, 'TOY002', 4, 'I102', 5),
('2021-10-15', 1, 'MER001', 4, 'I103', 6),
('2022-02-10', 0, 'HYU002', 7, 'I104', 7),
('2021-08-31', 0, 'TOY003', 9, 'I104', 8);
-- ANSWER TO Q.5
SELECT * FROM rental
WHERE startDate BETWEEN '2021-08-01' AND '2021-10-30';
-- ANSWER TO Q.6
SELECT * FROM rental
WHERE inspectorNo = 'I101';
-- ANSWER TO Q.7
SELECT * FROM returnCar
WHERE carNo = 'TOY001' or carNo = 'TOY002' or carNo = 'TOY003';
-- ANSWER TO Q.8
SELECT COUNT(*) FROM rental
WHERE carNo = 'HYU001' or carNo = 'HYU002'
-- ANSWER TO Q.9
UPDATE car
SET carModel = 'Focus'
WHERE carNo = 'FOR001';
100 %
Results
Messages
rentalID rentalFee startDate endDate carNo driverID inspectorNo
1 1 5000 2021-08-30 2021-08-31 HYU001 1 I101
2 2 5000 2021-09-01 2021-09-10 HYU002 1 I101
3 3 6500 2021-09-01 2021-09-10 FOR001 2 I101
4 4 7000 2021-09-20 2021-09-25 BMW002 5 I102
5 5 5000 2021-10-03 2021-10-31 TOY002 4 I102
6 6 8000 2021-10-05 2021-10-15 MER001 4 I103
7 8 5000 2021-08-10 2021-08-31 TOY003 9 I104
Query executed successfully.
DESKTOP-ITOAP1H (16.0 RTM)
DESKTOP-ITOAP1H\Comput...
ST10291606Database
00:00:00
7 rows

QUESTION 6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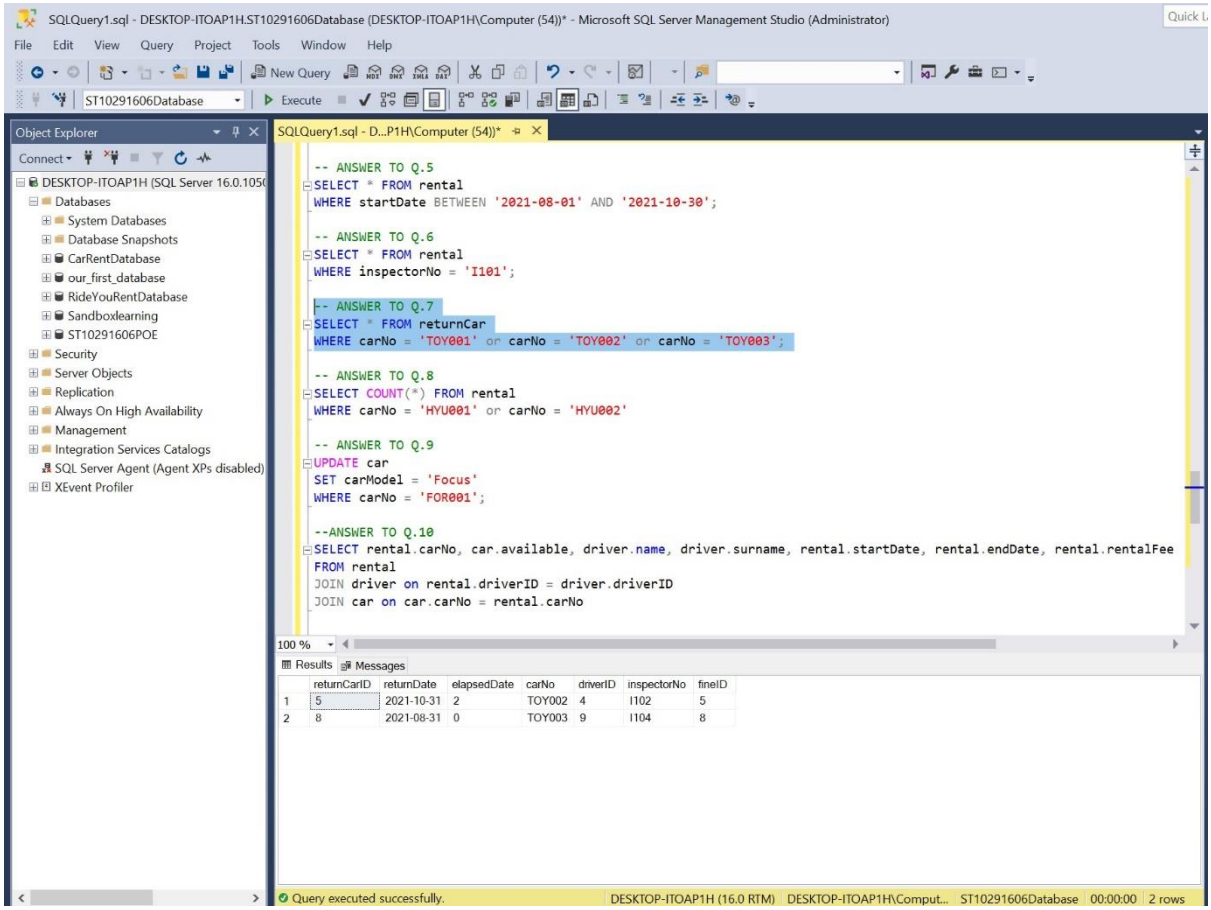
SQLQuery1.sql - D...P1H\Computer (54))*
('2021-09-30', 5, 'BMW002', 5, 'I102', 4),
('2021-10-31', 2, 'TOY002', 4, 'I102', 5),
('2021-10-15', 1, 'MER001', 4, 'I103', 6),
('2022-02-10', 0, 'HYU002', 7, 'I104', 7),
('2021-08-31', 0, 'TOY003', 9, 'I104', 8);
-- ANSWER TO Q.5
SELECT * FROM rental
WHERE startDate BETWEEN '2021-08-01' AND '2021-10-30';
-- ANSWER TO Q.6
SELECT * FROM rental
WHERE inspectorNo = 'I101';
-- ANSWER TO Q.7
SELECT * FROM returnCar
WHERE carNo = 'TOY001' or carNo = 'TOY002' or carNo = 'TOY003';
-- ANSWER TO Q.8
SELECT COUNT(*) FROM rental
WHERE carNo = 'HYU001' or carNo = 'HYU002'
-- ANSWER TO Q.9
UPDATE car
SET carModel = 'Focus'
WHERE carNo = 'FOR001';
100 %
Results
Messages
rentalID rentalFee startDate endDate carNo driverID inspectorNo
1 1 5000 2021-08-30 2021-08-31 HYU001 1 I101
2 2 5000 2021-09-01 2021-09-10 HYU002 1 I101
3 3 6500 2021-09-01 2021-09-10 FOR001 2 I101
Query executed successfully.
