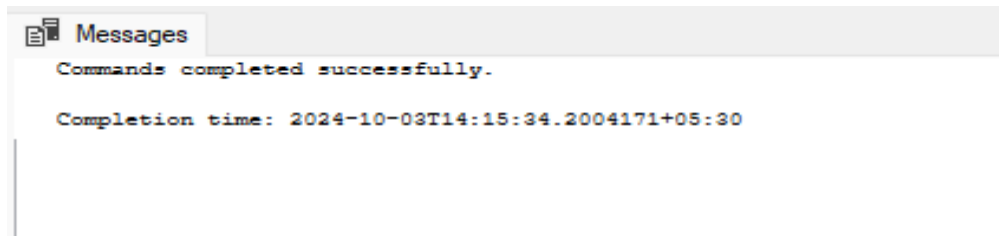


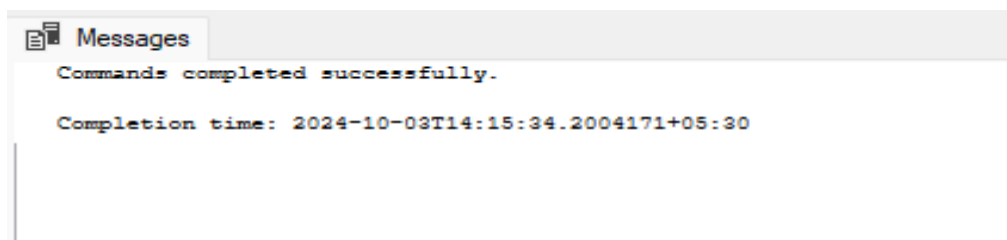
# CODING CHALLENGE 1

-- 1. Create the database for PetPals

**CREATE DATABASE PetPals;**



**USE PetPals;**



**CREATE TABLE Pets (**

**PetID INT PRIMARY KEY,**

**Name VARCHAR(50) NOT NULL,**

**Age INT NOT NULL,**

**Breed VARCHAR(50) NOT NULL,**

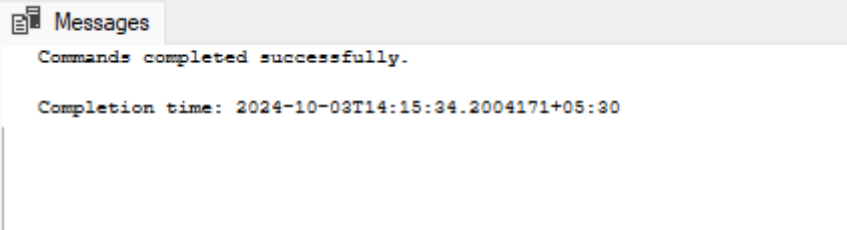
**Type VARCHAR(20) NOT NULL,**

**AvailableForAdoption BIT NOT NULL,**

**OwnerID INT NULL -- To handle pets that may or may not have an owner**

**);**

# CODING CHALLENGE 1



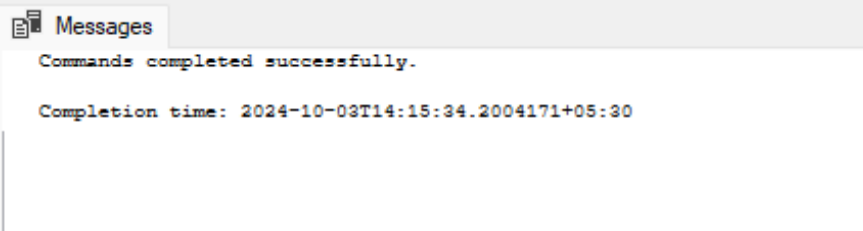
Messages

Commands completed successfully.

Completion time: 2024-10-03T14:15:34.2004171+05:30

IF NOT EXISTS (SELECT \* FROM INFORMATION\_SCHEMA.TABLES WHERE  
TABLE\_NAME = 'Shelters')

```
CREATE TABLE Shelters (  
    ShelterID INT PRIMARY KEY,  
    Name VARCHAR(100) NOT NULL,  
    Location VARCHAR(100) NOT NULL  
);
```



Messages

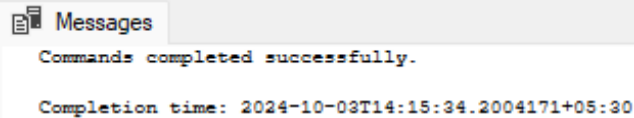
Commands completed successfully.

