

DATA 4330

Chase Bowen

Data Wrangling Assignment

Question 1:

CREATE TRIGGER trgAnimal\_Insert

ON Animal

AFTER INSERT

AS

INSERT INTO Animal\_Audit (CreationTime, AnimalID, Name)

SELECT GETDATE(), AnimalID, Name FROM INSERTED

GO

CREATE TRIGGER trgVaccination\_Insert

ON Vaccination

AFTER INSERT

AS

INSERT INTO Vaccination\_Audit (CreationTime, AnimalID, VaccineType)

SELECT GETDATE(), AnimalID, VaccineType FROM INSERTED

GO

Question 1 Test:

```
INSERT INTO Animal (Name, Species, Breed, AGE, Gender, Status, DateAdded)
VALUES ('Maximilian', 'Dog', 'Schnauzer', 2, 'Male', 'Available', GETDATE());
```

```
SELECT * FROM Animal;
```

```
SELECT * FROM Animal_Audit;
```

Results								Messages	
	AnimalID	Name	Species	Breed	AGE	Gender	Status	DateAdded	
29	29	Duke	Dog	Cocker Spaniel	3	Male	Available	2024-10-29	
30	30	Sophie	Cat	Ragdoll	4	Female	Available	2024-11-12	
31	31	Thumper	Rabbit	Dutch	2	Male	Available	2024-11-06	
32	32	Milo	Dog	Poodle	5	Male	Available	2024-10-20	
33	33	Bella	Cat	Domestic Shorthair	1	Female	Available	2024-11-02	
34	34	Poppy	Rabbit	Mini Lop	3	Female	Available	2024-11-07	
35	35	Rex	Dog	Australian Shepherd	2	Male	Available	2024-10-18	
36	36	Maximilian	Dog	Schnauzer	2	Male	Available	2025-11-15	

	CreationTime	AnimalID	Name	
1	2025-11-15 16:11:07.727	36	Maximilian	

Query exe... | stairway.usu.edu (13.0 SP3) | 4330\_chasebowen (59) | 4330\_chasebowen | 00:00:00 | 37 rows

```
INSERT INTO Vaccination (AnimalID, VaccineType, DateAdministered, AdministeredBY)
VALUES (36, 'Parvo', '2024-11-05', 5);
```

```
SELECT * FROM Vaccination;
```

```
SELECT * FROM Vaccination_Audit;
```

Results						Messages	
	VaccinationID	AnimalID	VaccineType	DateAdministered	AdministeredBY		
46	46	30	Parvovirus	2024-12-01	15		
47	47	30	Rabies	2024-12-01	15		
48	48	31	Bordetella	2024-12-02	2		
49	49	32	Rabies	2024-12-03	9		
50	50	32	Parvovirus	2024-12-03	9		
51	51	32	Leptospiro...	2024-12-03	9		
52	52	34	Rabies	2024-11-30	15		
53	53	36	Parvo	2024-11-05	5		

	CreationTime	AnimalID	VaccineType	
1	2025-11-15 16:14:34.613	36	Parvo	

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## Question 2

```
SELECT A.AnimalID, Name, Species, Status, VaccinationID, VaccineType, EmployeeID,  
Fname, Lname  
FROM Animal A  
LEFT JOIN Vaccination V on A.AnimalID = V.AnimalID  
LEFT JOIN Employees E on V.AdministeredBY = E.EmployeeID;
```

Results Messages

	AnimalID	Name	Species	Status	VaccinationID	VaccineType	EmployeeID	Fname	Lname
1	1	Bella	Dog	Available	1	Rabies	4	Meg	Jones
2	1	Bella	Dog	Available	2	Parvo	4	Meg	Jones
3	2	Max	Cat	Adopted	NULL	NULL	NULL	NULL	NULL
4	3	Daisy	Dog	Available	3	Rabies	4	Meg	Jones
5	3	Daisy	Dog	Available	4	Distemper	4	Meg	Jones
6	4	Charlie	Rabbit	Available	5	Parvo	5	William	Ford
7	5	Luna	Dog	Available	NULL	NULL	NULL	NULL	NULL
8	6	Data Bleu	Dog	Adopted	6	Rabies	3	Daphne	Anderson
9	6	Data Bleu	Dog	Adopted	17	Parvovirus	3	Daphne	Anderson
10	7	Calvin	Dog	Adopted	7	Distemper	2	Max	Orwell
11	7	Calvin	Dog	Adopted	19	Rabies	2	Max	Orwell

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### Question 3

```
CREATE TABLE Vaccine_Analysis (
```

```
    AnimalID INT,  
    Name CHAR(30),  
    Species CHAR(30),  
    Status CHAR(30),  
    VaccinationID INT,  
    VaccineType CHAR(50),  
    EmployeeID INT,  
    Fname CHAR(30),  
    Lname CHAR(30)
```

```
)
```