DESKTOP-ITOAP1H (16.0 RTM)
DESKTOP-ITOAP1H\Comput...
ST10291606Database
00:00:00
3 rows

QUESTION 7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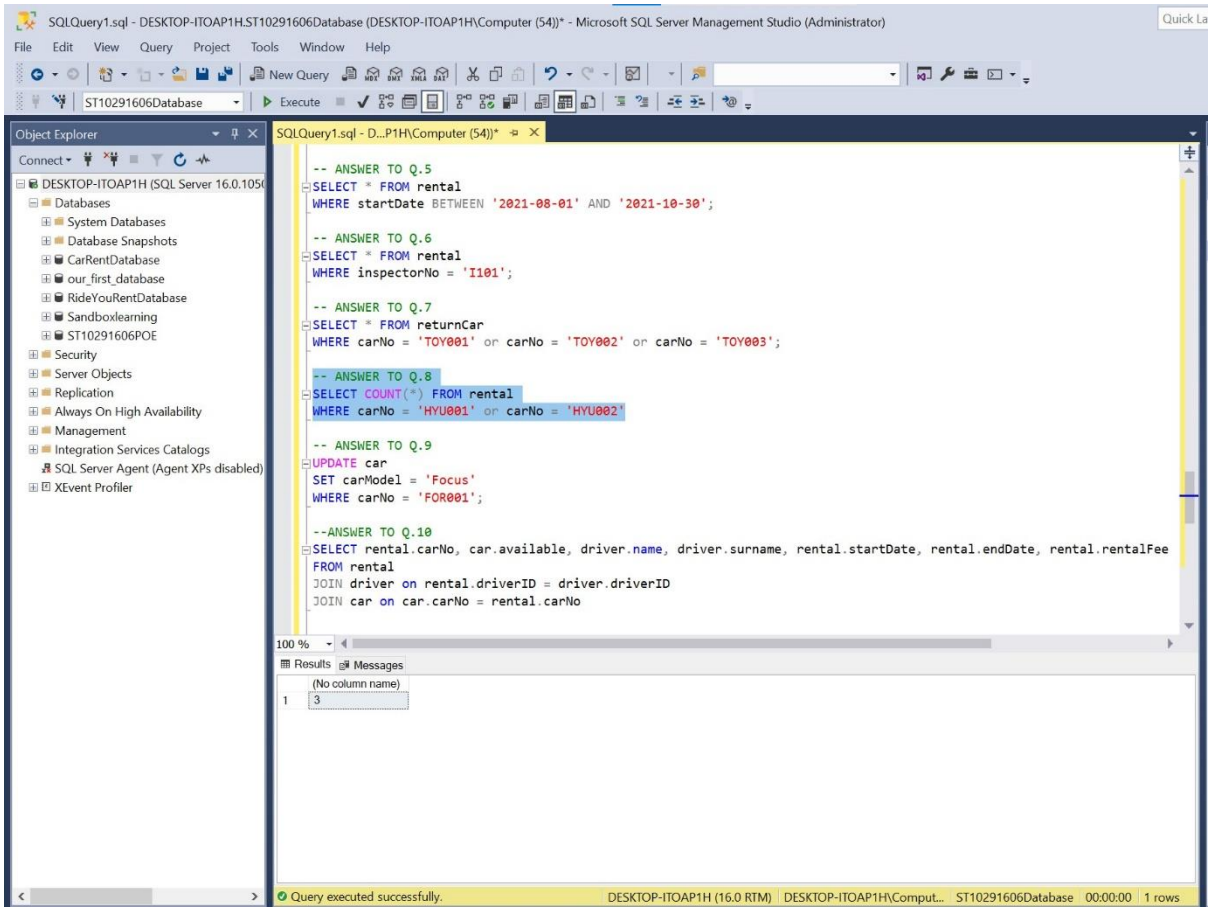
-- ANSWER TO Q.5
SELECT * FROM rental
WHERE startDate BETWEEN '2021-08-01' AND '2021-10-30';
-- ANSWER TO Q.6
SELECT * FROM rental
WHERE inspectorNo = 'I101';
-- ANSWER TO Q.7
SELECT * FROM returnCar
WHERE carNo = 'TOY001' or carNo = 'TOY002' or carNo = 'TOY003';
-- ANSWER TO Q.8
SELECT COUNT(*) FROM rental
WHERE carNo = 'HYU001' or carNo = 'HYU002'
-- ANSWER TO Q.9
UPDATE car
SET carModel = 'Focus'
WHERE carNo = 'FOR001';
--ANSWER TO Q.10
SELECT rental.carNo, car.available, driver.name, driver.surname, rental.startDate, rental.endDate, rental.rentalFee
FROM rental
JOIN driver on rental.driverID = driver.driverID
JOIN car on car.carNo = rental.carNo
100 %
Results
Messages
returnCarID returnDate elapsedDate carNo driverID inspectorNo fineID
1 5 2021-10-31 2 TOY002 4 I102 5
2 8 2021-08-31 0 TOY003 9 I104 8
Query executed successfully.
DESKTOP-ITOAP1H (16.0 RTM)
DESKTOP-ITOAP1H\Comput...
