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DBMS PROJECT

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Charity Management System

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NGO OB

Charity is an act of kindness, in which financially stable people provide help to those people who are needy. The children living in an orphanage need help of food and money and NGO's act as a link between the donors and the orphanage and provide the donors a medium through which they can help the needy children. For establishing such a link the NGO must have an effective database to manage all the information and ensure proper flow of the donation received from the donors. The objective of this project is to create a database which can manage the inter-NGO network of employees and establish a link between Donors, NGO and the Orphanage.

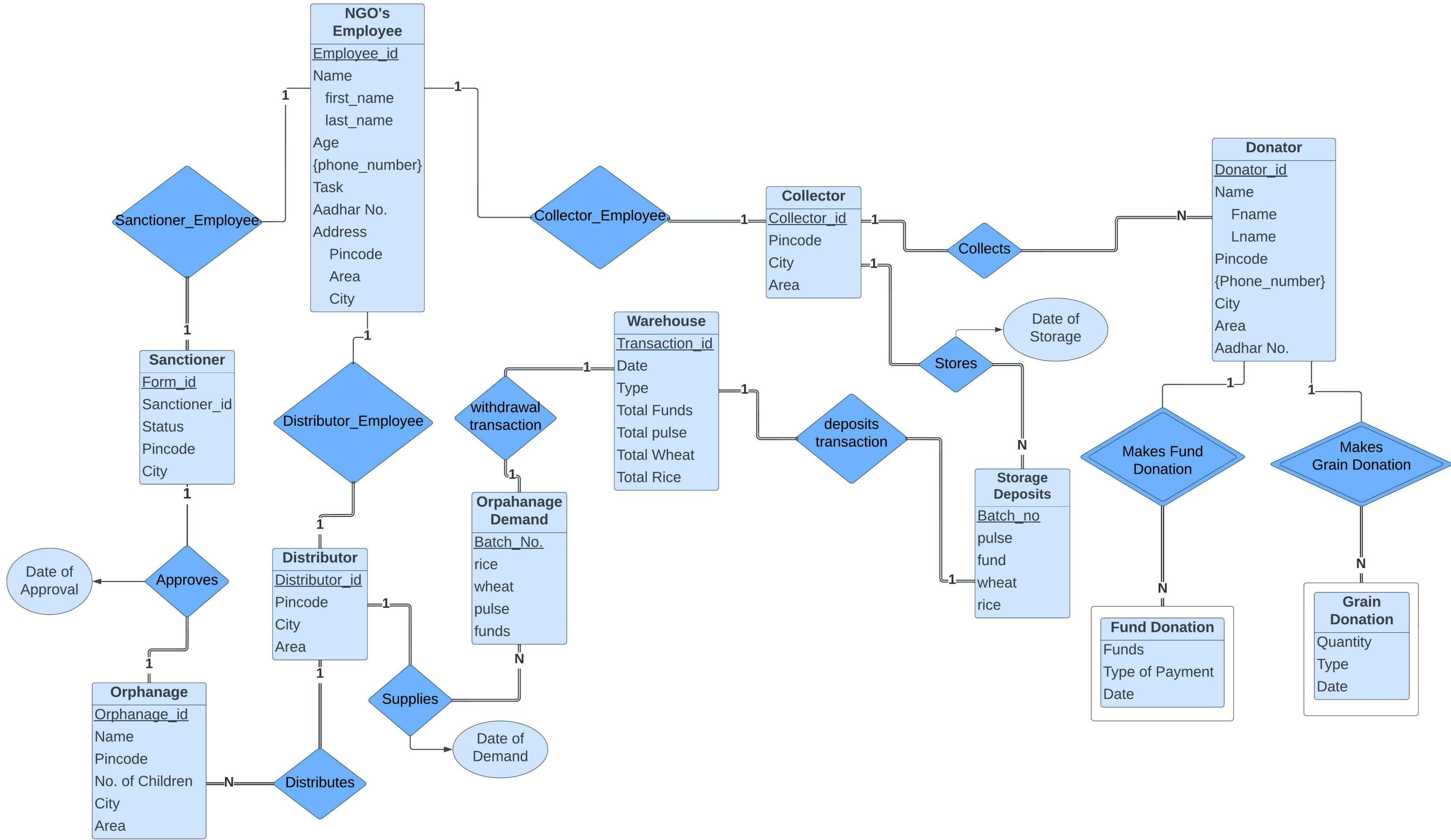


OVERVIEW

In this project for the effective management of the NGO's internal processes we have divided the processes into four parts. First, the collector employee will collect the donations from the donators. The collected donations will be stored in the warehouse by these employees. Second is the sanctioner employee which gets the data of the orphanage through a form and approves whether the orphanage matches the criteria of the NGO or not. Third is the distributor which collects the required quantity from the warehouse and distributes the donations to the orphanage based on their demands. For the management of the storage process, we have included a warehouse table which handles the deposits and withdrawal of the donations. By dividing this process into four major parts we are ensuring that all the processes from the donation to distribution happen smoothly.



ER DIAGRAM



1. Donator

(Donator_id, Name(Fname, Lname), Pincode, Area, City, Aadhar No.
{Phone_number})

Here, Donator_id is the primary key. Name is a composite attribute which is divided into two components Fname and Lname. Phone_number is a multivalued attribute.

2. Fund donation

(Funds, Type, Date)

This entity set is a weak entity set as it is dependent on Donator because if there are no donators there can be no donation. Since, this is a weak entity set there will be no primary key.

3. Grain donation

(Quantity, Type, Date)

This entity set is a weak entity set as it is dependent on Donator because if there are no donators there can be no donation. Since, this is a weak entity set there will be no primary key.

4. Collector

(Collector_id, Pincode, City, Area)

Here, Collector_id is the primary key.

5. NGO's Employee

(Employee_id, Name(first_name, last_name), Age, {phone_number}, Task, Aadhar No., Address(pincode, area, city))

Here, Employee_id is the primary key. Name is a composite attribute and is divided into two components first_name and last_name. Address is a multivalued attribute and it is divided into pincode, area and city. phone_number is a multivalued attribute.

