Hands On - MS SQL

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Day 2 - 5/11/2024 (Tuesday)

1. Storing data in table: -

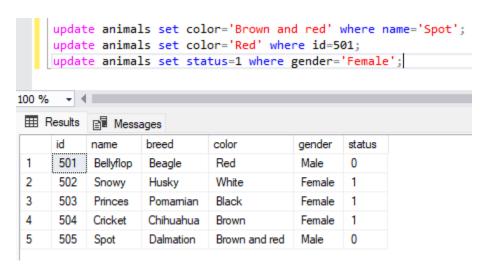
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```
insert into animals(id,name,breed,color,gender,status) values(501,'Bellyflop','Beagle','Brown','Male',0);
    insert into animals(id,name,breed,color,gender,status) values(502,'Snowy','Husky','White','Female',0);
    insert into animals(id,name,breed,color,gender,status) values(503,'Princes','Pomarnian','Black','Female',0);
    insert into animals(id,name,breed,color,gender,status) values(504,'Cricket','Chihuahua','Brown','Female',0);
    insert into animals(id,name,breed,color,gender,status) values(505,'Spot','Dalmation','Black and White','Male',0);
    select * from animals;

    ⊞ Results

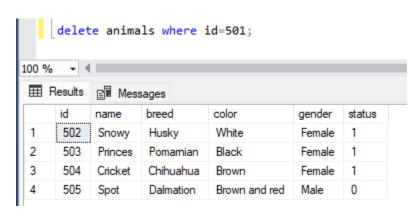
          Messages
                                           gender
                                                  status
     501
          Bellyflop
                  Beagle
                             Brown
                                           Male
                                                   0
2
     502
                   Husky
                             White
                                           Female
                                                  0
3
     503
                                                  0
                  Pomamian
                                           Female
     504
          Cricket
                  Chihuahua
                                           Female
                                                  0
     505
                   Dalmation
                            Black and White
                                           Male
```

2. Updating data in table: -



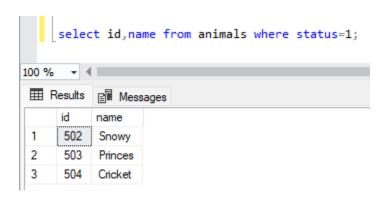
3. Deleting data from table: -

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4. Retrieving specific attributes: -

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5. Retrieving Selected Rows: -



6. Filtering Data: Where Clause

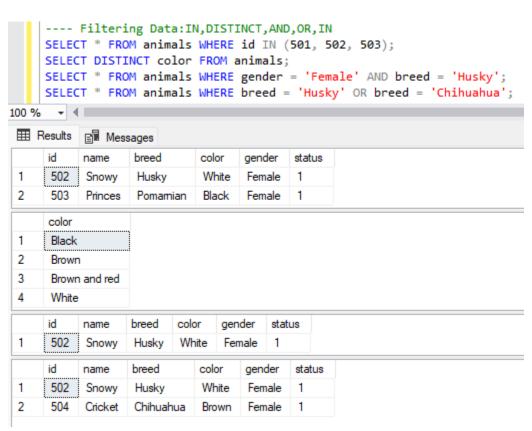
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```
---- Filtering Data: Where clause select name, breed from animals where gender='Female';

100 % 
Results Messages

name breed
1 Snowy Husky
2 Princes Pomamian
3 Cricket Chihuahua
```

7. Filtering Data: IN, DISTINCT, AND, OR, IN, BETWEEN, LIKE, Column & table aliases



```
---- Filtering Data: BETWEEN,LIKE,Column & table aliases
     SELECT * FROM animals WHERE id BETWEEN 502 AND 504;
     SELECT * FROM animals WHERE color LIKE '%Brown%';
     SELECT name AS AnimalName, breed AS BreedType, color AS FurColor FROM animals;
     SELECT a.id, a.name, a.breed FROM animals AS a WHERE a.gender = 'Male';
100 % ▼ ◀ ■
 breed
           name
                             color
                                   gender
                                           status
      502
           Snowy
                   Husky
                             White Female
 2
      503
           Princes Pomamian
                             Black
                                   Female 1
 3
      504
          Cricket
                  Chihuahua
                             Brown Female 1
     id
          name
                  breed
                            color
                                         gender
                                                 status
           Cricket Chihuahua
                                          Female
                             Brown
 2
      505
                  Dalmation
                                                 0
           Spot
                             Brown and red Male
     AnimalName
                           FurColor
                 BreedType
     Snowy
                 Husky
                            White
 2
      Princes
                 Pomamian
                            Black
 3
      Cricket
                 Chihuahua
                            Brown
      Spot
                 Dalmation
                            Brown and red
                 breed
     id
          name
 1
      505
           Spot
                 Dalmation
```

