Views:

1. View workers and which center they work at

```
create view workers_center as
   select *
   from donationcenters inner join workers using (center_id) inner join
employees using (worker_id);
```

2. View the locations of churches

```
create view church_location as
   select *
   from donationcenters inner join ziplocations using (zip_code)
   where center_type like '%Church%';
```

3. View foods and their allergens

```
create view allergen_foods as
   select *
   from foods inner join foodallergens using (donation_id);
```

4. View physical donations

```
create view phys_don as
   select *
   from donations inner join physicaldonations using (donation_id);
```

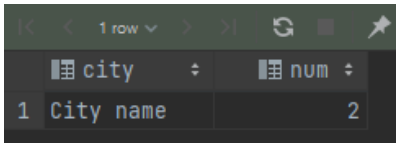
5. View monetary donations

```
create view mon_don as
   select *
   from donations inner join monetarydonations using (donation_id);
```

Queries:

1.

```
# Find the cities with the greatest number of donation centers
select city, count(zip_code) as num
from ziplocations inner join donationcenters using (zip_code)
group by city
having num = (
   select max(y.num) as max
   from (
       select count(zip_code) as num
       from ziplocations inner join donationcenters using (zip_code)
       group by city) y);
```



2.

```
# Find the cities with the largest number of donations
select city, count(zip_code) as num
```

```
from ziplocations inner join donationcenters using (zip_code) inner join
donations using (center_id)
group by city
having num = (
   select max(y.num) as max
   from (
       select count(zip_code) as num
       from ziplocations inner join donationcenters using (zip_code) inner join
donations using (center_id)
       group by city) y);
```

1 row

	city	num
1	Long Beach	6

3.
```
# Find all of the pairs of employees who work at the same donation center
select  a.first_name as "Employee 1 FN",
       a.last_name as "Employee 1 LN",
       b.first_name as "Employee 2 FN",
       b.last_name as "Employee 2 LN",
       a.center_id as "Employee 1 Center",
       b.center_id as "Employee 2 Center"
from    workers_center a inner join
       workers_center b using (center_id)
where a.worker_id > b.worker_id;
```

7 rows

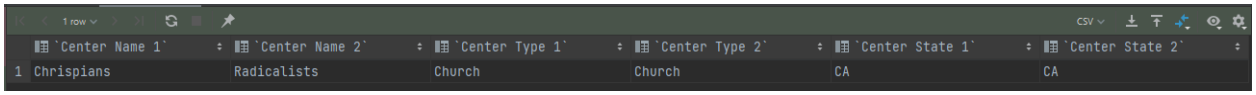
	`Employee 1 FN`	`Employee 1 LN`	`Employee 2 FN`	`Employee 2 LN`	`Employee 1 Center`	`Employee 2 Center`
1	All	Ice	Fred	Ward	1	1
2	Nic	Kee	Fred	Ward	1	1
3	Hez	Zeus	Fred	Ward	1	1
4	Nic	Kee	All	Ice	1	1
5	Hez	Zeus	All	Ice	1	1
6	Hez	Zeus	Nic	Kee	1	1
7	Vel	Muh	Nat	Han	2	2

4.
```
# List the donation centers with the amount of donations above the average
select name, count(donation) as num
from donationcenters inner join donations using (center_id)
group by center_id
having num > (
   select avg(y.num) as avg
   from (
       select count(donation) as num
       from donationcenters inner join donations using (center_id)
       group by center_id) y);
```

