

## MySQL code:

### Tables:

```
mysql> CREATE TABLE relief_centers (  
->   center_id INT AUTO_INCREMENT PRIMARY KEY,  
->   center_name VARCHAR(100),  
->   location VARCHAR(100),  
->   capacity INT  
-> );  
Query OK, 0 rows affected (0.03 sec)  
  
mysql> CREATE TABLE victims (  
->   victim_id INT AUTO_INCREMENT PRIMARY KEY,  
->   victim_name VARCHAR(100),  
->   age INT,  
->   incident_type VARCHAR(100),  
->   region VARCHAR(100),  
->   center_id INT,  
->   FOREIGN KEY (center_id) REFERENCES relief_centers(center_id)  
-> );
```

```
mysql> CREATE TABLE supplies (  
->   supply_id INT AUTO_INCREMENT PRIMARY KEY,  
->   item_name VARCHAR(100),  
->   quantity INT,  
->   center_id INT,  
->   FOREIGN KEY (center_id) REFERENCES relief_centers(center_id)  
-> );  
Query OK, 0 rows affected (0.05 sec)
```

```
mysql> CREATE TABLE donations (  
->   donation_id INT AUTO_INCREMENT PRIMARY KEY,  
->   donor_name VARCHAR(100),  
->   item_donated VARCHAR(100),  
->   amount INT,  
->   donation_date DATE  
-> );  
Query OK, 0 rows affected (0.02 sec)  
  
mysql> CREATE TABLE demands (  
->   demand_id INT AUTO_INCREMENT PRIMARY KEY,  
->   region VARCHAR(100),  
->   food_required INT,  
->   water_required INT,  
->   medical_kits_required INT  
-> );  
Query OK, 0 rows affected (0.04 sec)  
  
mysql> CREATE TABLE feedback (  
->   feedback_id INT AUTO_INCREMENT PRIMARY KEY,  
->   person_name VARCHAR(100),  
->   message TEXT,  
->   date_submitted DATE  
-> );  
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> DELIMITER ;
mysql> CREATE TABLE IF NOT EXISTS inventory_low (
->     id INT AUTO_INCREMENT PRIMARY KEY,
->     item_name VARCHAR(100),
->     center_id INT,
->     quantity INT,
->     status VARCHAR(50),
->     checked_at DATETIME
-> );
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> CREATE TABLE low_inventory_log (
->     log_id INT AUTO_INCREMENT PRIMARY KEY,
->     supply_id INT,
->     item_name VARCHAR(100),
->     center_id INT,
->     quantity INT,
->     log_time TIMESTAMP DEFAULT CURRENT_TIMESTAMP
-> );
Query OK, 0 rows affected (0.03 sec)
```

```
mysql>
mysql> CREATE TABLE allocation_log (
->     log_id INT AUTO_INCREMENT PRIMARY KEY,
->     region VARCHAR(100),
->     item_name VARCHAR(100),
->     quantity_allocated INT,
->     allocation_time TIMESTAMP DEFAULT CURRENT_TIMESTAMP
-> );
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> CREATE TABLE disaster_report_log (
->     report_id INT AUTO_INCREMENT PRIMARY KEY,
->     region VARCHAR(100),
->     victims INT,
->     total_demand INT,
->     supplies_available INT,
->     report_time TIMESTAMP DEFAULT CURRENT_TIMESTAMP
-> );
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> INSERT INTO relief_centers (center_name, location, capacity) VALUES
-> ('Central Relief Camp', 'Delhi', 300),
-> ('North Flood Shelter', 'Punjab', 220),
