1.Questions

OUTPUT RESULTS:

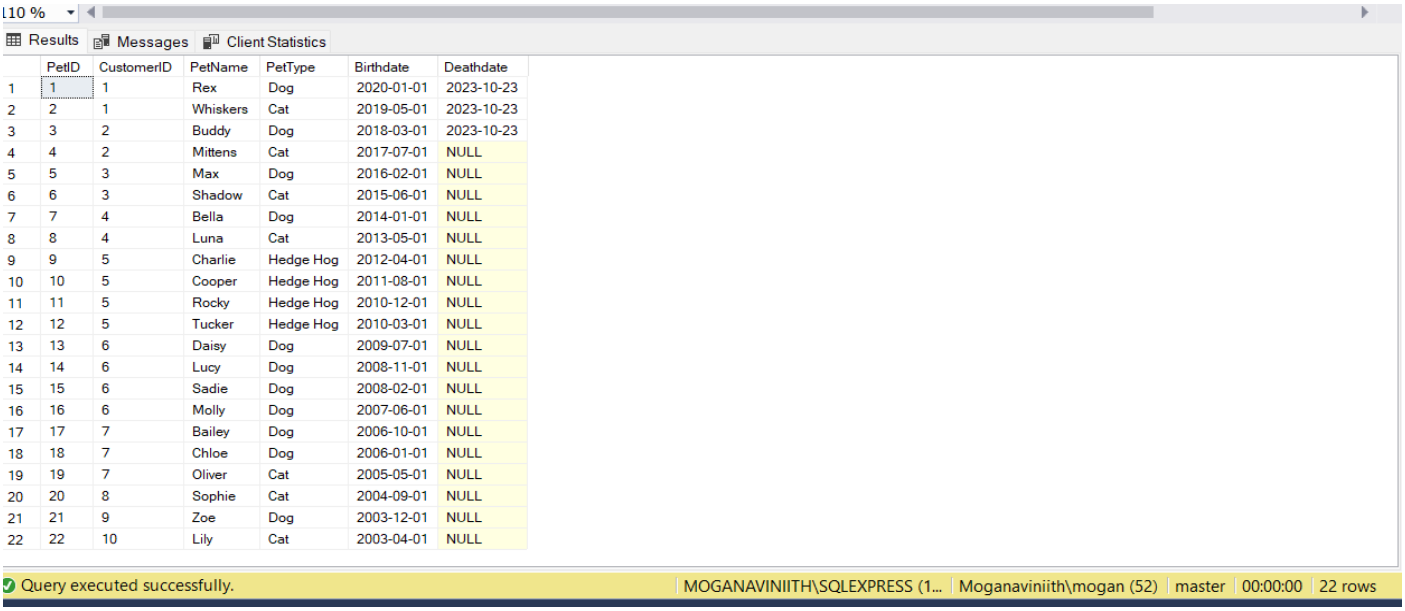
1. Create Customers Table (2 Marks) • CustomerID INT PRIMARY KEY, • FirstName VARCHAR(50), • LastName VARCHAR(50), • Email VARCHAR(100) UNIQUE, • City VARCHAR(20) Insert ten records of synthetic data into the Customers Table (values made up by you). Use three cities for the City column. (2 Marks)`

Results Messages

	CustomerID	FirstName	LastName	Email	City
1	1	John	Doe	john.doe@email.com	City1
2	2	Jane	Smith	jane.smith@email.com	City2
3	3	Bob	Johnson	bob.johnson@email.com	City3
4	4	Alice	Williams	alice.williams@email.com	City1
5	5	Charlie	Brown	charlie.brown@email.com	City2
6	6	David	Jones	david.jones@email.com	City3
7	7	Eva	Miller	eva.miller@email.com	City1
8	8	Frank	Taylor	frank.taylor@email.com	City2
9	9	Grace	Martin	grace.martin@email.com	City3
10	10	Henry	Clark	henry.clark@email.com	City1

Query executed successfully. | MOGANAVINIITH\SQLEXPRESS (1... | Moganaviniith\mogan (52) | master | 00:00:00 | 10 rows