6. Sanctioner

(Form_id, Sanctioner_id, Status, Pincode, City)

Here, Form_id is the primary key.

7. Storage Deposits

(Batch_No., Pulse, Wheat, Rice, Fund)

Here, Batch_No. is the primary key.

8. Warehouse

(Transaction_id, Date, Type, Total Funds, Total pulse, Total Wheat, Total Rice)

Here, Transaction_id is the primary key.

9. Orphanage Demand

(Batch_No, Rice, Wheat, Pulse, Funds)

Here, Batch_No is the primary key.

10. Distributor

(Distributor_id, Pincode, city, Area)

Here, Distributor_id is the primary key.

11. Orphanage

(Orphanage_id, Name, Pincode, city, Area, No. of Children)

Here, Orphanage_id is the primary key.

1. Makes Fund Donation

This is a one to many relationship from donator to Fund Donation. There is a total participation from the Fund Donation side and partial participation from the Donator side. This is a weak relationship set.

2. Makes Grain Donation

This is a one to many relationship from donator to Grain Donation. There is a total participation from the Grain Donation side and partial participation from the Donator side. This is a weak relationship set.

3. Collects

(Donator_id, Collector_id)

This is one to many relationship from collector to donator side. There is total participation from both the collector and donator sides. The primary key of the relationship set is **donator_id** as it is on the many side.

4. Collector_Employee

(Collector_id, Employee_id)

This is a **one to one relationship** from the collector to NGO's Employee. There is **total participation** from the collector side and **partial participation** from the NGO's Employee side. The primary key can be any one of the two as it is a one to one relationship.

5. Distributor_Employee

(Distributor_id, Employee_id)

This is a **one to one relationship** from the distributor to NGO's Employee. There is **total participation** from the distributor side and **partial participation** from the NGO's Employee side. The primary key can be any one of the two as it is a one to one relationship.

6. Sanctioner_Employee

(Sanctioner_id, Employee_id)

This is a **one to one relationship** from the sanctioner to NGO's Employee. There is **total participation** from the sanctioner side and **partial participation** from the NGO's Employee side. The primary key can be any one of the two as it is a one to one relationship.

7. Stores

(Collector_id, Batch_no., Date of Storage)

This is a **many to one relationship** from Storage Deposits to collector side. There will be **total participation** from the collector side and **partial participation** from the storage deposits side. The primary key will be **collector_id** as it is on the many side.

8. Deposit Transaction

(Transaction_id, Batch_no.)

This is a **one to one relationship** from Storage Deposits to transaction side. There will be **total participation** from both sides. The primary key will be any of the two.

9. Withdrawal Transaction

(Transaction_id, Batch_no.)

This is a **one to one relationship** from Orphanage demand to transaction side. The will be **total participation** from both sides. The primary key will be any of the two.

10. Supplies

(Distributor_id, Batch_no., Date of Demand)

This is a many to one relationship from orphanage demand to distributor side. There will be total participation from both sides. The primary key will be batch_no. as it is on the many side.

11. Approves

(Form_id, Orphanage_id, Date of Approval)

This is a one to many relationship from sanctioner to the Orphanage. There is a total participation from the orphanage side and partial participation from the sanctioner side. The primary key will be orphanage_id as it is on many side.

12. Distributes

(Distributor_id, Orphanage_id)

This is one to many relationship from the distributor to the orphanage side. There is total participation from both sides. The primary key will be orphanage_id as it is on many side.

1. Donator

(Donator_id, Name(Fname, Lname), Pincode, Area, City, Aadhar No.
{Phone_number})

Donator_id -> Fname, Lname, Pincode, Area, City, Aadhar No, Phone_number

Aadhar No -> Fname, Lname, Pincode, Area, City, Phone_number

Pincode -> City, Area

2. Collector

(Collector_id, Pincode, City, Area)

Collector_id-> Pincode, City, Area

Pincode-> City, Area

3. NGO's Employee

(Employee_id, Name(first_name, last_name), Age, {phone_number}, Task,
Aadhar No., Address(pincode, area, city))

Employee_id -> first_name, last_name, Age, phone_number, Task, Aadhar No.,
pincode, area, city

Aadhar No. -> first_name, last_name, Age, phone_number, pincode, area, city

pincode -> area, city

4. Storage Deposits

(Batch_No., Pulse, Wheat, Rice, Fund)

Batch_No. -> Pulse, Wheat, Rice, Fund

5. Warehouse

((Transaction_id, Date, Type, Total Funds, Total pulse, Total Wheat, Total Rice)

Transaction_id-> Date, Type, Total Funds, Total pulse, Total Wheat, Total Rice

6. Orphanage Demand

(Batch_No, Rice, Wheat, Pulse, Funds)

Batch_No -> Rice, Wheat, Pulse, Funds

7. Sanctioner

Form_id, Sanctioner_id, Status, Pincode, City)

Form_id -> Sanctioner_id, Status, Pincode, City

pincode-> city

8. Distributor

(Distributor_id, Pincode, city, Area)

Distributor_id -> Pincode, city, Area

Pincode-> city, Area

9. Orphanage

(Orphanage_id, Name, Pincode, city, Area, No. of Children)

Orphanage_id -> Name, Pincode, city, area, No. of Children

Pincode-> city, area

1. Donator

(Donator_id, Name(Fname, Lname), Pincode, Area, City, Aadhar No.
{Phone_number})

1NF: Since, phone_number is a multivalued attribute we will break into two schemas namely:

Donator1(Donator_id, Fname, Lname, Pincode, Area, City, Aadhar No.)

Donator2(Donator_id, Phone_number)

2NF: In 2NF as there is only one attribute in the primary key, therefore there are no partial dependencies.

NORMALIZATION

3NF: Since, a non-prime attribute is determined by another non-prime attribute in

Aadhar No -> Fname, Lname, Pincode, Area, City

So we will break it into two schemas

Donator11(Donator_id, Aadhar No)

Donator12(Donator_id, Fname, Lname, Pincode, Area, City)

Now, pincode-> area, city

So we will again break into two schemas

Donator121(Donator_id, Fname, Lname, Pincode)

Donator122(Pincode, area, city)

BCNF: In BCNF as the attributes only depend on the candidate key

2. Collector

(Collector_id, Pincode, City, Area)

1NF: Since, there are no multivalued attributes it is already in 1NF.

