

# DATA RETRIEVAL AND ANALYSIS USING SQL

## 1.1 DATA RETRIEVAL

### Creating Tables

```
1 • CREATE DATABASE IF NOT EXISTS `charity`;
2 • USE `charity`;
3
4 -- Children's Home table
5 • CREATE TABLE ChildrensHome (
6     HomeID INT PRIMARY KEY AUTO_INCREMENT,
7     Name VARCHAR(255) NOT NULL,
8     Location VARCHAR(255) NOT NULL,
9     Description TEXT NOT NULL,
10    ContactInfo VARCHAR(255) NOT NULL,
11    Needs TEXT,
12    ImageURL VARCHAR(255)
13 );
14
15 -- Charitable Event table
16 • CREATE TABLE CharitableEvent (
17     EventID INT PRIMARY KEY AUTO_INCREMENT,
18     Name VARCHAR(255) NOT NULL,
19     Description TEXT NOT NULL,
20     Date DATE NOT NULL,
21     Location VARCHAR(255) NOT NULL,
22     OrganizerID INT,
23     ContactInfo VARCHAR(255) NOT NULL,
24     ImageURL VARCHAR(255),
25     FOREIGN KEY (OrganizerID) REFERENCES Organizer(OrganizerID)
26 );
27
28 -- Create Organizer table
29 • CREATE TABLE Organizer (
30     OrganizerID INT PRIMARY KEY AUTO_INCREMENT,
31     Name VARCHAR(255) NOT NULL,
32     OrganizationName VARCHAR(255) NOT NULL,
33     ContactInfo VARCHAR(255) NOT NULL,
34     WebsiteURL VARCHAR(255)
35 );
36
```

```
37      -- Donor table
38  ● ○ CREATE TABLE Donor (
39      DonorID INT PRIMARY KEY AUTO_INCREMENT,
40      Name VARCHAR(255) NOT NULL,
41      Email VARCHAR(255) UNIQUE,
42      PhoneNumber VARCHAR(20)
43  );
44
45      -- Donation table
46  ● ○ CREATE TABLE Donation (
47      DonationID INT PRIMARY KEY AUTO_INCREMENT,
48      DonorID INT,
49      HomeID INT,
50      Amount DECIMAL(10, 2),
51      Date DATE NOT NULL,
52      FOREIGN KEY (DonorID) REFERENCES DonorVolunteer(DonorID),
53      FOREIGN KEY (HomeID) REFERENCES ChildrensHome(HomeID)
54  );
55
56      -- Event Registration table
57  ● ○ CREATE TABLE EventRegistration (
58      RegistrationID INT PRIMARY KEY AUTO_INCREMENT,
59      EventID INT,
60      Date DATE,
61      Name VARCHAR(255) NOT NULL,
62      Email VARCHAR(255) NOT NULL,
63      PhoneNumber VARCHAR(20) NOT NULL,
64      AdditionalInfo TEXT,
65      FOREIGN KEY (DonorID) REFERENCES DonorVolunteer(DonorID),
66      FOREIGN KEY (EventID) REFERENCES CharitableEvent(EventID)
67  );
```

## Inserting Sample Data

### Children's Home

```
INSERT INTO ChildrensHome (Name, Location, Description, ContactInfo, Needs, ImageURL)
VALUES
```

```
('Hope Children's Home', 'Nairobi', 'Provides shelter and education to underprivileged children.',
'info@hopehome.org', 'Food, Clothing, School Supplies', 'http://example.com/image1.jpg'),
```

```
('Sunshine Orphanage', 'Kisumu', 'Offers care and support for orphaned children.',
'contact@sunshineorphanage.org', 'Medical Supplies, Food', 'http://example.com/image2.jpg'),
```

----Add more

### Charitable Event

```
INSERT INTO CharitableEvent (Name, Description, Date, Location, OrganizerID, ContactInfo,
ImageURL)
```

```
VALUES
```

```
('Fundraising Gala for Hope Home', 'A gala to raise funds for Hope Children's Home.', '2024-10-15',
'Nairobi', 1, 'info@hopehome.org', 'http://example.com/event1.jpg'),
```

```
('Sunshine Walkathon', 'A 5km walkathon to support Sunshine Orphanage.', '2024-11-05', 'Kisumu',
2, 'contact@sunshineorphanage.org', 'http://example.com/event2.jpg'),
```

--- Add more

### Organizer

```
INSERT INTO Organizer (Name, OrganizationName, ContactInfo, WebsiteURL)
```

```
VALUES
```

```
('Alice Mwangi', 'Hope Children's Home', 'alice@hopehome.org', 'http://hopehome.org'),
```

```
('John Otieno', 'Sunshine Orphanage', 'john@sunshineorphanage.org', 'http://sunshineorphanage.org'),
```

---Add more

### Donor

```
INSERT INTO Donor (Name, Email, PhoneNumber) VALUES
```

```
('Daniel Njeri', 'daniel.njeri@example.com', '0700123456'),
```

```
('Emily Achieng', 'emily.achieng@example.com', '0712345678'),
```

--Add more

## Donation

```
INSERT INTO Donation (DonorID, HomeID, Amount, Date) VALUES
(1, 1, 5000.00, '2024-09-10'),
(2, 2, 3000.00, '2024-09-12'),
---Add more
```

## Event Registration

```
INSERT INTO EventRegistration (DonorID, EventID, Date) VALUES
(1, 1, '2024-09-10'),
(2, 2, '2024-09-12'),
--Add more
```

## Queries

### *Retrieve all Children's Home*

To get a complete list of all children's homes, their locations, and basic details.

```
SELECT * FROM ChildrensHome;
```

### *Retrieve all Charitable Events*

To view details of all charitable events, including their dates and locations.

```
SELECT * FROM CharitableEvent;
```

## 1.2 DATA ANALYSIS

### Queries

#### *1. Total Number of Children's Home*

- To get the total count of children's homes in the database.

```
SELECT COUNT(HomeID) AS TotalChildrensHomes
FROM ChildrensHome;
```

#### *2. Total Donations Received by Each Children's Home*

- To analyze which children's homes are receiving the most donations.

```
SELECT ChildrensHome.Name AS HomeName, SUM(Donation.Amount) AS TotalDonations
FROM ChildrensHome
JOIN Donation ON ChildrensHome.HomeID = Donation.HomeID
```

GROUP BY ChildrensHome.Name;

### *3. Distribution of children's home by location*

- To get the list of children's homes along with their locations.

SELECT

    Name AS HomeName,

    Location

FROM

    ChildrensHome;