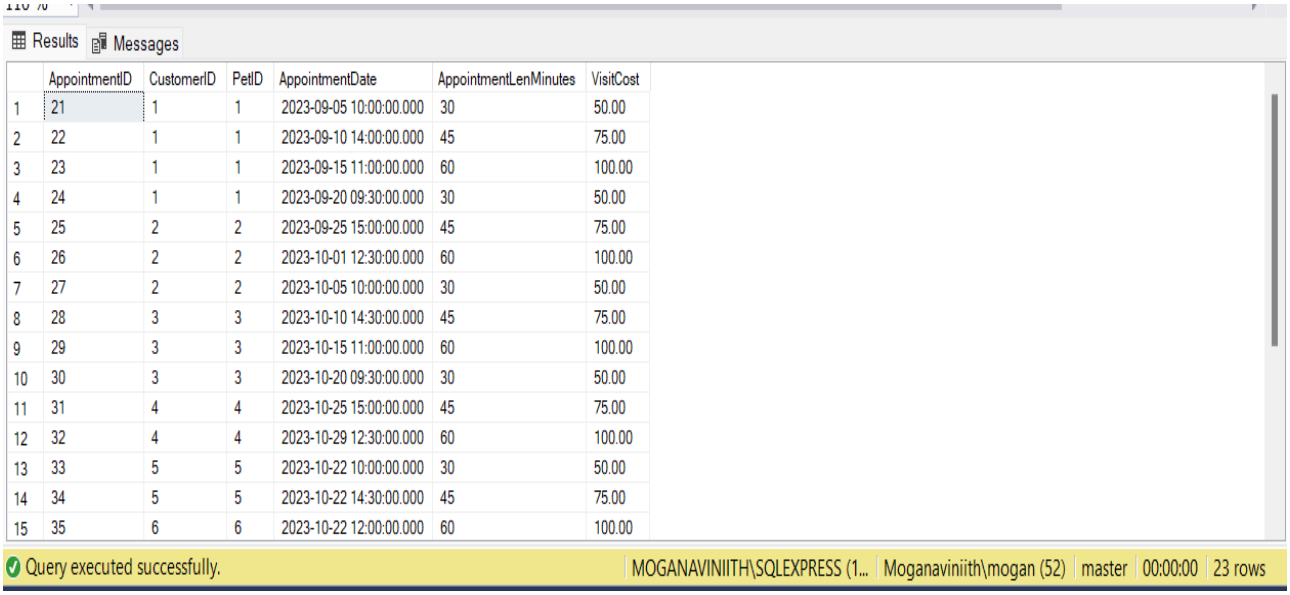
2. Create Pets Table (2 Marks) • PetID INT PRIMARY KEY, • CustomerID FOREIGN KEY REFERENCE Customers(CustomerID), • PetName VARCHAR(50), • PetType VARCHAR(50), • Birthdate DATE • Deathdate DATE Insert synthetic data (values made up by you) into the Pets Table with the following conditions (2 Marks); • Four Customers have two pets each ▪ Per person the two pets are of a different PetType • Two Customers have four pets of the same PetType • One customer has two pets of one species and one pet of another PetType • All remaining customers have one pet • One pet does not have a birth date on record • Sadly three pets died the week of October 22nd (For all others the record is NULL) • There are three PetTypes (Dog, Cat, and Hedge Hog)



	PetID	CustomerID	PetName	PetType	Birthdate	Deathdate
1	1	1	Rex	Dog	2020-01-01	2023-10-23
2	2	1	Whiskers	Cat	2019-05-01	2023-10-23
3	3	2	Buddy	Dog	2018-03-01	2023-10-23
4	4	2	Mittens	Cat	2017-07-01	NULL
5	5	3	Max	Dog	2016-02-01	NULL
6	6	3	Shadow	Cat	2015-06-01	NULL
7	7	4	Bella	Dog	2014-01-01	NULL
8	8	4	Luna	Cat	2013-05-01	NULL
9	9	5	Charlie	Hedge Hog	2012-04-01	NULL
10	10	5	Cooper	Hedge Hog	2011-08-01	NULL
11	11	5	Rocky	Hedge Hog	2010-12-01	NULL
12	12	5	Tucker	Hedge Hog	2010-03-01	NULL
13	13	6	Daisy	Dog	2009-07-01	NULL
14	14	6	Lucy	Dog	2008-11-01	NULL
15	15	6	Sadie	Dog	2008-02-01	NULL
16	16	6	Molly	Dog	2007-06-01	NULL
17	17	7	Bailey	Dog	2006-10-01	NULL
18	18	7	Chloe	Dog	2006-01-01	NULL
19	19	7	Oliver	Cat	2005-05-01	NULL
20	20	8	Sophie	Cat	2004-09-01	NULL
21	21	9	Zoe	Dog	2003-12-01	NULL
22	22	10	Lily	Cat	2003-04-01	NULL