2NF: In 2NF as there is only one attribute in the primary key, therefore there are no partial dependencies.

3NF: Since, a non-prime attribute is determined by a non-prime attribute in
 $\text{pincode} \rightarrow \text{city, area}$

So, we will break it into two schemas namely

Collector1(Collector_id, Pincode)

Collector2(pincode, area, city)

BCNF: In BCNF, as all the attributes are only determined by the candidate key

3.NGO's Employee

(Employee_id, Name(first_name, last_name), Age, {phone_number}, Task, Aadhar No., Address(pincode, area, city))

1NF: Since, phone_number is a multivalued attribute we will break it into two schemas:

 NGO's Employee1(Employee_id, first_name, last_name, Age, Task,
 Aadhar No., pincode, area, city)

 NGO's Employee2(Employee_id, phone_number)

2NF: In 2NF as there is only one attribute in the primary key, therefore there are no partial dependencies..

NORMALIZATION

3NF: Since, a non-prime attribute is determined by another non-prime attribute

Aadhar No. \rightarrow first_name, last_name, Age, phone_number, pincode, area, city

So we will break it into two schemas

NGO's Employee11(Employee_id, Aadhar No.)

NGO's Employee12(Employee_id, first_name, last_name, Age, Task, pincode, area , city)

Now, pincode \rightarrow area, city

So, we will break it into two schemas

NGO's Employee121(Employee_id, first_name, last_name, Age, Task, pincode)

NGO's Employee122(pincode, area, city)

BCNF: In BCNF, since all the attributes depend only on the candidate key

4. Sanctioner

(Form_id, Sanctioner_id, Status, Pincode, City)

1NF: In 1NF, as there is no multivalued attribute

2NF: In 2NF as there is only one attribute in the primary key, therefore there are no partial dependencies.

3NF: Since a non-prime attribute is determining a non-prime attribute in
pincode-> city

So, we will have to break it into two schemas

Sanctioner1(Form_id, Sanctioner_id, Status, Pincode)

Sanctioner2(Pincode, City)

BCNF: In BCNF, since all the attributes depend only on the candidate key.

5. Distributor

(Distributor_id, Pincode, city, Area)

1NF: In 1NF, as there is no multivalued attribute

2NF: In 2NF as there is only one attribute in the primary key, therefore there are no partial dependencies.

3NF: Since a non-prime attribute is determining a non-prime attribute in
 $\text{pincode} \rightarrow \text{city, area}$

So, we will have to break it into two schemas

Distributor1(Distributor_id, Pincode)

Distributor2(Pincode, Area, City)

BCNF: In BCNF, since all the attributes depend only on the candidate key.

6. Orphanage

(Orphanage_id, Name, Pincode, city, Area, No. of Children)

1NF: In 1NF, as there is no multivalued attribute

2NF: In 2NF as there is only one attribute in the primary key, therefore there are no partial dependencies.

3NF: Since a non-prime attribute is determining a non-prime attribute in
 $\text{pincode} \rightarrow \text{city, area}$

So, we will have to break it into two schemas

Orphanage1(Orphanage_id, Name, No. of Children, Pincode)

Orphanage2(Pincode, Area, City)

BCNF: In BCNF, since all the attributes depend only on the candidate key.

DATABASE RELATIONS

```
mysql> select * from ngo_employee;
```

id	first_name	last_name	age	task	pincode
E-101	Udit	Tomar	20	Collector	474015
E-102	Kshitij	Gupta	19	Collector	474026
E-103	Pranav	Pawar	20	Collector	226004
E-104	Harsh	Vaidh	18	Collector	226001
E-105	Ayan	Nafees	21	Collector	221010
E-106	Gaurang	Sondur	18	Collector	221015
E-107	Hardik	Mehta	20	Distributor	475015
E-108	Akash	Gupta	21	Distributor	479026
E-109	Ankit	Singh	20	Distributor	2226069
E-110	Harsh	Sharma	19	Distributor	226151
E-111	Shivam	Singh	21	Distributor	221130
E-112	Aditya	Pandey	19	Distributor	213015
E-113	Dhruv	Sangvi	20	Manager	465715
E-114	Ayush	Rakesh	19	Manager	226678
E-115	Yash	Nigam	18	Manager	224040

```
15 rows in set (0.00 sec)
```

NGO_EMPLOYEES

NGO_EMPLOYEES_LOCATION

```
mysql> select * from employee_location;
```

pincode	area	city
213015	Alam Nagar	Indore
221010	Rajendra Nagar	Indore
221015	Alambagh	Indore
221130	Dubagga	Indore
222669	Rajajipuram	Bhopal
224040	Hazratganj	Indore
226001	Tilak Nagar	Bhopal
226004	Chowk	Bhopal
226151	Gomti Nagar	Bhopal
226678	Chowk	Bhopal
465715	Gola Ka Mandir	Gwalior
474015	Morena	Gwalior
474026	City Center	Gwalior
475015	DD Nagar	Gwalior
479026	Lashkar	Gwalior

```
15 rows in set (0.00 sec)
```