ST10291606Database
00:00:00
2 rows

QUESTION 8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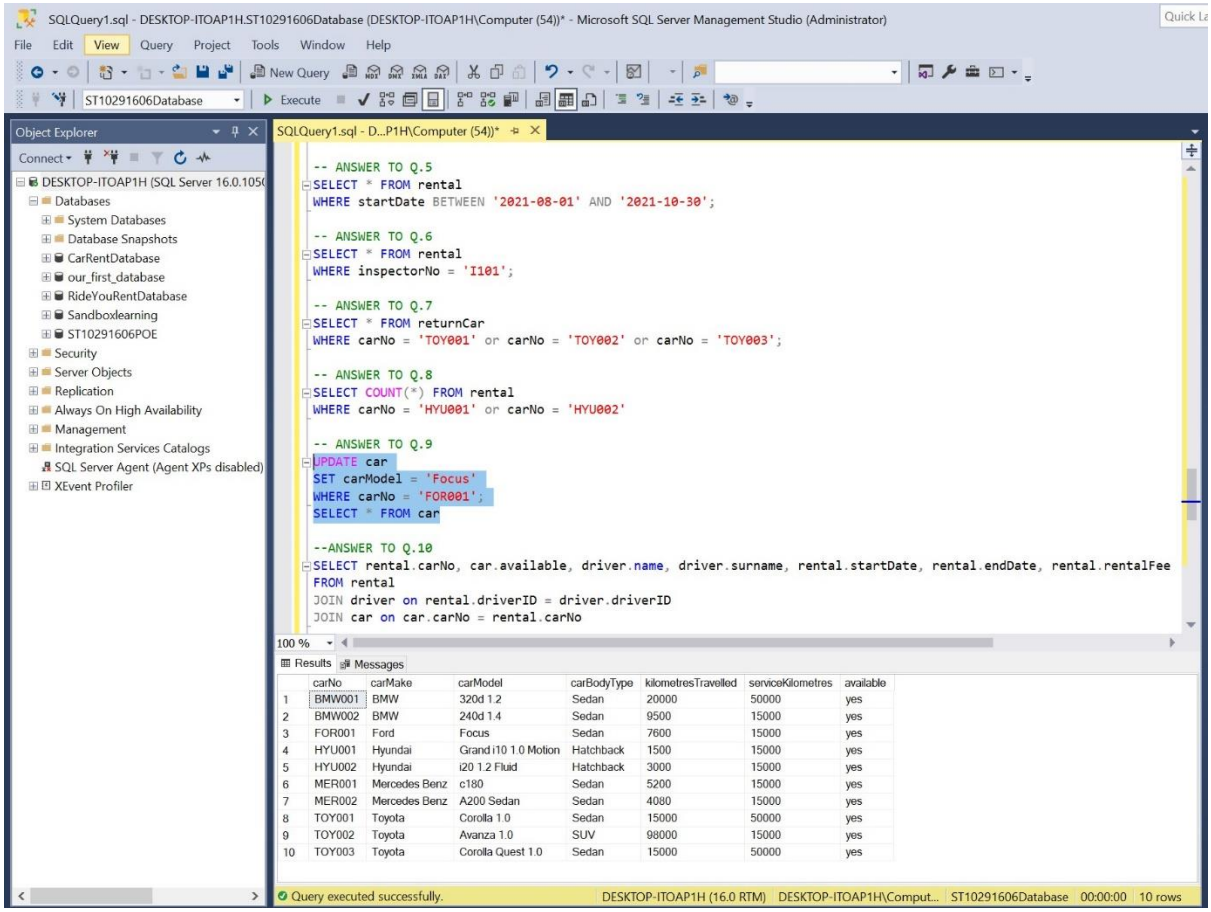
-- ANSWER TO Q.5
SELECT * FROM rental
WHERE startDate BETWEEN '2021-08-01' AND '2021-10-30';
-- ANSWER TO Q.6
SELECT * FROM rental
WHERE inspectorNo = 'I101';
-- ANSWER TO Q.7
SELECT * FROM returnCar
WHERE carNo = 'TOY001' or carNo = 'TOY002' or carNo = 'TOY003';
-- ANSWER TO Q.8
SELECT COUNT(*) FROM rental
WHERE carNo = 'HYU001' or carNo = 'HYU002'
-- ANSWER TO Q.9
UPDATE car
SET carModel = 'Focus'
WHERE carNo = 'FOR001';
--ANSWER TO Q.10
SELECT rental.carNo, car.available, driver.name, driver.surname, rental.startDate, rental.endDate, rental.rentalFee
FROM rental
JOIN driver on rental.driverID = driver.driverID
JOIN car on car.carNo = rental.carNo
100 %
Results
Messages
(No column name)
1
3
Query executed successfully.
DESKTOP-ITOAP1H (16.0 RTM)
DESKTOP-ITOAP1H\Comput...