Query executed successfully. MOGANAVINIITH\SQLEXPRESS (1... Moganaviniith\mogan (52) master 00:00:00 22 rows

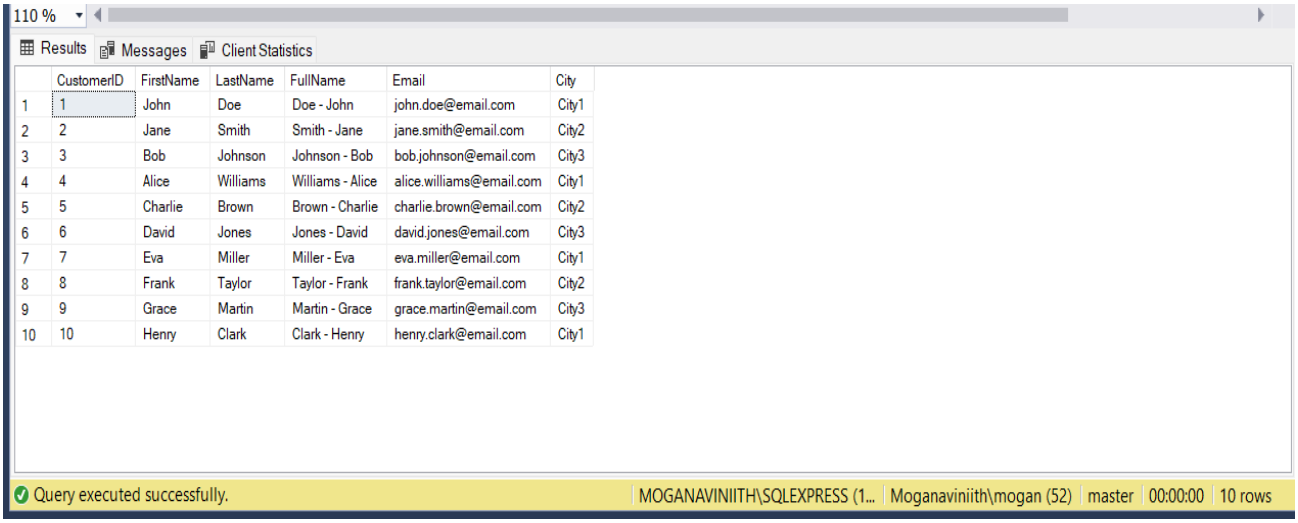
3. Create Appointments Table (2 Marks) • AppointmentID INT PRIMARY KEY, • CustomerID FOREIGN KEY REFERENCE Customers(CustomerID), • PetID FOREIGN KEY REFERENCE Pets(PetID), • AppointmentDate DATETIME, • AppointmentLenMinutes INT • VisitCost DECIMAL(8,2) Insert synthetic data (values made up by you) into the Appointments Table with the following conditions (2 Marks); • All appointments occurred between September 1, 2023 and October 31, 2023 • One pet had four appointments • Two pets had three appointments • Three pets had two appointments • Four pets had one appointment • One of the pets that died had an appointment a week before they passed away • Two of the pets had an appointment the day they passed away. • All other pets did not have an appointment



	AppointmentID	CustomerID	PetID	AppointmentDate	AppointmentLenMinutes	VisitCost
1	21	1	1	2023-09-05 10:00:00.000	30	50.00
2	22	1	1	2023-09-10 14:00:00.000	45	75.00
3	23	1	1	2023-09-15 11:00:00.000	60	100.00
4	24	1	1	2023-09-20 09:30:00.000	30	50.00
5	25	2	2	2023-09-25 15:00:00.000	45	75.00
6	26	2	2	2023-10-01 12:30:00.000	60	100.00
7	27	2	2	2023-10-05 10:00:00.000	30	50.00
8	28	3	3	2023-10-10 14:30:00.000	45	75.00
9	29	3	3	2023-10-15 11:00:00.000	60	100.00
10	30	3	3	2023-10-20 09:30:00.000	30	50.00
11	31	4	4	2023-10-25 15:00:00.000	45	75.00
12	32	4	4	2023-10-29 12:30:00.000	60	100.00
13	33	5	5	2023-10-22 10:00:00.000	30	50.00
14	34	5	5	2023-10-22 14:30:00.000	45	75.00
15	35	6	6	2023-10-22 12:00:00.000	60	100.00

Query executed successfully. MOGANAVINIITH\SQLEXPRESS (1... Moganaviniith\mogan (52) master 00:00:00 23 rows