NGO_Employee_Phone_Number

```
mysql> select * from employee_phone_number;
+-----+-----+
| id   | phone_number |
+-----+-----+
| E-101 | 9876543210 |
| E-102 | 6784561234 |
| E-102 | 9956488239 |
| E-103 | 7275488239 |
| E-104 | 8604995623 |
| E-105 | 7840565678 |
| E-106 | 9044882345 |
| E-106 | 9976123450 |
| E-106 | 9998887776 |
| E-107 | 6303643210 |
| E-107 | 8604994645 |
| E-108 | 6303619244 |
| E-109 | 8604818239 |
| E-109 | 8790565678 |
| E-110 | 8604995648 |
| E-110 | 9235849192 |
| E-111 | 7840888878 |
| E-111 | 9044567890 |
| E-112 | 6362559987 |
| E-112 | 8678561230 |
+-----+
20 rows in set (0.00 sec)
```

```
mysql> select * from Employee_aadhar_number;
+-----+-----+
| eid  | aadhar_number |
+-----+-----+
| E-101 | 703168822372 |
| E-102 | 989580843771 |
| E-103 | 989580843347 |
| E-104 | 989580841007 |
| E-105 | 703168824567 |
| E-106 | 703168845123 |
| E-107 | 905168822372 |
| E-108 | 703179922372 |
| E-109 | 703112342372 |
| E-110 | 879080843771 |
| E-111 | 657880843771 |
| E-112 | 798080843771 |
| E-113 | 708142522372 |
| E-114 | 989592165771 |
| E-115 | 989582184571 |
+-----+
15 rows in set (0.00 sec)
```

NGO_Employee_Aadhar

COLLECTOR EMPLOYEE

```
mysql> select * from collector_employee;
+----+----+
| eid | cid |
+----+----+
| E-101 | C-101 |
| E-102 | C-102 |
| E-103 | C-103 |
| E-104 | C-104 |
| E-105 | C-105 |
| E-106 | C-106 |
+----+----+
6 rows in set (0.00 sec)
```

COLLECTOR

COLLECTOR

```
mysql> select * from collector;
+----+----+
| cid | pincode |
+----+----+
| C-106 | 221078 |
| C-105 | 221090 |
| C-104 | 221345 |
| C-103 | 223456 |
| C-102 | 454567 |
| C-101 | 47123 |
+----+----+
6 rows in set (0.00 sec)
```

COLLECTOR_

LOCATION

```
mysql> select * from collector_location;
+----+----+----+
| city | area | pincode |
+----+----+----+
| Indore | Rajajipuram | 221078 |
| Indore | Alam Nagar | 221090 |
| Bhopal | Tilak Nagar | 221345 |
| Bhopal | Gomti Nagar | 223456 |
| Gwalior | Morena | 454567 |
| Gwalior | DD Nagar | 47123 |
+----+----+----+
6 rows in set (0.00 sec)
```

```
mysql> select * from donator;
```

did	fname	lname	pincode
Don-101	Hardik	Mehta	221340
Don-102	Sakshi	Kulkarni	224140
Don-103	Rupali	Das	221220
Don-104	Aman	Tiwari	221350
Don-105	Apoorv	Jain	221111
Don-106	Mridul	Gupta	221112
Don-107	Shubham	Kumar	221131
Don-108	Akshat	Jain	221141
Don-109	Yash	Nigam	474019
Don-110	Omkar	Singh	474349
Don-111	Yash	Goyal	474029
Don-112	Shouvik	Dey	474039

```
12 rows in set (0.00 sec)
```

DONATOR

DONATOR_LOCATION

```
mysql> select * from donator_location;
```

pincode	city	area
221111	Rajendra Nagar	Indore
221112	Alambagh	Indore
221131	DD Nagar	Gwalior
221141	Lashkar	Gwalior
221220	Chowk	Bhopal
221340	Morena	Gwalior
221350	Tilak Nagar	Bhopal
224140	City Center	Gwalior
474019	Rajajipuram	Bhopal
474029	Dubagga	Indore
474039	Alam Nagar	Indore
474349	Gomti Nagar	Bhopal

```
12 rows in set (0.00 sec)
```

DONATOR_PHONE_NO

```
mysql> select * from donator_phone_no;
+-----+-----+
| did      | phone_no   |
+-----+-----+
| Don-101  | 8887776665 |
| Don-102  | 8887776888 |
| Don-103  | 9997776665 |
| Don-104  | 8881116665 |
| Don-105  | 7275345610 |
| Don-105  | 9044756512 |
| Don-106  | 8604556677 |
| Don-107  | 6366124555 |
| Don-108  | 7869012345 |
| Don-108  | 9956781234 |
| Don-109  | 8907651234 |
| Don-110  | 7689435611 |
| Don-111  | 9671254678 |
| Don-112  | 9235849192 |
+-----+-----+
14 rows in set (0.00 sec)
```

```
mysql> select * from donator_aadhar_number;
+-----+-----+
| did      | aadhar_number |
+-----+-----+
| Don-101  | 905168100372 |
| Don-102  | 703179321372 |
| Don-103  | 703112111372 |
| Don-104  | 999080843771 |
| Don-105  | 650880843771 |
| Don-106  | 799090843771 |
| Don-107  | 703168822390 |
| Don-108  | 986980843771 |
| Don-109  | 989696943347 |
| Don-110  | 989580869696 |
| Don-111  | 712368824567 |
| Don-112  | 703169945123 |
+-----+-----+
12 rows in set (0.00 sec)
```

DONATOR_Aadhar_NO

```
mysql> select * from grain_donation;
```

did	type	quantity	date
Don-103 Wheat 10 Kg 16-01-2003			
Don-106 Wheat 25 Kg 15-01-2003			
Don-107 Rice 10 Kg 03-01-2003			
Don-107 Rice 25 Kg 04-01-2003			
Don-108 Wheat 50 Kg 06-01-2003			
Don-109 Wheat 20 Kg 08-01-2003			
Don-110 Pulses 10 Kg 09-01-2003			
Don-111 Pulses 15 Kg 13-01-2003			
Don-112 Rice 50 Kg 14-01-2003			

```
9 rows in set (0.00 sec)
```

GRAIN_DONATION

FUND_DONATION

```
mysql> select * from fund_donation;
```

did	type	funds	date
Don-101 Cash 1000 01-01-2003			
Don-102 UPI 500 03-01-2003			
Don-103 Cheque 5000 05-01-2003			
Don-104 Cash 2500 13-01-2004			
Don-105 UPI 2000 14-01-2003			
Don-106 UPI 1500 15-01-2003			
Don-107 Cash 2500 27-01-2003			

```
7 rows in set (0.00 sec)
```