ST10291606Database
00:00:00
1 rows

QUESTION 9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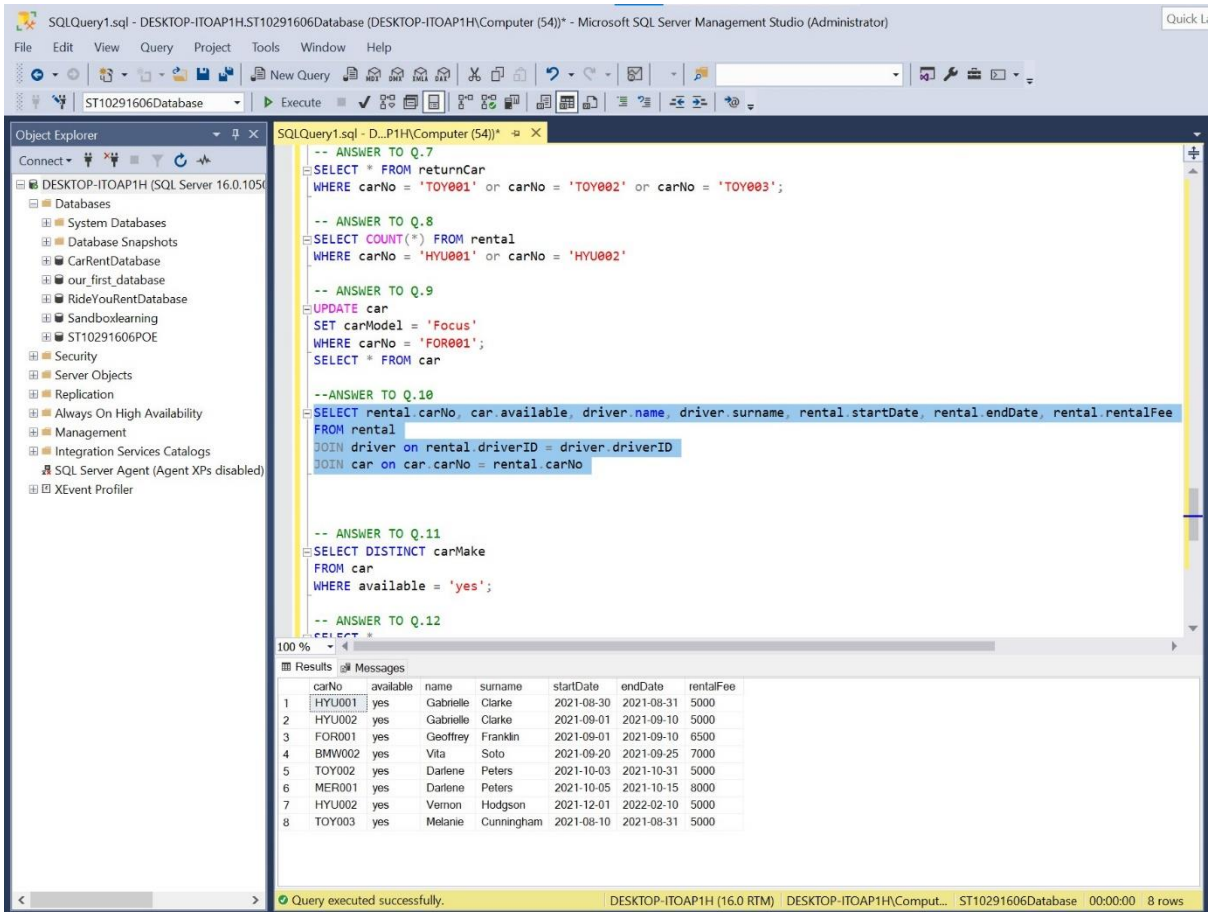
WHERE startDate BETWEEN '2021-08-01' AND '2021-10-30';
-- ANSWER TO Q.6
SELECT * FROM rental
WHERE inspectorNo = 'I101';
-- ANSWER TO Q.7
SELECT * FROM returnCar
WHERE carNo = 'TOY001' or carNo = 'TOY002' or carNo = 'TOY003';
-- ANSWER TO Q.8
SELECT COUNT(*) FROM rental
WHERE carNo = 'HYU001' or carNo = 'HYU002'
-- ANSWER TO Q.9
UPDATE car
SET carModel = 'Focus'
WHERE carNo = 'FOR001';
SELECT * FROM car
--ANSWER TO Q.10
SELECT rental.carNo, car.available, driver.name, driver.surname, rental.startDate, rental.endDate, rental.rentalFee
FROM rental
JOIN driver on rental.driverID = driver.driverID
JOIN car on car.carNo = rental.carNo
100 %
Results
Messages
carNo carMake carModel carBodyType kilometresTravelled serviceKilometres available
1 BMW001 BMW 320d 1.2 Sedan 20000 50000 yes
2 BMW002 BMW 240d 1.4 Sedan 9500 15000 yes
3 FOR001 Ford Focus Sedan 7600 15000 yes
4 HYU001 Hyundai Grand i10 1.0 Motion Hatchback 1500 15000 yes
5 HYU002 Hyundai i20 1.2 Fluid Hatchback 3000 15000 yes
6 MER001 Mercedes Benz c180 Sedan 5200 15000 yes
7 MER002 Mercedes Benz A200 Sedan Sedan 4080 15000 yes
8 TOY001 Toyota Corolla 1.0 Sedan 15000 50000 yes
9 TOY002 Toyota Avanza 1.0 SUV 98000 15000 yes
10 TOY003 Toyota Corolla Quest 1.0 Sedan 15000 50000 yes
Query executed successfully.
DESKTOP-ITOAP1H (16.0 RTM)
DESKTOP-ITOAP1H\Comput...