4. In the Customers table create a variable that contains each customer's full name called fullname, using the following format "last name - first name" (2 Marks)



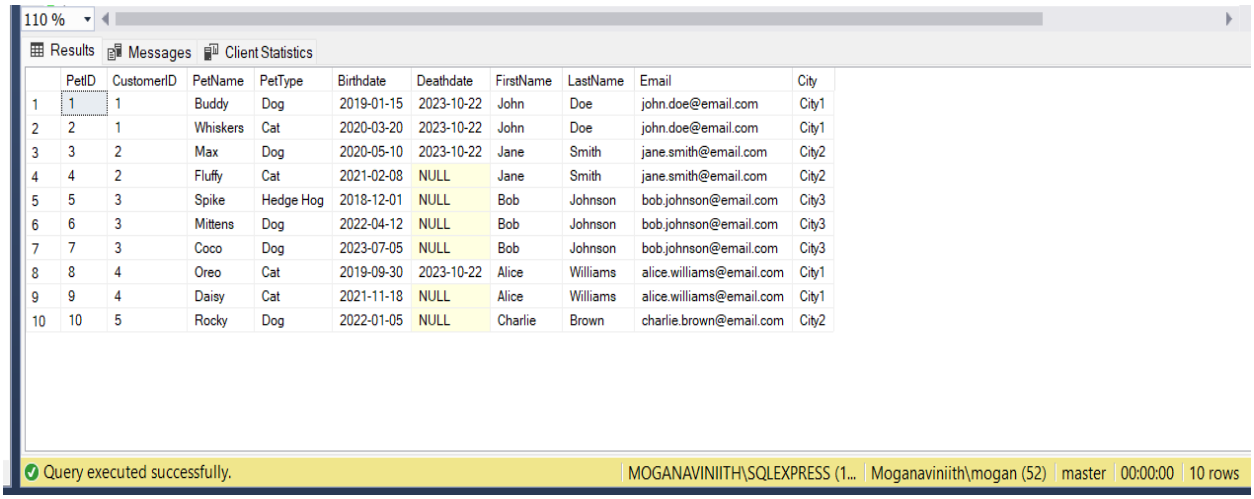
110 %

Results | Messages | Client Statistics

	CustomerID	FirstName	LastName	FullName	Email	City
1	1	John	Doe	Doe - John	john.doe@email.com	City1
2	2	Jane	Smith	Smith - Jane	jane.smith@email.com	City2
3	3	Bob	Johnson	Johnson - Bob	bob.johnson@email.com	City3
4	4	Alice	Williams	Williams - Alice	alice.williams@email.com	City1
5	5	Charlie	Brown	Brown - Charlie	charlie.brown@email.com	City2
6	6	David	Jones	Jones - David	david.jones@email.com	City3
7	7	Eva	Miller	Miller - Eva	eva.miller@email.com	City1
8	8	Frank	Taylor	Taylor - Frank	frank.taylor@email.com	City2
9	9	Grace	Martin	Martin - Grace	grace.martin@email.com	City3
10	10	Henry	Clark	Clark - Henry	henry.clark@email.com	City1

Query executed successfully. | MOGANAVINIITH\SQLEXPRESS (1... | Moganaviniith\mogan (52) | master | 00:00:00 | 10 rows