Completion time: 2024-10-03T14:15:34.2004171+05:30

IF NOT EXISTS (SELECT \* FROM INFORMATION\_SCHEMA.TABLES WHERE  
TABLE\_NAME = 'Donations')

```
CREATE TABLE Donations (  
    DonationID INT PRIMARY KEY,  
    DonorName VARCHAR(100) NOT NULL,  
    DonationType VARCHAR(50) NOT NULL,  
    DonationAmount DECIMAL(10, 2),  
    DonationItem VARCHAR(100),  
    DonationDate DATETIME NOT NULL  
);
```

# CODING CHALLENGE 1



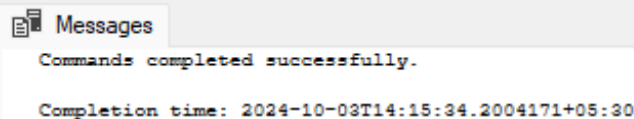
Messages

Commands completed successfully.

Completion time: 2024-10-03T14:15:34.2004171+05:30

IF NOT EXISTS (SELECT \* FROM INFORMATION\_SCHEMA.TABLES WHERE  
TABLE\_NAME = 'AdoptionEvents')

```
CREATE TABLE AdoptionEvents (  
    EventID INT PRIMARY KEY,  
    EventName VARCHAR(100) NOT NULL,  
    EventDate DATETIME NOT NULL,  
    Location VARCHAR(100) NOT NULL  
);
```



Messages

Commands completed successfully.

Completion time: 2024-10-03T14:15:34.2004171+05:30

IF NOT EXISTS (SELECT \* FROM INFORMATION\_SCHEMA.TABLES WHERE  
TABLE\_NAME = 'Participants')

```
CREATE TABLE Participants (  
    ParticipantID INT PRIMARY KEY,  
    ParticipantName VARCHAR(100) NOT NULL,  
    ParticipantType VARCHAR(20) NOT NULL,  
    EventID INT,  
    FOREIGN KEY (EventID) REFERENCES AdoptionEvents(EventID)  
);
```

# CODING CHALLENGE 1

```
Messages
Commands completed successfully.

Completion time: 2024-10-03T14:15:34.2004171+05:30
```

-- 3. Insert sample data into the tables

```
INSERT INTO Pets (PetID, Name, Age, Breed, Type, AvailableForAdoption) VALUES
(1, 'Buddy', 3, 'Golden Retriever', 'Dog', 1),
(2, 'Mittens', 2, 'Siamese', 'Cat', 1),
(3, 'Charlie', 5, 'Bulldog', 'Dog', 0),
(4, 'Whiskers', 1, 'Persian', 'Cat', 1);
```

```
Messages
(4 rows affected)

Completion time: 2024-10-03T14:24:47.8324537+05:30
```

```
INSERT INTO Shelters (ShelterID, Name, Location) VALUES
(1, 'Happy Tails Shelter', 'Chennai'),
(2, 'Paw Haven', 'Mumbai');
```


```
Messages
(2 rows affected)

Completion time: 2024-10-03T14:25:30.0606958+05:30
```

```
INSERT INTO Donations (DonationID, DonorName, DonationType,
DonationAmount, DonationItem, DonationDate) VALUES
```

## CODING CHALLENGE 1


```
(1, 'Alice', 'Cash', 5000.00, NULL, '2023-09-01 10:30:00'),  
(2, 'Bob', 'Item', NULL, 'Dog Food', '2023-09-05 14:00:00');
```

 Messages

(2 rows affected)

Completion time: 2024-10-03T14:25:30.0606958+05:30


```
INSERT INTO AdoptionEvents (EventID, EventName, EventDate, Location) VALUES  
(1, 'Adopt-a-Pet Day', '2023-10-10 10:00:00', 'Happy Tails Shelter'),  
(2, 'Furry Friends Adoption Fair', '2023-11-15 11:00:00', 'Paw Haven');
```

 Messages

(2 rows affected)

Completion time: 2024-10-03T14:25:30.0606958+05:30

```
INSERT INTO Participants (ParticipantID, ParticipantName, ParticipantType,  
EventID) VALUES  
(1, 'Happy Tails Shelter', 'Shelter', 1),  
(2, 'John Doe', 'Adopter', 1),  
(3, 'Paw Haven', 'Shelter', 2);
```

 Messages

(3 rows affected)

Completion time: 2024-10-03T14:31:39.0318180+05:30

-- 5. Query to retrieve a list of available pets

```
SELECT Name, Age, Breed, Type
```

# CODING CHALLENGE 1

**FROM Pets**

**WHERE AvailableForAdoption = 1;**

Results Messages				
	Name	Age	Breed	Type
1	Buddy	3	Golden Retriever	Dog
2	Mittens	2	Siamese	Cat
3	Whiskers	1	Persian	Cat