ST10291606Database
00:00:00
10 rows

QUESTION 10


SQLQuery1.sql - DESKTOP-ITOAP1H.ST10291606Database (DESKTOP-ITOAP1H\Computer (54))* - Microsoft SQL Server Management Studio (Administrator)
File Edit View Query Project Tools Window Help
New Query
ST10291606Database
Execute
Object Explorer
Connect
DESKTOP-ITOAP1H (SQL Server 16.0.105
Databases
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our_first_database
RideYouRentDatabase
Sandboxlearning
ST10291606POE
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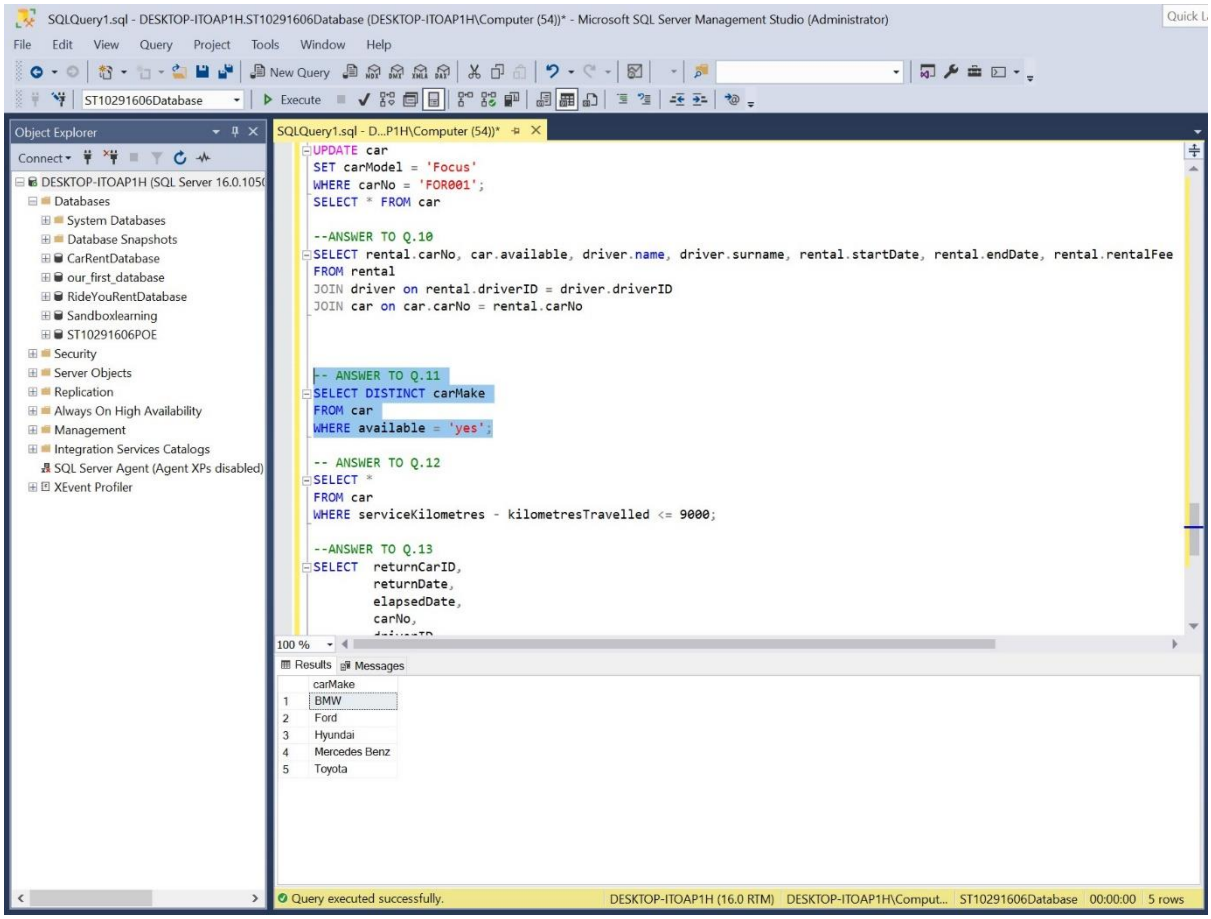
XEvent Profiler
SQLQuery1.sql - D...P1H\Computer (54))*
-- ANSWER TO Q.7
SELECT * FROM returnCar
WHERE carNo = 'TOY001' or carNo = 'TOY002' or carNo = 'TOY003';
-- ANSWER TO Q.8
SELECT COUNT(*) FROM rental
WHERE carNo = 'HYU001' or carNo = 'HYU002'
-- ANSWER TO Q.9
UPDATE car
SET carModel = 'Focus'
WHERE carNo = 'FOR001';
SELECT * FROM car
--ANSWER TO Q.10
SELECT rental.carNo, car.available, driver.name, driver.surname, rental.startDate, rental.endDate, rental.rentalFee
FROM rental
JOIN driver on rental.driverID = driver.driverID
JOIN car on car.carNo = rental.carNo
-- ANSWER TO Q.11
SELECT DISTINCT carMake
FROM car
WHERE available = 'yes';
-- ANSWER TO Q.12
100 %
Results
Messages
carNo available name surname startDate endDate rentalFee
1 HYU001 yes Gabrielle Clarke 2021-08-30 2021-08-31 5000
2 HYU002 yes Gabrielle Clarke 2021-09-01 2021-09-10 5000
3 FOR001 yes Geoffrey Franklin 2021-09-01 2021-09-10 6500
4 BMW002 yes Vita Soto 2021-09-20 2021-09-25 7000
5 TOY002 yes Darlene Peters 2021-10-03 2021-10-31 5000
6 MER001 yes Darlene Peters 2021-10-05 2021-10-15 8000
7 HYU002 yes Vernon Hodgson 2021-12-01 2022-02-10 5000
8 TOY003 yes Melanie Cunningham 2021-08-10 2021-08-31 5000
Query executed successfully.
DESKTOP-ITOAP1H (16.0 RTM)
DESKTOP-ITOAP1H\Comput...