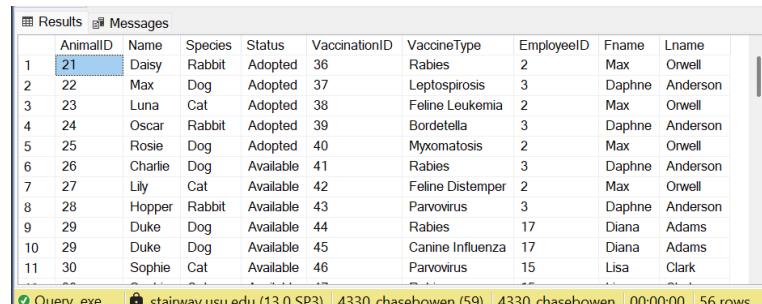
```
INSERT INTO Vaccine_Analysis (AnimalID, Name, Species, Status, VaccinationID,  
VaccineType, EmployeeID, Fname, Lname)
```

```
SELECT A.AnimalID, Name, Species, Status, VaccinationID, VaccineType, EmployeeID,  
Fname, Lname  
FROM Animal A
```

```
LEFT JOIN Vaccination V on A.AnimalID = V.AnimalID
```

```
LEFT JOIN Employees E on V.AdministeredBY = E.EmployeeID;
```

```
SELECT * FROM Vaccine_Analysis;
```



	AnimalID	Name	Species	Status	VaccinationID	VaccineType	EmployeeID	Fname	Lname	
1	21	Daisy	Rabbit	Adopted	36	Rabies	2	Max	Orwell	
2	22	Max	Dog	Adopted	37	Leptospirosis	3	Daphne	Anderson	
3	23	Luna	Cat	Adopted	38	Feline Leukemia	2	Max	Orwell	
4	24	Oscar	Rabbit	Adopted	39	Bordetella	3	Daphne	Anderson	
5	25	Rosie	Dog	Adopted	40	Myxomatosis	2	Max	Orwell	
6	26	Charlie	Dog	Available	41	Rabies	3	Daphne	Anderson	
7	27	Lily	Cat	Available	42	Feline Distemper	2	Max	Orwell	
8	28	Hopper	Rabbit	Available	43	Parvovirus	3	Daphne	Anderson	
9	29	Duke	Dog	Available	44	Rabies	17	Diana	Adams	
10	29	Duke	Dog	Available	45	Canine Influenza	17	Diana	Adams	
11	30	Sophie	Cat	Available	46	Parvovirus	15	Lisa	Clark	

```
Query exec... stairway.usu.edu (13.0 SP3) 4330_chasebowen (59) 4330_chasebowen 00:00:00 56 rows
```

## Question 4

UPDATE Vaccine\_Analysis

SET Status = 'Adopted'

WHERE AnimalID = 1;

UPDATE Vaccine\_Analysis

SET VaccineType = 'Parvovirus'

WHERE VaccineType = 'Parvo';

DELETE FROM Vaccine\_Analysis

WHERE AnimalID = 27;

UPDATE Vaccine\_Analysis

SET Fname = RTRIM(Fname);

SELECT \* FROM Vaccine\_Analysis;