8. Implementing Data Integrity:-

```
---- Implementing Data Integrity

ALTER TABLE animals

ADD CONSTRAINT PK_Animals PRIMARY KEY (id);

ALTER TABLE animals

ADD CONSTRAINT CHK_Animal_Gender CHECK (gender IN ('Male', 'Female'));

ALTER TABLE animals

ADD CONSTRAINT CHK_Animal_Status CHECK (status IN (0, 1));

100 % 

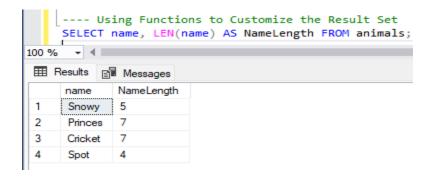
Messages

Commands completed successfully.

Completion time: 2024-11-05T12:31:01.2875217+05:30
```

9. Using Functions to Customize the Result Set: -

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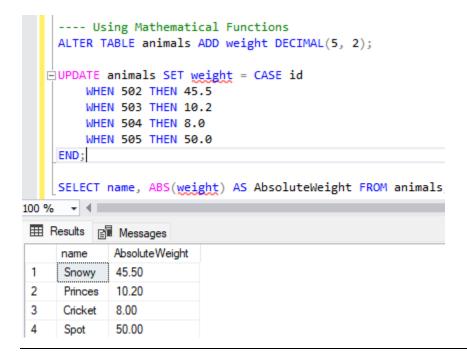
10. Using String Functions: -

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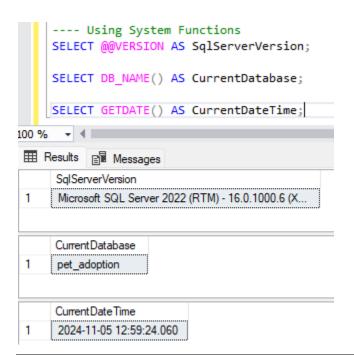
11. Using Date Functions: -

```
---- Using Date Functions
   ALTER TABLE animals
     ADD date_of_birth DATE;
     UPDATE animals SET date of birth = '2020-06-25' WHERE id = 502;
     UPDATE animals SET date of birth = '2019-11-11' WHERE id = 503; UPDATE animals SET date of birth = '2017-01-03' WHERE id = 504;
     UPDATE animals SET date of birth = '2021-02-10' WHERE id = 505;
   ±SELECT name,
              YEAR(date of birth) AS BirthYear,
             MONTH(date of birth) AS BirthMonth,
DAY(date of birth) AS BirthDay
     FROM animals;
100 % 🕶 🖣 🗔
Results Messages
      name
               BirthYear BirthMonth BirthDay
     Snowy
              2020
                         6
                                     25
2
      Princes
              2019
                         11
                                     11
      Cricket
3
               2017
                          1
                                     3
               2021
                         2
                                     10
      Spot
```

12. Using Mathematical Functions: -

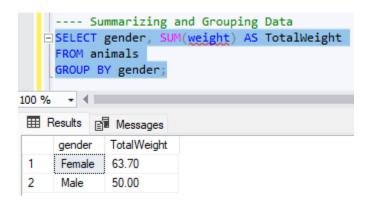


13. Using System Functions: -



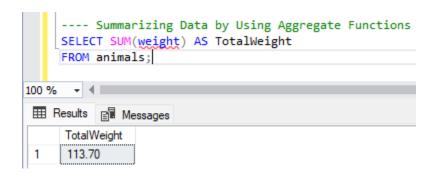
14. Summarizing and Grouping Data: -

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15. Summarizing Data by Using Aggregate Functions: -

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16. Grouping Data: -