ST10291606Database
00:00:00
8 rows

QUESTION 11


SQLQuery1.sql - DESKTOP-ITOAP1H.ST10291606Database (DESKTOP-ITOAP1H\Computer (54))* - Microsoft SQL Server Management Studio (Administrator)
File Edit View Query Project Tools Window Help
New Query
ST10291606Database
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DESKTOP-ITOAP1H (SQL Server 16.0.105
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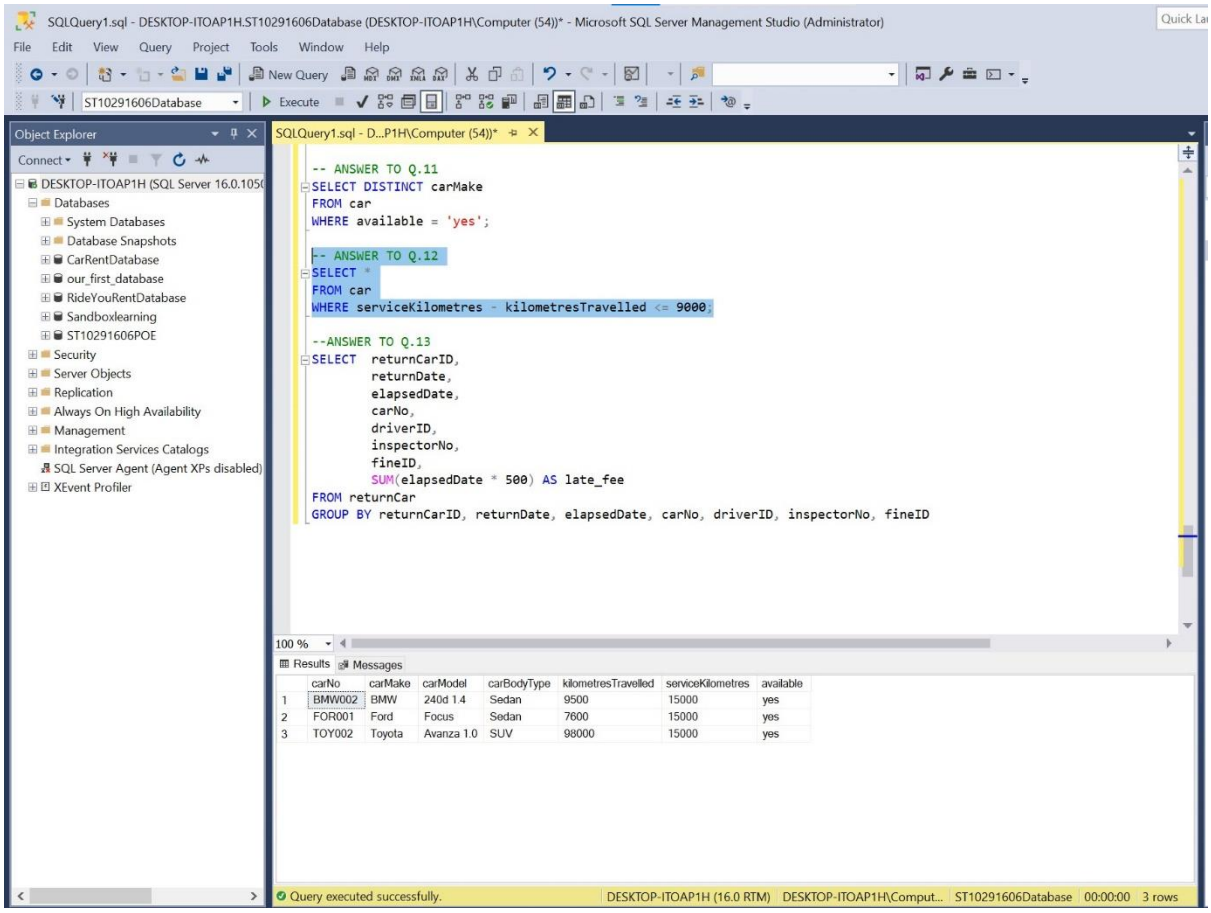
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler
SQLQuery1.sql - D...P1H\Computer (54))*
UPDATE car
SET carModel = 'Focus'
WHERE carNo = 'FOR001';
SELECT * FROM car
--ANSWER TO Q.10
SELECT rental.carNo, car.available, driver.name, driver.surname, rental.startDate, rental.endDate, rental.rentalFee
FROM rental
JOIN driver on rental.driverID = driver.driverID
JOIN car on car.carNo = rental.carNo
-- ANSWER TO Q.11
SELECT DISTINCT carMake
FROM car
WHERE available = 'yes';
-- ANSWER TO Q.12
SELECT *
FROM car
WHERE serviceKilometres - kilometresTravelled <= 9000;
--ANSWER TO Q.13
SELECT returnCarID,
returnDate,
elapsedDate,
carNo,
100 %
Results
Messages
carMake
1 BMW
2 Ford
3 Hyundai
4 Mercedes Benz
5 Toyota
Query executed successfully.
DESKTOP-ITOAP1H (16.0 RTM)
DESKTOP-ITOAP1H\Comput...
ST10291606Database
00:00:00
5 rows

QUESTION 12