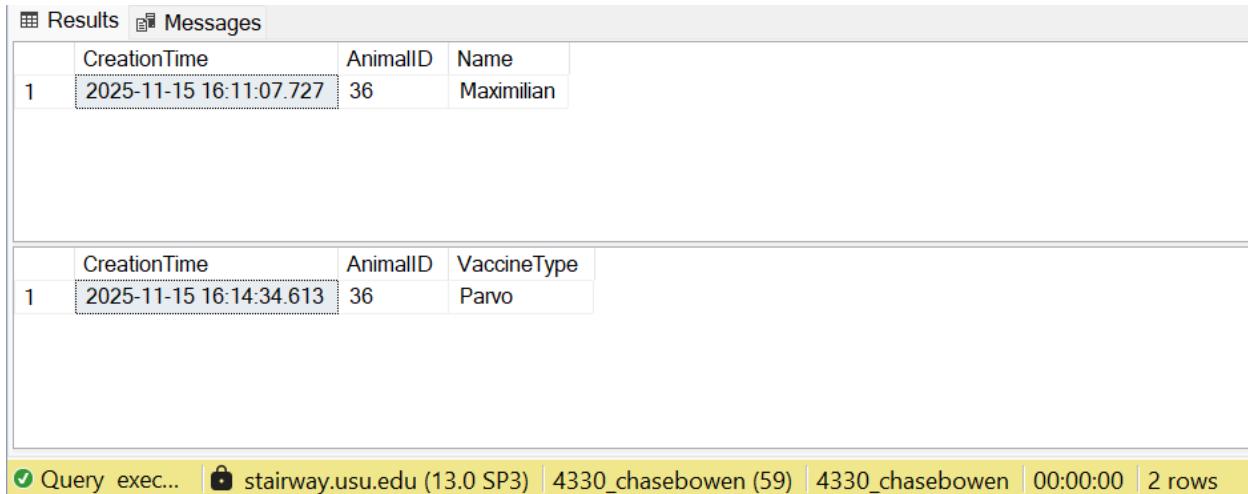
	AnimalID	Name	Species	Status	VaccinationID	VaccineType	EmployeeID	Fname	Lname
1	21	Daisy	Rabbit	Adopted	36	Rabies	2	Max	Orwell
2	22	Max	Dog	Adopted	37	Leptospirosis	3	Daphne	Anderson
3	23	Luna	Cat	Adopted	38	Feline Leukemia	2	Max	Orwell
4	24	Oscar	Rabbit	Adopted	39	Bordetella	3	Daphne	Anderson
5	25	Rosie	Dog	Adopted	40	Myxomatosis	2	Max	Orwell
6	26	Charlie	Dog	Available	41	Rabies	3	Daphne	Anderson
7	28	Hopper	Rabbit	Available	43	Parvovirus	3	Daphne	Anderson
8	29	Duke	Dog	Available	44	Rabies	17	Diana	Adams
9	29	Duke	Dog	Available	45	Canine Influenza	17	Diana	Adams
10	30	Sophie	Cat	Available	46	Parvovirus	15	Lisa	Clark
11	30	Sophie	Cat	Available	47	Rabies	15	Lisa	Clark

Query exe... | stairway.usu.edu (13.0 SP3) | 4330\_chasebowen (59) | 4330\_chasebowen | 00:00:00 | 55 rows

## Question 5

```
SELECT * FROM Animal_Audit;
```

```
SELECT * FROM Vaccination_Audit;
```



The screenshot shows a SQL query results window with two tables displayed:

	CreationTime	AnimalID	Name
1	2025-11-15 16:11:07.727	36	Maximilian

	CreationTime	AnimalID	VaccineType
1	2025-11-15 16:14:34.613	36	Parvo

At the bottom of the window, the status bar indicates: **Query exec...** | **stairway.usu.edu (13.0 SP3)** | **4330\_chasebowen (59)** | **4330\_chasebowen** | **00:00:00** | **2 rows**

There is no record of any changes to the Vaccine\_Analysis temp table because the trigger is set to change when the original Animal and Vaccination tables are edited, not our temporary table.

## Question 6

```
SELECT AnimalID, Name,  
    ISNULL([Rabies], 'NO') AS Rabies,  
    ISNULL([Parvovirus], 'NO') AS Parvovirus,  
    ISNULL([Bordetella], 'NO') AS Bordetella,  
    ISNULL([Leptospirosis], 'NO') AS Leptospirosis,  
    ISNULL([Feline Leukemia], 'NO') AS [Feline Leukemia],  
    ISNULL([Myxomatosis], 'NO') AS Myxomatosis,  
    ISNULL([Canine Influenza], 'NO') AS [Canine Influenza],  
    ISNULL([Distemper], 'NO') AS Distemper  
FROM(  
    SELECT AnimalID, Name, VaccineType, 'YES' AS Value  
    FROM Vaccine_Analysis  
    WHERE Status = 'Available'  
) AS VaccineAssessment  
PIVOT (  
    MAX(Value) FOR VaccineType IN ([Rabies], [Parvovirus], [Bordetella], [Leptospirosis],  
        [Feline Leukemia], [Myxomatosis], [Canine Influenza], [Distemper])  
) AS Vaccines  
ORDER BY AnimalID;
```

Results Messages

	AnimalID	Name	Rabies	Parvovirus	Bordetella	Leptospirosis	Feline Leukemia	Myxomatosis	Canine Influ
1	3	Daisy	YES	NO	NO	NO	NO	NO	NO
2	4	Charlie	NO	YES	NO	NO	NO	NO	NO
3	5	Luna	NO	NO	NO	NO	NO	NO	NO
4	9	Rocky	YES	YES	NO	NO	NO	YES	NO
5	10	Coco	YES	YES	NO	NO	YES	NO	NO
6	12	Snowball	YES	NO	NO	NO	NO	NO	NO
7	13	Shadow	NO	YES	NO	NO	NO	NO	NO
8	15	Peanut	YES	YES	NO	YES	NO	NO	NO
9	17	Bubbles	YES	NO	YES	NO	NO	NO	NO
10	26	Charlie	YES	NO	NO	NO	NO	NO	NO
	..	..	..	..	..	..	..	..	..

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