SANCTIONER

```
mysql> select * from sanctioner;
+-----+-----+-----+-----+
| san_id | form_id | status | pincode |
+-----+-----+-----+-----+
| S-103 | 12323 | Approved | 475618 |
| S-101 | 12345 | Approved | 224567 |
| S-103 | 21213 | Approved | 221089 |
| S-102 | 32145 | Approved | 224569 |
| S-103 | 32156 | Approved | 456123 |
| S-101 | 43789 | Approved | 221086 |
| S-102 | 45645 | Approved | 475612 |
| S-103 | 56123 | Approved | 221088 |
| S-103 | 67345 | Approved | 475613 |
| S-102 | 67812 | Rejected | 475619 |
| S-101 | 67890 | Rejected | 224568 |
| S-102 | 76567 | Rejected | 456124 |
| S-102 | 76589 | Rejected | 224510 |
| S-101 | 87909 | Rejected | 221087 |
| S-102 | 98706 | Rejected | 221023 |
| S-103 | 99876 | Approved | 475614 |
| S-101 | 99889 | Approved | 456125 |
+-----+-----+-----+
```

17 rows in set (0.00 sec)

```
mysql> select * from sanctioner_location;
+-----+-----+
| pincode | city   |
+-----+-----+
| 221023 | Bhopal |
| 221086 | Gwalior |
| 221087 | Gwalior |
| 221088 | Indore |
| 221089 | Indore |
| 224510 | Bhopal |
| 224567 | Gwalior |
| 224568 | Gwalior |
| 224569 | Bhopal |
| 475612 | Bhopal |
| 475613 | Indore |
| 475614 | Indore |
+-----+-----+
```

12 rows in set (0.00 sec)

SANCTIONER_LOCATION

ORPHANAGE_LOCATION

```
mysql> select * from orphanage;
```

orphanage_id	name	pincode	number_of_children
O-101	Sweet Home	475015	255
O-102	Pragati	475016	200
O-103	Ujjwal	226151	500
O-104	Happiness	226152	100
O-105	Kind Home	475018	150
O-106	Ujjivan	475017	300
O-107	Asha	226153	250
O-108	Nayi Kirana	226150	200
O-109	Mother Teresa	221019	450
O-110	Vishwas	221090	120
O-111	Bal Kendra	221034	240

```
11 rows in set (0.00 sec)
```

ORPHANAGE

```
mysql> select * from orphanage_location;
```

pincode	city	area
221019	Rajajipuram	Bhopal
221034	Dubagga	Indore
221090	Gomti Nagar	Bhopal
226150	Lashkar	Gwalior
226151	Chowk	Bhopal
226152	Tilak Nagar	Bhopal
226153	DD Nagar	Gwalior
475015	Morena	Gwalior
475016	City Center	Gwalior
475017	Alambagh	Indore
475018	Rajendra Nagar	Indore

```
11 rows in set (0.00 sec)
```

DISTRIBUTOR_LOCATION

```
mysql> select * from distributor;
```

pincode	did
475015	D-101
479026	D-102
2226069	D-103
226151	D-104
221130	D-105
213015	D-106

```
6 rows in set (0.00 sec)
```

DISTRIBUTOR

```
mysql> select * from distributor_location;
```

pincode	area	city
213015	Alam Nagar	Indore
221130	Dubagga	Indore
2226069	Rajajipuram	Bhopal
226151	Gomti Nagar	Bhopal
475015	DD Nagar	Gwalior
479026	Lashkar	Gwalior

```
6 rows in set (0.00 sec)
```

```
mysql> select * from warehouse;
```

date	tid	type	total_fund_in_ruppees	total_pulse_in_kgs	total_wheat_in_kgs	total_rice_in_kgs
12-11-2003	T-101	Deposit	10000	35	50	50
13-11-2003	T-102	Deposit	15000	15	30	20
14-11-2003	T-103	Withdrawl	5000	50	50	50
14-11-2003	T-104	Deposit	25000	35	40	100
14-11-2003	T-105	Withdrawl	20000	35	100	40
15-11-2003	T-106	Withdrawl	25000	35	100	100
15-11-2003	T-107	Deposit	10000	15	20	25
16-11-2003	T-108	Deposit	30000	35	35	35
17-11-2003	T-109	Deposit	12000	15	25	30
17-11-2003	T-110	Withdrawl	15000	30	30	30

10 rows in set (0.00 sec)

WAREHOUSE

RELATIONSHIP SETS

COLLECTS

```
mysql> select * from collects;
+-----+-----+
| did      | cid    |
+-----+-----+
| Don-101  | C-101  |
| Don-102  | C-101  |
| Don-103  | C-102  |
| Don-104  | C-102  |
| Don-105  | C-103  |
| Don-106  | C-103  |
| Don-107  | C-104  |
| Don-108  | C-104  |
| Don-109  | C-105  |
| Don-110  | C-105  |
| Don-111  | C-106  |
| Don-112  | C-106  |
+-----+-----+
12 rows in set (0.00 sec)
```

```
mysql> select * from collector_employee;
+-----+-----+
| eid      | cid    |
+-----+-----+
| E-101   | C-101  |
| E-102   | C-102  |
| E-103   | C-103  |
| E-104   | C-104  |
| E-105   | C-105  |
| E-106   | C-106  |
+-----+-----+
6 rows in set (0.00 sec)
```

COLLECTOR_ EMPLOYEE

SANCTIONER_EMPLOYEE

```
mysql> select * from sanctioner_employee;
+----+-----+
| id | form_id |
+----+-----+
| E-113 | 12345 |
| E-113 | 32156 |
| E-113 | 67890 |
| E-113 | 76567 |
| E-113 | 87909 |
| E-113 | 99889 |
| E-114 | 12323 |
| E-114 | 21213 |
| E-114 | 32145 |
| E-114 | 56123 |
| E-114 | 67812 |
| E-114 | 76589 |
| E-114 | 99876 |
| E-115 | 43789 |
| E-115 | 45645 |
| E-115 | 67345 |
| E-115 | 98706 |
+----+-----+
17 rows in set (0.00 sec)
```

```
mysql> select * from approves;
+-----+-----+-----+
| orphanage_id | form_id | date_of_approval |
+-----+-----+-----+
| 0-101 | 12345 | 10-11-2001 |
| 0-102 | 32145 | 10-10-2001 |
| 0-103 | 21213 | 10-10-2002 |
| 0-104 | 56123 | 09-01-2000 |
| 0-105 | 43789 | 11-11-2002 |
| 0-106 | 45645 | 10-01-2001 |
| 0-107 | 67345 | 09-12-2000 |
| 0-108 | 99876 | 25-08-2003 |
| 0-109 | 12323 | 15-11-2001 |
| 0-110 | 32156 | 20-10-2001 |
| 0-111 | 99889 | 28-08-2003 |
+-----+-----+-----+
11 rows in set (0.00 sec)
```

