```sql
-- Part 2
-- Inside a transaction update the animals table by setting the species column to unspecified. Verify that change was made.
-- Then roll back the change and verify that the species columns went back to the state before the transaction.
BEGIN;
UPDATE animals SET species = 'unspecified';
ROLLBACK;
```

	id [PK] integer	name character varying (100)	date_of_birth date	escape_attempts integer	neutered boolean	weight_kg numeric	species character varying (100)
1	23	Agumon	2020-02-03	0	true	10.23	unspecified
2	24	Gabumon	2018-11-15	2	true	8	unspecified
3	25	Pikachu	2021-01-07	1	false	15.04	unspecified
4	26	Devimon	2017-05-12	5	true	11	unspecified
5	27	Charmander	2020-02-08	0	false	-11	unspecified
6	28	Plantmon	2021-11-15	2	true	-5.7	unspecified
7	29	Squirtle	1993-04-02	3	false	-12.13	unspecified
8	30	Angemon	2005-06-12	1	true	-45	unspecified
9	31	Boarmon	2005-06-07	7	true	20.4	unspecified
10	32	Blossom	1998-10-13	3	true	17	unspecified
11	33	Ditto	2022-05-14	4	true	22	unspecified

	id [PK] integer	name character varying (100)	date_of_birth date	escape_attempts integer	neutered boolean	weight_kg numeric	species character varying (100)
1	23	Agumon	2020-02-03	0	true	10.23	[null]
2	24	Gabumon	2018-11-15	2	true	8	[null]
3	25	Pikachu	2021-01-07	1	false	15.04	[null]
4	26	Devimon	2017-05-12	5	true	11	[null]
5	27	Charmander	2020-02-08	0	false	-11	[null]
6	28	Plantmon	2021-11-15	2	true	-5.7	[null]
7	29	Squirtle	1993-04-02	3	false	-12.13	[null]
8	30	Angemon	2005-06-12	1	true	-45	[null]
9	31	Boarmon	2005-06-07	7	true	20.4	[null]
10	32	Blossom	1998-10-13	3	true	17	[null]
11	33	Ditto	2022-05-14	4	true	22	[null]

```sql
-- Inside a transaction:
-- Update the animals table by setting the species column to digimon for all animals that have a name ending in mon.
-- Update the animals table by setting the species column to pokemon for all animals that don't have species already set.
-- Commit the transaction.
BEGIN;
UPDATE animals SET species = 'digimon' WHERE name LIKE '%mon';
UPDATE animals SET species = 'pokemon' WHERE species IS NULL;
COMMIT;
```

	id [PK] integer	name character varying (100)	date_of_birth date	escape_attempts integer	neutered boolean	weight_kg numeric	species character varying (100)
1	23	Agumon	2020-02-03	0	true	10.23	digimon
2	24	Gabumon	2018-11-15	2	true	8	digimon
3	26	Devimon	2017-05-12	5	true	11	digimon
4	28	Plantmon	2021-11-15	2	true	-5.7	digimon
5	30	Angemon	2005-06-12	1	true	-45	digimon
6	31	Boarmon	2005-06-07	7	true	20.4	digimon
7	25	Pikachu	2021-01-07	1	false	15.04	pokemon
8	27	Charmander	2020-02-08	0	false	-11	pokemon
9	29	Squirtle	1993-04-02	3	false	-12.13	pokemon
10	32	Blossom	1998-10-13	3	true	17	pokemon
11	33	Ditto	2022-05-14	4	true	22	pokemon

```sql
-- Now, take a deep breath and... Inside a transaction delete all records in the animals table, then roll back the transaction.
BEGIN;
DELETE FROM animals;
ROLLBACK;
```

	id [PK] integer	name character varying (100)	date_of_birth date	escape_attempts integer	neutered boolean	weight_kg numeric	species character varying (100)