5. Then create a table that has all of the pet information per pet along with each pet's owner's information. (2 Marks)



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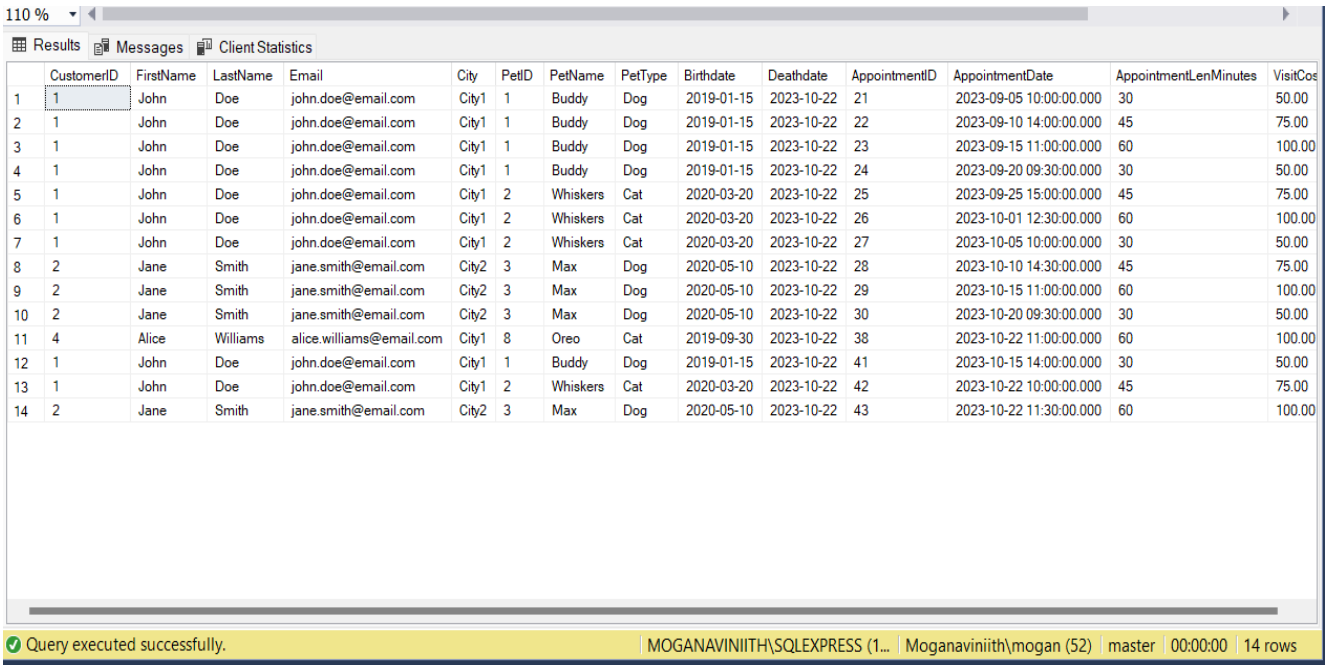
Results | Messages | Client Statistics

	PetID	CustomerID	PetName	PetType	Birthdate	Deathdate	FirstName	LastName	Email	City
1	1	1	Buddy	Dog	2019-01-15	2023-10-22	John	Doe	john.doe@email.com	City1
2	2	1	Whiskers	Cat	2020-03-20	2023-10-22	John	Doe	john.doe@email.com	City1
3	3	2	Max	Dog	2020-05-10	2023-10-22	Jane	Smith	jane.smith@email.com	City2
4	4	2	Fluffy	Cat	2021-02-08	NULL	Jane	Smith	jane.smith@email.com	City2
5	5	3	Spike	Hedge Hog	2018-12-01	NULL	Bob	Johnson	bob.johnson@email.com	City3
6	6	3	Mittens	Dog	2022-04-12	NULL	Bob	Johnson	bob.johnson@email.com	City3
7	7	3	Coco	Dog	2023-07-05	NULL	Bob	Johnson	bob.johnson@email.com	City3
8	8	4	Oreo	Cat	2019-09-30	2023-10-22	Alice	Williams	alice.williams@email.com	City1
9	9	4	Daisy	Cat	2021-11-18	NULL	Alice	Williams	alice.williams@email.com	City1
10	10	5	Rocky	Dog	2022-01-05	NULL	Charlie	Brown	charlie.brown@email.com	City2

Query executed successfully. | MOGANAVINIITH\SQLEXPRESS (1... | Moganaviniith\mogan (52) | master | 00:00:00 | 10 rows

6. Create a table that has the customer, pet, and all appointment information for those pets who passed away. (4 Marks)



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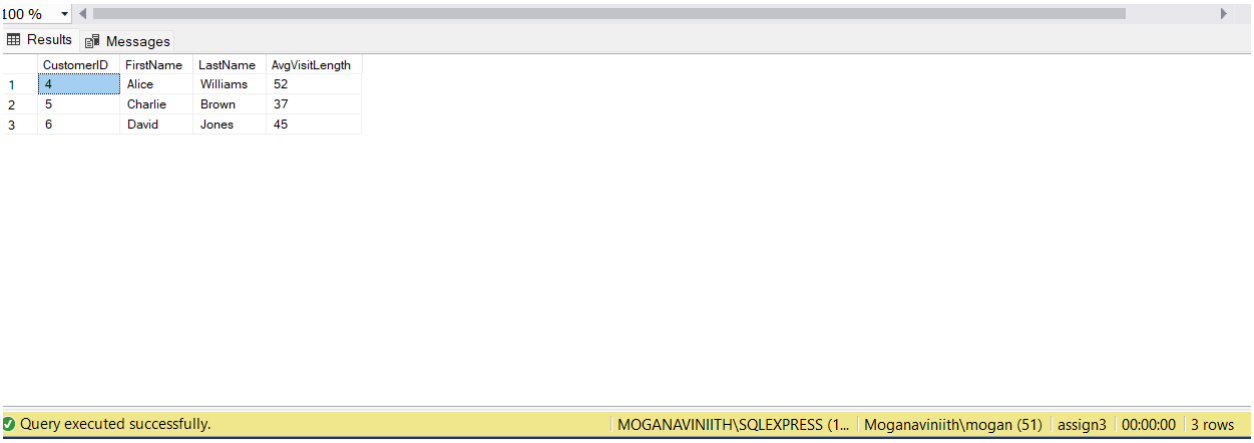
Results | Messages | Client Statistics