SQLQuery1.sql - DESKTOP-ITOAP1H.ST10291606Database (DESKTOP-ITOAP1H\Computer (54))* - Microsoft SQL Server Management Studio (Administrator)
File Edit View Query Project Tools Window Help
New Query
ST10291606Database
Execute
Object Explorer
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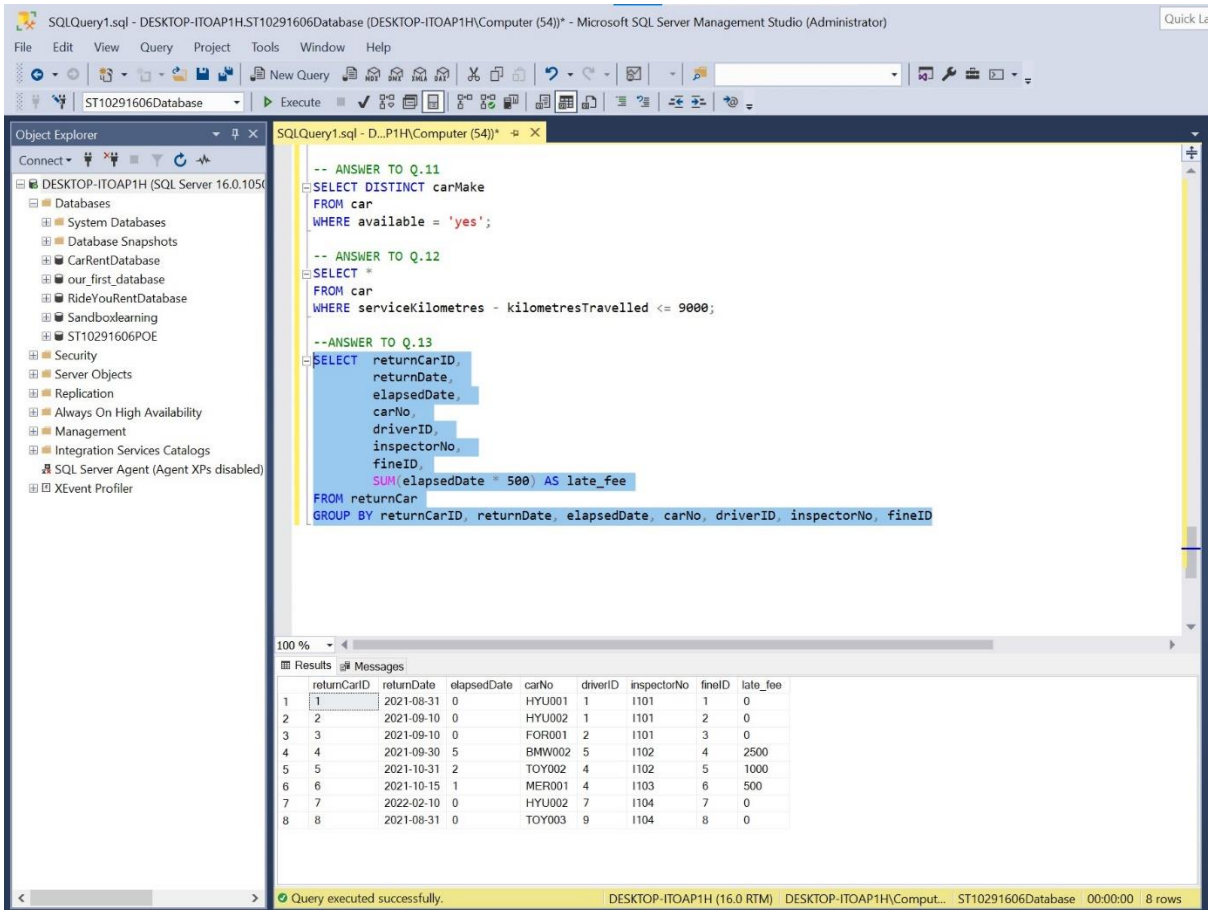
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler
SQLQuery1.sql - D...P1H\Computer (54))*
-- ANSWER TO Q.11
SELECT DISTINCT carMake
FROM car
WHERE available = 'yes';
-- ANSWER TO Q.12
SELECT *
FROM car
WHERE serviceKilometres - kilometresTravelled <= 9000;
--ANSWER TO Q.13
SELECT returnCarID,
returnDate,
elapsedDate,
carNo,
driverID,
inspectorNo,
fineID,
SUM(elapsedDate * 500) AS late_fee
FROM returnCar
GROUP BY returnCarID, returnDate, elapsedDate, carNo, driverID, inspectorNo, fineID
100 %
Results
Messages
carNo carMake carModel carBodyType kilometresTravelled serviceKilometres available
1 BMW002 BMW 240d 1.4 Sedan 9500 15000 yes
2 FOR001 Ford Focus Sedan 7600 15000 yes
3 TOY002 Toyota Avanza 1.0 SUV 98000 15000 yes
Query executed successfully.
DESKTOP-ITOAP1H (16.0 RTM)
DESKTOP-ITOAP1H\Comput...
ST10291606Database
00:00:00
3 rows

QUESTION 13


SQLQuery1.sql - DESKTOP-ITOAP1H.ST10291606Database (DESKTOP-ITOAP1H\Computer (54))* - Microsoft SQL Server Management Studio (Administrator)
File Edit View Query Project Tools Window Help