APPROVES

DISTRIBUTES

```
mysql> select * from distributes;
+-----+-----+
| did | oid |
+-----+-----+
| D-101 | 0-101 |
| D-102 | 0-102 |
| D-103 | 0-103 |
| D-104 | 0-104 |
| D-105 | 0-105 |
| D-106 | 0-106 |
| D-101 | 0-107 |
| D-102 | 0-108 |
| D-103 | 0-109 |
| D-104 | 0-110 |
| D-105 | 0-111 |
+-----+
11 rows in set (0.00 sec)
```

SUPPLIES

```
mysql> select * from supplies;
+-----+-----+
| batch_no | did | date_of_demand |
+-----+-----+
| 12125 | D-101 | 17-11-2003 |
| 12126 | D-102 | 18-11-2003 |
| 12127 | D-103 | 19-11-2003 |
| 12128 | D-104 | 20-11-2003 |
| 12129 | D-105 | 21-11-2003 |
| 12130 | D-106 | 22-11-2003 |
| 12134 | D-104 | 23-11-2003 |
+-----+
7 rows in set (0.00 sec)
```

STORES

```
mysql> select * from stores;
+-----+-----+-----+
| batch_no | cid    | date_of_storage |
+-----+-----+-----+
| 12125   | C-101  | 01-01-2003   |
| 12131   | C-101  | 15-01-2003   |
| 12135   | C-101  | 09-01-2003   |
| 12126   | C-102  | 11-01-2003   |
| 12132   | C-102  | 13-01-2003   |
| 12136   | C-102  | 10-01-2003   |
| 12127   | C-103  | 12-01-2003   |
| 12133   | C-103  | 08-01-2003   |
| 12137   | C-103  | 15-01-2003   |
| 12128   | C-104  | 04-01-2003   |
| 12134   | C-104  | 05-01-2003   |
| 12138   | C-104  | 19-01-2003   |
| 12129   | C-105  | 05-01-2003   |
| 12139   | C-105  | 11-01-2003   |
| 12130   | C-106  | 17-01-2003   |
+-----+-----+-----+
15 rows in set (0.00 sec)
```

DEPOSITS_TRANSACTION

```
mysql> select * from deposits_transaction;
+-----+-----+
| tid  | batch_no |
+-----+-----+
| T-101 | 12125  |
| T-102 | 12126  |
| T-103 | 12127  |
| T-104 | 12128  |
| T-105 | 12129  |
| T-106 | 12130  |
| T-107 | 12131  |
| T-108 | 12132  |
| T-109 | 12133  |
| T-110 | 12134  |
+-----+-----+
10 rows in set (0.00 sec)
```

WITHDRAWAL_TRANSACTION

```
mysql> select * from withdrawl_transaction;
+-----+-----+
| batch_no | tid   |
+-----+-----+
| 12126   | T-103 |
| 12129   | T-105 |
| 12130   | T-106 |
| 12134   | T-110 |
+-----+-----+
4 rows in set (0.00 sec)
```

SQL Queries

```
mysql> select concat(fname," ",lname) as name
-> from donator
-> where did in ( select did
-> from fund_donation
-> where did in (select did from grain_donation));
+-----+
| name      |
+-----+
| Rupali Das |
| Mridul Gupta |
| Shubham Kumar |
+-----+
3 rows in set (0.00 sec)
```

Q1. Display names of all the donors which donated both funds and grains as a donation.

```
mysql> select * from orphanage where number_of_children > (select avg(number_of_children) from orphanage );
+-----+-----+-----+
| orphanage_id | name           | pincode | number_of_children |
+-----+-----+-----+
| 0-101        | Sweet Home     | 475015   | 255                |
| 0-103        | Ujjwal         | 226151   | 500                |
| 0-106        | Ujjivan        | 475017   | 300                |
| 0-109        | Mother Teresa  | 221019   | 450                |
+-----+-----+-----+
4 rows in set (0.00 sec)
```

Q2. Display all the orphanages whose number of students is greater than the average size of all orphanages.

```
mysql> select * from ngo_employee where last_name like '%a' union select * from ngo_employee where first_name like '____';
+-----+-----+-----+-----+-----+
| id   | first_name | last_name | age  | task       | pincode |
+-----+-----+-----+-----+-----+
| E-102 | Kshitij    | Gupta     | 19   | Collector  | 474026  |
| E-107 | Hardik     | Mehta     | 20   | Distributor| 475015  |
| E-108 | Akash      | Gupta     | 21   | Distributor| 479026  |
| E-110 | Harsh      | Sharma    | 19   | Distributor| 226151  |
| E-104 | Harsh      | Vaidh     | 18   | Collector  | 226001  |
| E-109 | Ankit      | Singh     | 20   | Distributor| 222669  |
| E-113 | Dhruv      | Sangvi    | 20   | Manager    | 465715  |
| E-114 | Ayush      | Rakesh    | 19   | Manager    | 226678  |
+-----+-----+-----+-----+-----+
8 rows in set (0.01 sec)
```

Q3. Find all the NGO employees whose last names end with 'a' or the first name has exactly five letters.

```
mysql> select concat(first_name, " ", last_name) as name,cid,age
->   from ngo_employee natural join collector_employee;
+-----+-----+-----+
| name      | cid    | age   |
+-----+-----+-----+
| Udit Tomar | C-101 | 20   |
| Kshitij Gupta | C-102 | 19   |
| Pranav Pawar | C-103 | 20   |
| Harsh Vaidh | C-104 | 18   |
| Ayan Nafees | C-105 | 21   |
| Gaurang Sondur | C-106 | 18   |
+-----+-----+-----+
6 rows in set (0.00 sec)
```

Q4. Find all the employees who work as a collector.