1 row

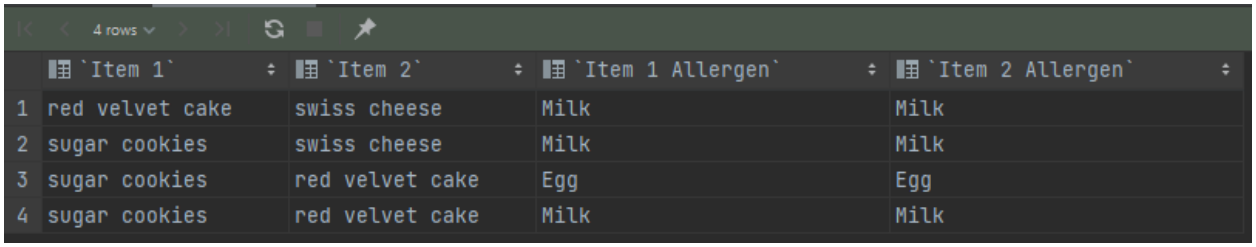
	name	num
1	Radicalists	6

5.
```
# Find all of the pairs of donation centers that have a state, are in the same state, and are Churches.
select  a.name as "Center Name 1",
        b.name as "Center Name 2",
        a.center_type as "Center Type 1",
        b.center_type as "Center Type 2",
        a.state as "Center State 1",
        b.state as "Center State 2"
from    church_location a inner join
        church_location b using (state)
where a.center_id > b.center_id;
```



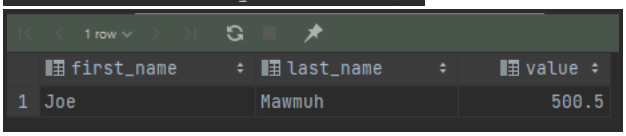
	`Center Name 1`	`Center Name 2`	`Center Type 1`	`Center Type 2`	`Center State 1`	`Center State 2`
1	Chrispians	Radicalists	Church	Church	CA	CA

6.
```
# Find all pairs of food with the same allergen
select  a.item as "Item 1",
        b.item as "Item 2",
        a.allergen as "Item 1 Allergen",
        b.allergen as "Item 2 Allergen"
from    allergen_foods a inner join
        allergen_foods b using (allergen)
where a.donation_id > b.donation_id;
```



	`Item 1`	`Item 2`	`Item 1 Allergen`	`Item 2 Allergen`
1	red velvet cake	swiss cheese	Milk	Milk
2	sugar cookies	swiss cheese	Milk	Milk
3	sugar cookies	red velvet cake	Egg	Egg
4	sugar cookies	red velvet cake	Milk	Milk

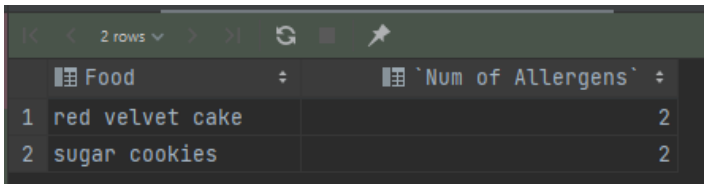
7.
```
# Name the person who has donated the most amount of money
select distinct first_name, last_name, value
from donators inner join mon_don using (donator_id)
where value = (
   select max(value)
   from monetarydonations);
```



	first_name	last_name	value
1	Joe	Mawmuh	500.5

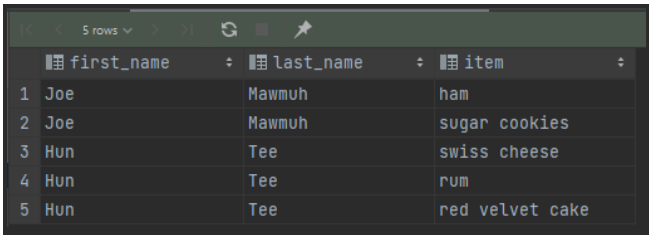
8.
```
# Find the food with the highest number of allergens
select item as "Food", count(allergen) as "Num of Allergens"
from allergen_foods
group by Food
having `Num of Allergens` = (
   select max(y.num) as max
   from (
```

```
        select count(allergen) as num
        from allergen_foods
        group by item) y);
```



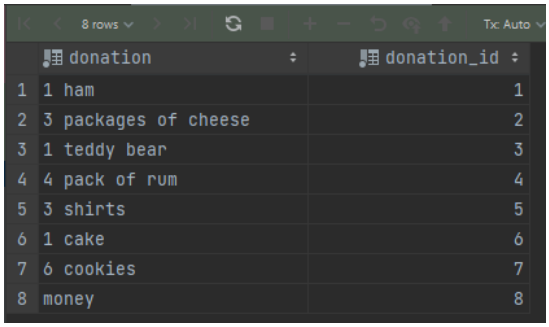
	Food	`Num of Allergens`
1	red velvet cake	2
2	sugar cookies	2