-- 6. Query to retrieve names of participants registered for a specific event

**DECLARE @EventID INT = 1;**

**SELECT ParticipantName, ParticipantType**

**FROM Participants**

**WHERE EventID = @EventID;**

Results Messages		
	ParticipantName	ParticipantType
1	Happy Tails Shelter	Shelter
2	John Doe	Adopter

-- 7. Stored procedure to update shelter information

**CREATE PROCEDURE UpdateShelter**

**@ShelterID INT,**

**@NewName NVARCHAR(100),**

**@NewLocation NVARCHAR(100)**

**AS**

**-- Update the shelter if it exists**

**UPDATE Shelters**

**SET Name = @NewName, Location = @NewLocation**

## CODING CHALLENGE 1

```
WHERE ShelterID = @ShelterID;
```

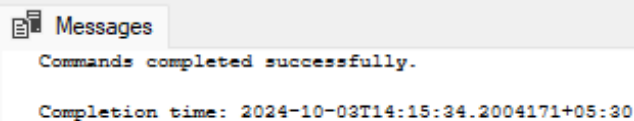
```
-- Check if any rows were affected
```

```
IF @@ROWCOUNT = 0
```

```
    PRINT 'Error: Shelter ID not found.';
```

```
ELSE
```

```
    PRINT 'Shelter information updated successfully.';
```



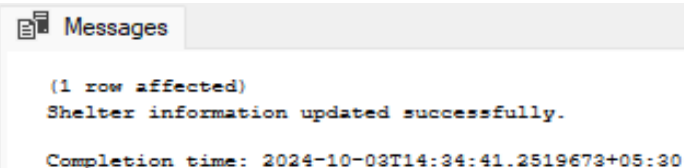
Messages

Commands completed successfully.

Completion time: 2024-10-03T14:15:34.2004171+05:30

```
-- Execution the stored procedure as an example
```

```
EXEC UpdateShelter @ShelterID = 1, @NewName = 'Happy Paws', @NewLocation =  
'New York';
```



Messages

(1 row affected)

Shelter information updated successfully.

Completion time: 2024-10-03T14:34:41.2519673+05:30

```
-- 8. Query to calculate total donations by shelter
```

```
SELECT S.Name AS ShelterName,
```

```
       COALESCE(SUM(D.DonationAmount), 0) AS TotalDonationAmount
```

```
FROM Shelters S
```

```
LEFT JOIN Donations D ON S.ShelterID = 1 -- Join on ShelterID
```

```
GROUP BY S.Name;
```

## CODING CHALLENGE 1

	ShelterName	TotalDonationAmount
1	Happy Paws	5000.00
2	Paw Haven	0.00

-- 9. Query to retrieve pets without an owner

**SELECT Name, Age, Breed, Type**

**FROM Pets**

**WHERE OwnerID IS NULL;**

	Name	Age	Breed	Type
1	Buddy	3	Golden Retriever	Dog
2	Mittens	2	Siamese	Cat
3	Charlie	5	Bulldog	Dog
4	Whiskers	1	Persian	Cat

-- 10. Query to calculate total donations by month and year

**SELECT FORMAT(DonationDate, 'yyyy-MM') AS MonthYear,**

**SUM(DonationAmount) AS TotalDonationAmount**

**FROM Donations**

**GROUP BY FORMAT(DonationDate, 'yyyy-MM');**

	MonthYear	TotalDonationAmount
1	2023-09	5000.00

-- 11. Retrieve distinct breeds of pets aged between 1-3 or older than 5



# CODING CHALLENGE 1

```
SELECT DISTINCT Breed
FROM Pets
WHERE (Age BETWEEN 1 AND 3) OR (Age > 5);
```

Results		Messages
	Breed	
1	Golden Retriever	
2	Persian	
3	Siamese	

-- 12. Retrieve available pets and their shelters

```
SELECT P.Name AS PetName, S.Name AS ShelterName
FROM Pets P
JOIN Shelters S ON 1 = S.ShelterID -- Assuming a relationship
WHERE P.AvailableForAdoption = 1;
```

Results			Messages
	PetName	ShelterName	
1	Buddy	Happy Paws	
2	Mittens	Happy Paws	
3	Whiskers	Happy Paws	

-- 13. Total participants in events organized by specific city shelters

```
SELECT COUNT(*) AS TotalParticipants
FROM Participants P
JOIN Shelters S ON P.EventID = S.ShelterID
WHERE S.Location = 'Chennai';
```