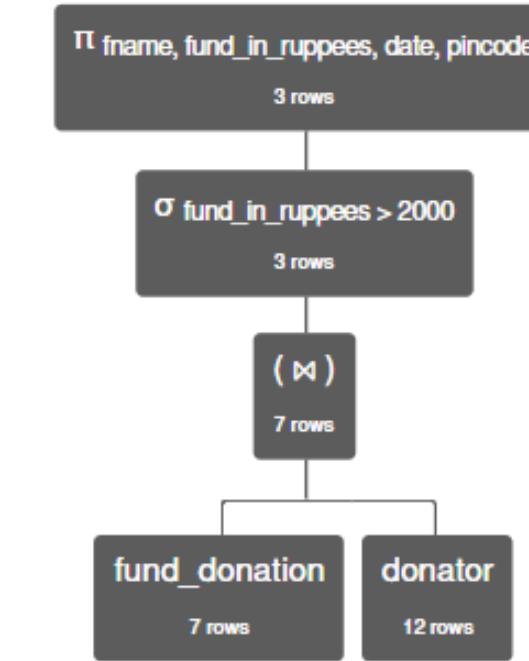
```
mysql> select * from sanctioner where status like 'Rejected';
+-----+-----+-----+-----+
| san_id | form_id | status   | pincode |
+-----+-----+-----+-----+
| S-102  | 67812  | Rejected | 475619  |
| S-101  | 67890  | Rejected | 224568  |
| S-102  | 76567  | Rejected | 456124  |
| S-102  | 76589  | Rejected | 224510  |
| S-101  | 87909  | Rejected | 221087  |
| S-102  | 98706  | Rejected | 221023  |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

Q5. Find all the details of the form which were rejected by the sanctioner.

Relational Queries

Q1.

Show first name,
funds, date, pincode
for all donations
greater than 2000
rupees.



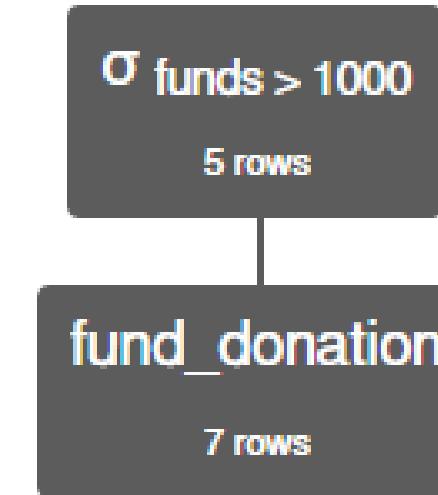
$\Pi \text{ fname, fund_in_ruppees, date, pincode } (\sigma \text{ fund_in_ruppees} > 2000 (\text{fund_donation} \bowtie \text{donator}))$

Execution time: 5 ms

donator.fname	fund_donation.fund_in_ruppees	fund_donation.date	donator.pincode
'Rupali'	5000	'05-01-2003'	221220
'Aman'	2500	'13-01-2004'	221350
'Shubham'	2500	'27-01-2003'	221131

Q2.

Find all donaiors
with fund
donation greater
than 1000 Rs



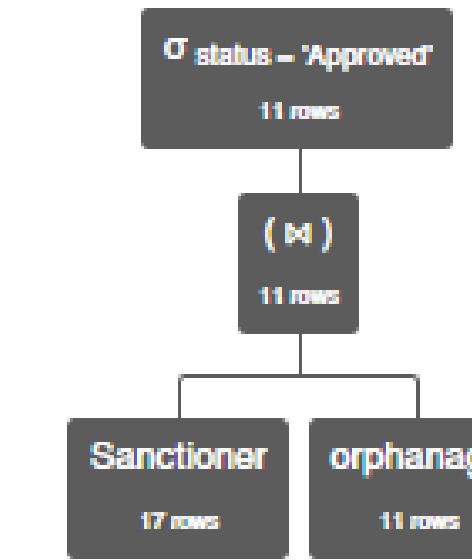
$\sigma \text{ funds} > 1000 \text{ (fund_donation) }$

Execution time: 0 ms

fund_donation.did	fund_donation.type	fund_donation.funds	fund_donation.date
'Don-103'	'Cheque'	5000	'05-01-2003'
'Don-104'	'Cash'	2500	'13-01-2004'
'Don-105'	'UPI'	2000	'14-01-2003'