	CustomerID	FirstName	LastName	Email	City	PetID	PetName	PetType	Birthdate	Deathdate	AppointmentID	AppointmentDate	AppointmentLenMinutes	VisitCos
1	1	John	Doe	john.doe@email.com	City1	1	Buddy	Dog	2019-01-15	2023-10-22	21	2023-09-05 10:00:00.000	30	50.00
2	1	John	Doe	john.doe@email.com	City1	1	Buddy	Dog	2019-01-15	2023-10-22	22	2023-09-10 14:00:00.000	45	75.00
3	1	John	Doe	john.doe@email.com	City1	1	Buddy	Dog	2019-01-15	2023-10-22	23	2023-09-15 11:00:00.000	60	100.00
4	1	John	Doe	john.doe@email.com	City1	1	Buddy	Dog	2019-01-15	2023-10-22	24	2023-09-20 09:30:00.000	30	50.00
5	1	John	Doe	john.doe@email.com	City1	2	Whiskers	Cat	2020-03-20	2023-10-22	25	2023-09-25 15:00:00.000	45	75.00
6	1	John	Doe	john.doe@email.com	City1	2	Whiskers	Cat	2020-03-20	2023-10-22	26	2023-10-01 12:30:00.000	60	100.00
7	1	John	Doe	john.doe@email.com	City1	2	Whiskers	Cat	2020-03-20	2023-10-22	27	2023-10-05 10:00:00.000	30	50.00
8	2	Jane	Smith	jane.smith@email.com	City2	3	Max	Dog	2020-05-10	2023-10-22	28	2023-10-10 14:30:00.000	45	75.00
9	2	Jane	Smith	jane.smith@email.com	City2	3	Max	Dog	2020-05-10	2023-10-22	29	2023-10-15 11:00:00.000	60	100.00
10	2	Jane	Smith	jane.smith@email.com	City2	3	Max	Dog	2020-05-10	2023-10-22	30	2023-10-20 09:30:00.000	30	50.00
11	4	Alice	Williams	alice.williams@email.com	City1	8	Oreo	Cat	2019-09-30	2023-10-22	38	2023-10-22 11:00:00.000	60	100.00
12	1	John	Doe	john.doe@email.com	City1	1	Buddy	Dog	2019-01-15	2023-10-22	41	2023-10-15 14:00:00.000	30	50.00
13	1	John	Doe	john.doe@email.com	City1	2	Whiskers	Cat	2020-03-20	2023-10-22	42	2023-10-22 10:00:00.000	45	75.00
14	2	Jane	Smith	jane.smith@email.com	City2	3	Max	Dog	2020-05-10	2023-10-22	43	2023-10-22 11:30:00.000	60	100.00

Query executed successfully. | MOGANAVINIITH\SQLEXPRESS (1... | Moganaviniith\mogan (52) | master | 00:00:00 | 14 rows

7. Create a table that has the average length of a visit, in decimal, for customers who had more than one visit and their pet did not pass away. (4 Marks)