9.
```
# List the name of everyone who donated food items and what food they donated
select first_name, last_name, item
from donators inner join donations using (donator_id) inner join foods using
(donation_id);
```



	first_name	last_name	item
1	Joe	Mawmuh	ham
2	Joe	Mawmuh	sugar cookies
3	Hun	Tee	swiss cheese
4	Hun	Tee	rum
5	Hun	Tee	red velvet cake

10.
```
# List the donated items that have not yet been distributed
select donation, donation_id
from phys_don
where recipient_id is null
union
   select donation, donation_id
   from mon_don
   where donation_id not in (
        select donation_id
        from moneydistributions);
```



	donation	donation_id
1	1 ham	1
2	3 packages of cheese	2
3	1 teddy bear	3
4	4 pack of rum	4
5	3 shirts	5
6	1 cake	6
7	6 cookies	7
8	money	8

Inserts Used:

```
insert into centertypes(center_type) values
('Homeless Shelter'),
('Church');
```

```
INSERT INTO ZipLocations(zip_code, city, state, country) VALUES
```

```
(90815, 'Long Beach', 'CA', 'United States'),
(123, 'City name', 'State', 'A country'),
(92348, 'Real Town', 'CA', 'United States');

insert into ZipLocations(zip_code, city, country) VALUES
(43215, 'Best Ville', 'Japan'),
(54312, 'Worst Ville', 'Japan');

insert into donationcenters(name, street, center_type, zip_code) values
('Homelessness Help', '123 street', 'Homeless Shelter', 123),
('Needing?', '56 avenue', 'Homeless Shelter', 123),
('Radicalists', '666 blvd', 'Church', 90815),
('Chrispians', '2 blvd', 'Church', 92348),
('Baptizers', '5 blvd', 'Church', 43215),
('Missionists', '09 blvd', 'Church', 54312);

insert into workers (first_name, last_name, center_id) values
('Fred', 'Ward', 1),
('All', 'Ice', 1),
('Nic', 'Kee', 1),
('Nat', 'Han', 2),
('Hez', 'Zeus', 1),
('Vel', 'Muh', 2);

insert into employees (worker_id, hourly_wage) values
(1, 15),
(2, 15),
(3, 15),
(4, 15),
(5, 15),
(6, 15);

insert into donators(first_name, last_name, phone, street, zip_code) values
('Joe', 'Mawmuh', 0621231234, '1 street', 123),
('Hun', 'Tee', 1871234321, '5 blvd', 90815);

insert into donations(donation, date_received, center_id, donator_id) values
('1 ham', '2021-1-6', 1, 1),
('3 packages of cheese', '2021-4-7', 3, 2),
('1 teddy bear', '2011-10-3', 1, 1),
('4 pack of rum', '2021-5-11', 3, 2),
('3 shirts', '2021-8-4', 3, 2),
('1 cake', '2021-5-11', 2, 2),
('6 cookies', '2021-8-4', 3, 1),
('money', '2021-9-4', 3, 1),
('money', '2021-9-7', 3, 1);

select *
from donations;
```

```
insert into physicaldonations (donation_id) values
(1), (2), (3), (4), (5), (6), (7);

insert into monetarydonations (value, donation_id) values
(100.75, 8), (500.50, 9);

INSERT INTO Destinations(recipient, street, zip_code)
VALUES('Sue\'s Orphanage', '400 State Way', 90815), ('Joey', '400 State Way',
90815);

insert into moneydistributions (value_distributed, donation_id, recipient_id)
values
(400, 9, 1), (100.50, 9, 2);

insert into brandeddonations (brand, donation_id) values
('Bucher', 1), ('swiss', 2), ('teddiesRus', 3), ('Modelo', 4), ('Nike', 5),
('Homemeade', 6), ('Homemade', 7);

insert into foods (item, best_by, donation_id) values
('ham', '2022-1-1', 1), ('swiss cheese', '2022-1-1', 2), ('rum', '2022-1-1',
4),
('red velvet cake', '2022-1-1', 6), ('sugar cookies', '2022-1-1', 7);

insert into DonationAllegens (allergen, donation_id) values
('Milk', 2), ('Nuts', 4), ('Milk', 6), ('Egg', 6), ('Egg', 7), ('Milk', 7);
```