'Don-106'	'UPI'	1500	'15-01-2003'
'Don-107'	'Cash'	2500	'27-01-2003'

Q3.

Find all
orphanages
approved by
the
sanctioner



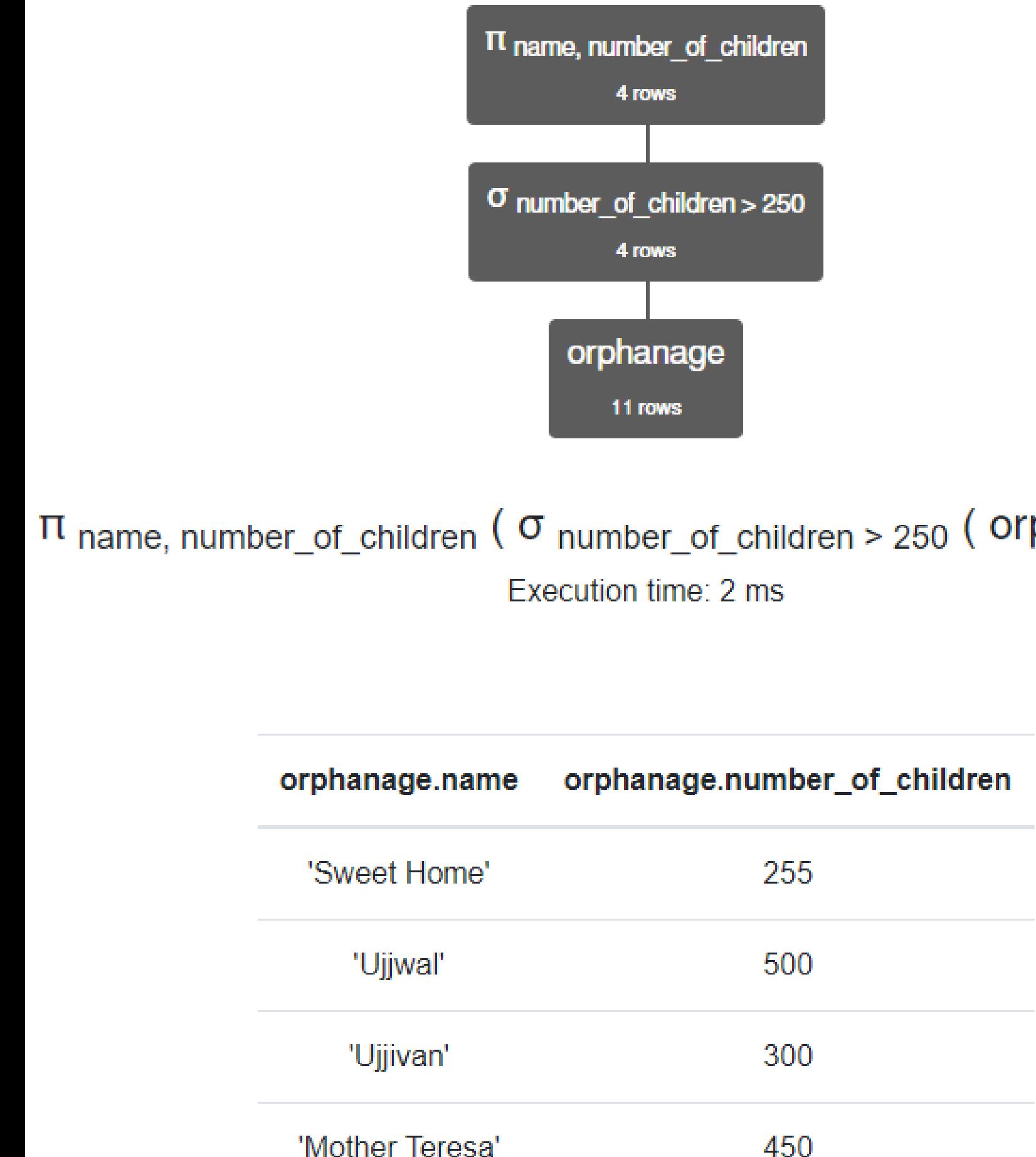
$\sigma \text{ status} = \text{'Approved'}$ (Sanctioner \bowtie orphanage)

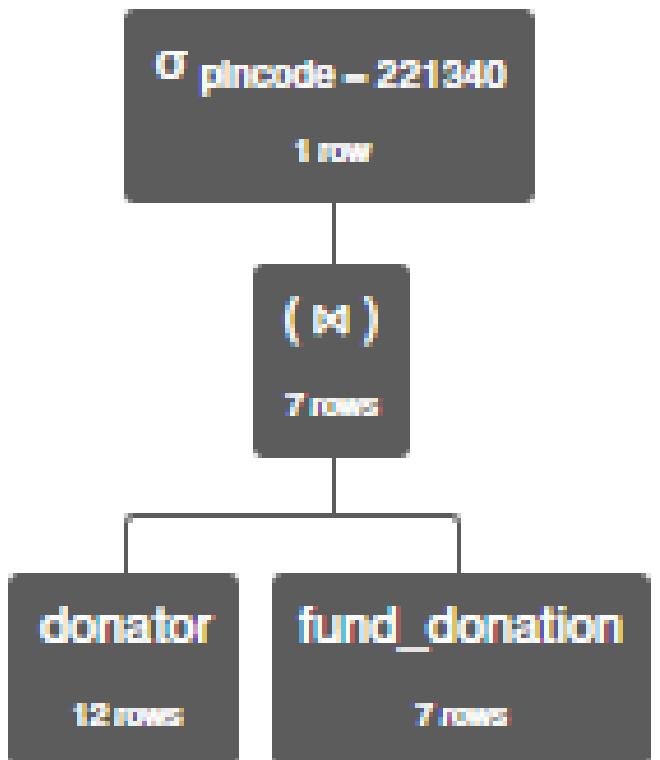
Execution time: 5 ms

Sanctioner.san_id	Sanctioner.form_id	Sanctioner.status	orphanage.orphanage_id	orphanage.name	orphanage.pincode	orphanage.number_of_children
'S-101'	12345	'Approved'	'O-101'	'Sweet Home'	'475015'	255
'S-102'	32145	'Approved'	'O-102'	'Pragati'	'475016'	200
'S-103'	21213	'Approved'	'O-103'	'Ujjwal'	'226151'	500
'S-103'	56123	'Approved'	'O-104'	'Happiness'	'226152'	100
'S-101'	43789	'Approved'	'O-105'	'Kind Home'	'475018'	150
'S-102'	45645	'Approved'	'O-106'	'Ujjivan'	'475017'	300
'S-103'	67345	'Approved'	'O-107'	'Asha'	'226153'	250
'S-103'	99876	'Approved'	'O-108'	'Nayi Kirana'	'226150'	200
'S-103'	12323	'Approved'	'O-109'	'Mother Teresa'	'221019'	450
'S-103'	32156	'Approved'	'O-110'	'Vishwas'	'221090'	120

Q4.

Show all orphanage's name and number of children having no. of children greater than 250





$\sigma \text{ pincode} = 221340 \text{ (donator } \bowtie \text{ fund_donation)}$

Execution time: 2 ms

donator.did	donator.pincode	donator.fname	donator.lname	fund_donation.type	fund_donation.fund_in_ruppees	fund_donation.date
'Don-101'	221340	"Hardik"	"Mehta"	'Cash'	1000	'01-01-2003'

Q5. Show all donations from pincode

221340