# CODING CHALLENGE 1

Results		Messages	
	TotalParticipants		
1	0		

-- 14. Retrieve unique breeds for pets aged between 1 and 5 years

**SELECT DISTINCT Breed**

**FROM Pets**

**WHERE Age BETWEEN 1 AND 5;**

Results		Messages	
	Breed		
1	Bulldog		
2	Golden Retriever		
3	Persian		
4	Siamese		

-- 15. Retrieve pets that have not been adopted

**SELECT \***

**FROM Pets**

**WHERE AvailableForAdoption = 1;**

Results

Messages

	PetID	Name	Age	Breed	Type	AvailableForAdoption	OwnerID
1	1	Buddy	3	Golden Retriever	Dog	1	NULL
2	2	Mittens	2	Siamese	Cat	1	NULL
3	4	Whiskers	1	Persian	Cat	1	NULL

-- 16. Retrieve adopted pets and their adopters

**CREATE TABLE Adoption (**

**AdoptionID INT PRIMARY KEY,**

## CODING CHALLENGE 1

```
PetID INT,  
AdopterName VARCHAR(100),  
AdoptionDate DATETIME,  
FOREIGN KEY (PetID) REFERENCES Pets(PetID)  
);
```

```
Messages  
Commands completed successfully.  
Completion time: 2024-10-03T14:15:34.2004171+05:30
```

```
INSERT INTO Adoption (AdoptionID, PetID, AdopterName, AdoptionDate)  
VALUES  
(1, 1, 'John Doe', '2024-09-15'),  
(2, 2, 'Alice Smith', '2024-09-20');
```

```
Messages  
(2 rows affected)  
Completion time: 2024-10-03T14:25:30.0606958+05:30
```

```
SELECT P.Name AS AdoptedPetName,  
       A.AdopterName  
FROM Pets P  
JOIN Adoption A ON P.PetID = A.PetID;
```

# CODING CHALLENGE 1

	AdoptedPetName	AdopterName
1	Buddy	John Doe
2	Mittens	Alice Smith

-- 17. Retrieve shelters along with count of available pets

```
SELECT S.Name AS ShelterName,  
       COUNT(P.PetID) AS AvailablePetsCount  
FROM Shelters S  
LEFT JOIN Pets P ON S.ShelterID = P.OwnerID AND P.AvailableForAdoption = 1  
GROUP BY S.Name;
```

	ShelterName	AvailablePetsCount
1	Chennai Animal Rescue	0
2	Happy Paws	2
3	Paw Haven	1

-- 18. Find pairs of pets from the same shelter with the same breed

```
SELECT P1.Name AS Pet1Name, P2.Name AS Pet2Name, S.Name AS ShelterName  
FROM Pets P1  
JOIN Pets P2 ON P1.Breed = P2.Breed AND P1.PetID <> P2.PetID  
JOIN Shelters S ON P1.OwnerID = S.ShelterID;
```

	Pet1Name	Pet2Name	ShelterName
1	Buddy	Max	Happy Paws
2	Mittens	Bella	Happy Paws
3	Max	Buddy	Happy Paws
4	Bella	Mittens	Happy Paws

## CODING CHALLENGE 1

-- 19. List all combinations of shelters and adoption events

```
SELECT S.Name AS ShelterName, E.EventName AS EventName
FROM Shelters S, AdoptionEvents E;
```

	ShelterName	EventName
1	Happy Paws	Adopt-a-Pet Day
2	Paw Haven	Adopt-a-Pet Day
3	Happy Paws	Furry Friends Adoption Fair
4	Paw Haven	Furry Friends Adoption Fair

-- 20. Determine the shelter with the highest number of adopted pets

-- Mark Buddy and Mittens as adopted

**UPDATE Pets**

**SET AvailableForAdoption = 0**

**WHERE PetID IN (1, 2);**

-- Insert data into the Adoption table

**INSERT INTO Adoption (AdoptionID, PetID, AdopterName, AdoptionDate)**

**VALUES**

**(3, 1, 'John Doe', '2024-09-15'), -- Buddy**

**(4, 2, 'Alice Smith', '2024-09-20'); -- Mittens**

**SELECT TOP 1**

**S.Name AS ShelterName,**

**COUNT(A.PetID) AS AdoptedPetsCount**

**FROM Shelters S**

**JOIN Pets P ON S.ShelterID = P.OwnerID**



## CODING CHALLENGE 1

**JOIN Adoption A ON P.PetID = A.PetID**

**WHERE P.AvailableForAdoption = 0**

**GROUP BY S.Name**

**ORDER BY AdoptedPetsCount DESC;**

 Results  Messages		
	ShelterName	AdoptedPetsCount
1	Happy Paws	4