New Query
ST10291606Database
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Object Explorer
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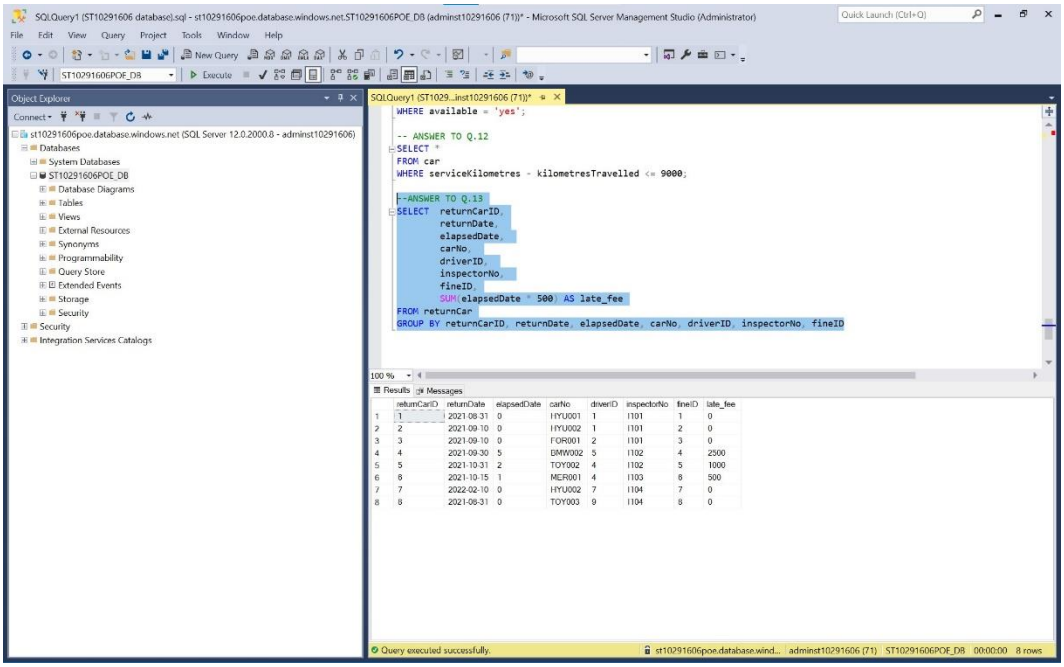
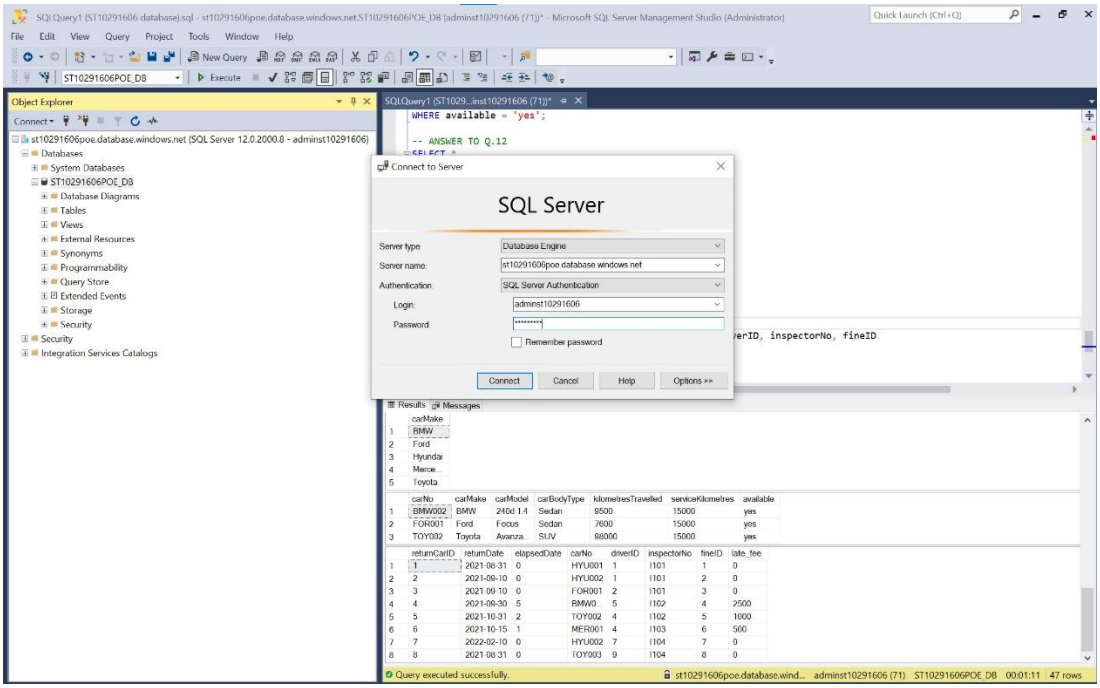
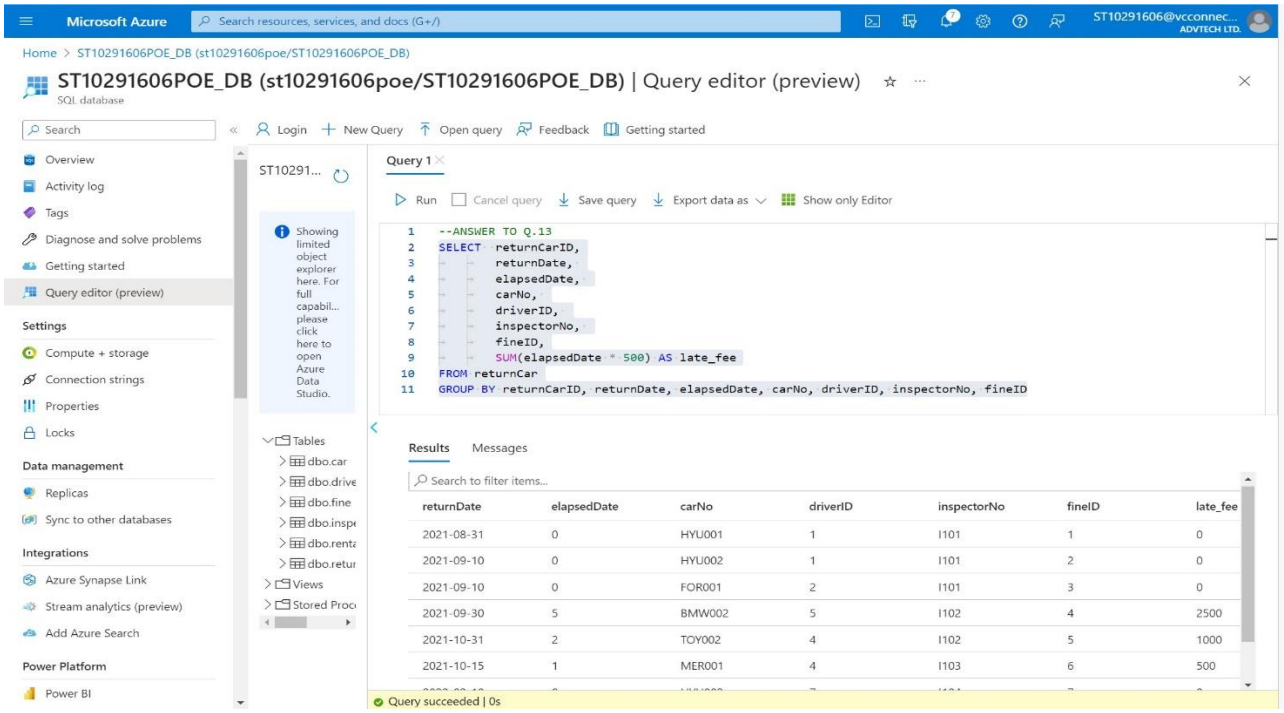
XEvent Profiler
SQLQuery1.sql - D...P1H\Computer (54))*
-- ANSWER TO Q.11
SELECT DISTINCT carMake
FROM car
WHERE available = 'yes';
-- ANSWER TO Q.12
SELECT *
FROM car
WHERE serviceKilometres - kilometresTravelled <= 9000;
--ANSWER TO Q.13
SELECT returnCarID,
returnDate,
elapsedDate,
carNo,
driverID,
inspectorNo,
fineID,
SUM(elapsedDate * 500) AS late_fee
FROM returnCar
GROUP BY returnCarID, returnDate, elapsedDate, carNo, driverID, inspectorNo, fineID
100 %
Results
Messages
returnCarID returnDate elapsedDate carNo driverID inspectorNo fineID late_fee
1 1 2021-08-31 0 HYU001 1 I101 1 0
2 2 2021-09-10 0 HYU002 1 I101 2 0
3 3 2021-09-10 0 FOR001 2 I101 3 0
4 4 2021-09-30 5 BMW002 5 I102 4 2500
5 5 2021-10-31 2 TOY002 4 I102 5 1000
6 6 2021-10-15 1 MER001 4 I103 6 500
7 7 2022-02-10 0 HYU002 7 I104 7 0
8 8 2021-08-31 0 TOY003 9 I104 8 0
Query executed successfully.
DESKTOP-ITOAP1H (16.0 RTM)
DESKTOP-ITOAP1H\Comput...
ST10291606Database
00:00:00
8 rows

PROOF OF AZURE MIGRATION







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