	id [PK] integer	name character varying (100)	date_of_birth date	escape_attempts integer	neutered boolean	weight_kg numeric	species character varying (100)
1	23	Agumon	2020-02-03	0	true	10.23	digimon
2	24	Gabumon	2018-11-15	2	true	8	digimon
3	26	Devimon	2017-05-12	5	true	11	digimon
4	28	Plantmon	2021-11-15	2	true	-5.7	digimon
5	30	Angemon	2005-06-12	1	true	-45	digimon
6	31	Boarmon	2005-06-07	7	true	20.4	digimon
7	25	Pikachu	2021-01-07	1	false	15.04	pokemon
8	27	Charmander	2020-02-08	0	false	-11	pokemon
9	29	Squirtle	1993-04-02	3	false	-12.13	pokemon
10	32	Blossom	1998-10-13	3	true	17	pokemon
11	33	Ditto	2022-05-14	4	true	22	pokemon

```sql
-- Inside a transaction:
-- Delete all animals born after Jan 1st, 2022.
-- Create a savepoint for the transaction.
-- Update all animals' weight to be their weight multiplied by -1.
-- Rollback to the savepoint
-- Update all animals' weights that are negative to be their weight multiplied by
-1.
-- Commit transaction
BEGIN;
DELETE FROM animals WHERE date_of_birth > '2022-01-01';
SAVEPOINT DEL_ANIMALS;
UPDATE animals SET weight_kg = weight_kg*-1;
ROLLBACK TO DEL_ANIMALS;
UPDATE animals SET weight_kg = weight_kg*-1 WHERE weight_kg<0;
COMMIT;
```

	id [PK] integer	name character varying (100)	date_of_birth date	escape_attempts integer	neutered boolean	weight_kg numeric	species character varying (100)
1	23	Agumon	2020-02-03	0	true	10.23	digimon
2	24	Gabumon	2018-11-15	2	true	8	digimon
3	26	Devimon	2017-05-12	5	true	11	digimon
4	31	Boarmon	2005-06-07	7	true	20.4	digimon
5	25	Pikachu	2021-01-07	1	false	15.04	pokemon
6	32	Blossom	1998-10-13	3	true	17	pokemon
7	28	Plantmon	2021-11-15	2	true	5.7	digimon
8	30	Angemon	2005-06-12	1	true	45	digimon
9	27	Charmander	2020-02-08	0	false	11	pokemon
10	29	Squirtle	1993-04-02	3	false	12.13	pokemon

```sql
-- How many animals are there?
SELECT COUNT(*) AS nb_animals FROM animals;
```

	nb_animals bigint
1	10

```sql
-- How many animals have never tried to escape?
SELECT COUNT(*) AS nb_animals FROM animals WHERE escape_attempts=0;
```

	nb_animals bigint
1	2

```sql
-- What is the average weight of animals?
SELECT AVG(weight_kg) AS av_weight_kg FROM animals;
```

	av_weight_kg numeric
1	15.5500000000000000

```sql
-- Who escapes the most, neutered or not neutered animals?
SELECT neutered,SUM(escape_attempts) total_attempts FROM animals GROUP BY
neutered;
```

	neutered boolean	total_attempts bigint
1	false	4
2	true	20

```sql
-- What is the minimum and maximum weight of each type of animal?
SELECT species type,MIN(weight_kg) AS min_weight_kg, MAX(weight_kg) max_weight_kg
FROM animals GROUP BY species;
```

	type character varying (100)	min_weight_kg numeric	max_weight_kg numeric
1	pokemon	11	17
2	digimon	5.7	45

```sql
-- What is the average number of escape attempts per animal type of those born
between 1990 and 2000?
SELECT species type, AVG(escape_attempts) av_escape_attempts FROM animals WHERE
EXTRACT(YEAR FROM date_of_birth) BETWEEN 1990 AND 2000 GROUP BY species;
```

	type character varying (100)	av_escape_attempts numeric
1	pokemon	3.0000000000000000