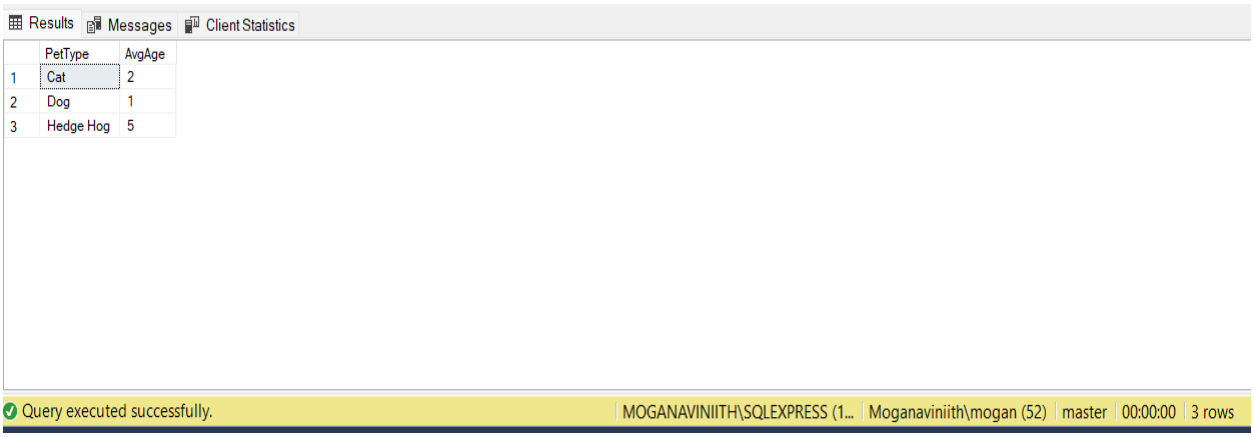
100 %

Results | Messages

	CustomerID	FirstName	LastName	AvgVisitLength
1	4	Alice	Williams	52
2	5	Charlie	Brown	37
3	6	David	Jones	45

Query executed successfully. | MOGANAVINIITH\SQLEXPRESS (1... | Moganaviniith\mogan (51) | assign3 | 00:00:00 | 3 rows

8. Utilize WINDOW functions to calculate the average age of pets as of September 31, 2023 by PetType (3 Marks)

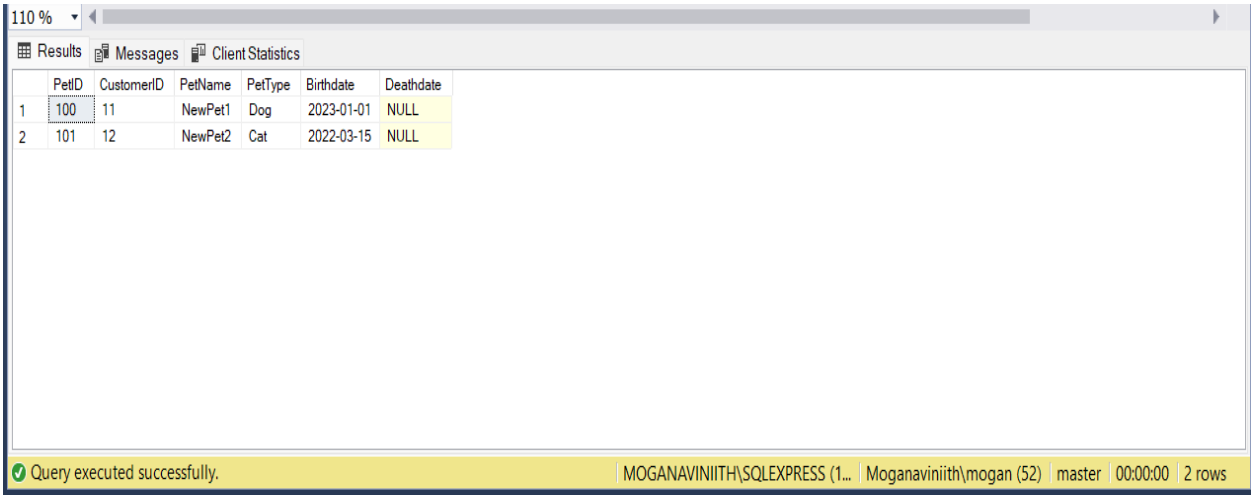


Results | Messages | Client Statistics

	PetType	AvgAge
1	Cat	2
2	Dog	1
3	Hedge Hog	5

Query executed successfully. | MOGANAVINIITH\SQLEXPRESS (1... | Moganaviniith\mogan (52) | master | 00:00:00 | 3 rows

9. Use EXCEPT to create a table for those pets who do not exist in the Appointments table and have not passed away. (3 Marks)

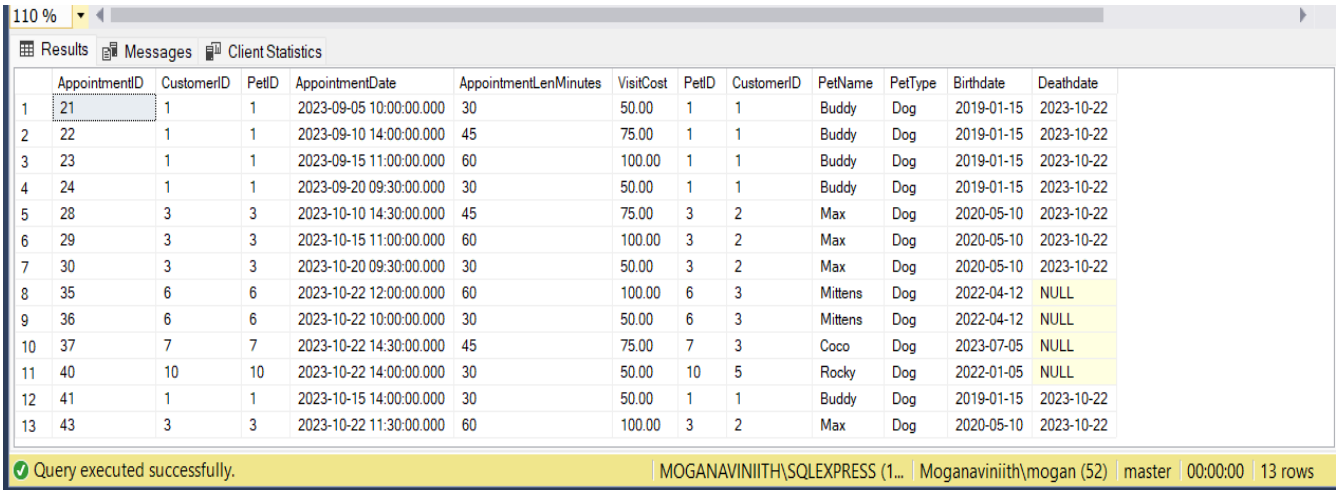


110 % | Results | Messages | Client Statistics

	PetID	CustomerID	PetName	PetType	Birthdate	Deathdate
1	100	11	NewPet1	Dog	2023-01-01	NULL
2	101	12	NewPet2	Cat	2022-03-15	NULL

Query executed successfully. | MOGANAVINIITH\SQLEXPRESS (1... | Moganaviniith\mogan (52) | master | 00:00:00 | 2 rows

10. Create a stored procedure that returns all of the appointment records for pets that filters on PetType. (4 Marks)



110 % | Results | Messages | Client Statistics

	AppointmentID	CustomerID	PetID	AppointmentDate	AppointmentLenMinutes	VisitCost	PetID	CustomerID	PetName	PetType	Birthdate	Deathdate
1	21	1	1	2023-09-05 10:00:00.000	30	50.00	1	1	Buddy	Dog	2019-01-15	2023-10-22
2	22	1	1	2023-09-10 14:00:00.000	45	75.00	1	1	Buddy	Dog	2019-01-15	2023-10-22
3	23	1	1	2023-09-15 11:00:00.000	60	100.00	1	1	Buddy	Dog	2019-01-15	2023-10-22
4	24	1	1	2023-09-20 09:30:00.000	30	50.00	1	1	Buddy	Dog	2019-01-15	2023-10-22
5	28	3	3	2023-10-10 14:30:00.000	45	75.00	3	2	Max	Dog	2020-05-10	2023-10-22
6	29	3	3	2023-10-15 11:00:00.000	60	100.00	3	2	Max	Dog	2020-05-10	2023-10-22
7	30	3	3	2023-10-20 09:30:00.000	30	50.00	3	2	Max	Dog	2020-05-10	2023-10-22
8	35	6	6	2023-10-22 12:00:00.000	60	100.00	6	3	Mittens	Dog	2022-04-12	NULL
9	36	6	6	2023-10-22 10:00:00.000	30	50.00	6	3	Mittens	Dog	2022-04-12	NULL
10	37	7	7	2023-10-22 14:30:00.000	45	75.00	7	3	Coco	Dog	2023-07-05	NULL
11	40	10	10	2023-10-22 14:00:00.000	30	50.00	10	5	Rocky	Dog	2022-01-05	NULL
12	41	1	1	2023-10-15 14:00:00.000	30	50.00	1	1	Buddy	Dog	2019-01-15	2023-10-22
13	43	3	3	2023-10-22 11:30:00.000	60	100.00	3	2	Max	Dog	2020-05-10	2023-10-22

Query executed successfully. | MOGANAVINIITH\SQLEXPRESS (1... | Moganaviniith\mogan (52) | master | 00:00:00 | 13 rows

11. Calculate the total Visit Cost revenue by customer City. (4 Marks)