-> ('South Quake Support Center', 'Gujarat', 280),
-> ('East Cyclone Relief Point', 'Odisha', 250),
-> ('West Landslide Camp', 'Himachal Pradesh', 150),
-> ('Metro Emergency Hub', 'Mumbai', 320),
-> ('Valley Relief Zone', 'Kashmir', 180),
-> ('Riverbank Evacuation Camp', 'Assam', 210),
-> ('Highway First-Aid Station', 'Rajasthan', 140),
-> ('Urban Multi-Relief Unit', 'Bangalore', 260);
Query OK, 10 rows affected (0.02 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
mysql> INSERT INTO victims (victim_name, age, incident_type, region, center_id) VALUES
-> ('Amit Kumar', 32, 'Flood', 'Punjab', 2),
-> ('Riya Sharma', 28, 'Earthquake', 'Gujarat', 3),
-> ('Karan Verma', 45, 'Storm', 'Delhi', 1),
-> ('Meena Devi', 38, 'Cyclone', 'Odisha', 4),
-> ('Sohan Lal', 50, 'Landslide', 'Himachal Pradesh', 5),
-> ('Priya Gupta', 22, 'Building Collapse', 'Delhi', 1),
-> ('Mohit Singh', 29, 'Flood', 'Assam', 8),
-> ('Sunita Reddy', 41, 'Heatwave', 'Rajasthan', 9),
-> ('Jatin Arora', 34, 'Earthquake', 'Gujarat', 3),
-> ('Rohit Das', 19, 'Cyclone', 'Odisha', 4),
-> ('Ananya Mehta', 26, 'Flood', 'Punjab', 2),
-> ('Lakshmi Nair', 31, 'Storm', 'Bangalore', 10),
-> ('Harpreet Kaur', 47, 'Flood', 'Punjab', 2),
-> ('Arjun Singh', 30, 'Landslide', 'Himachal Pradesh', 5),
-> ('Shweta Rawat', 27, 'Snowstorm', 'Kashmir', 7);
Query OK, 15 rows affected (0.02 sec)
Records: 15 Duplicates: 0 Warnings: 0
```

```
mysql> INSERT INTO supplies (item_name, quantity, center_id) VALUES
-> ('Food Packets', 120, 1),
-> ('Water Bottles', 250, 1),
-> ('Medical Kits', 70, 3),
-> ('Blankets', 90, 2),
-> ('Sanitary Pads', 150, 4),
-> ('Baby Food', 60, 1),
-> ('Torch Lights', 40, 5),
-> ('Tents', 25, 7),
-> ('Painkillers', 80, 3),
-> ('Dry Rations', 200, 2),
-> ('Winter Jackets', 50, 7),
-> ('ORS Packets', 120, 9),
-> ('Masks', 300, 10),
-> ('Gloves', 180, 8),
-> ('Energy Bars', 140, 4);
Query OK, 15 rows affected (0.01 sec)
Records: 15 Duplicates: 0 Warnings: 0
```

```
mysql> INSERT INTO donations (donor_name, item_donated, amount, donation_date) VALUES
-> ('Rahul Mehta', 'Food Packets', 40, '2025-11-10'),
-> ('Simran Kohli', 'Water Bottles', 30, '2025-11-12'),
-> ('Global Aid Org', 'Medical Kits', 20, '2025-11-08'),
-> ('Priya Foundation', 'Blankets', 50, '2025-11-14'),
-> ('Arun Kumar', 'Cash', 5000, '2025-11-11'),
-> ('Hope Trust', 'Tents', 10, '2025-11-09'),
-> ('Nisha Patel', 'Sanitary Kits', 35, '2025-11-13'),
-> ('Vikas Sharma', 'Dry Rations', 45, '2025-11-10'),
-> ('Rotary Club', 'Winter Jackets', 25, '2025-11-07'),
-> ('Ritu Arora', 'Baby Food', 15, '2025-11-12'),
-> ('SNS Group', 'Medicines', 80, '2025-11-05'),
-> ('Harsh Gupta', 'Energy Bars', 60, '2025-11-13'),
-> ('Metro Charitable Trust', 'ORS Packets', 90, '2025-11-14'),
-> ('Vicare NGO', 'Masks', 100, '2025-11-11'),
-> ('People United', 'Gloves', 70, '2025-11-10');
Query OK, 15 rows affected (0.00 sec)
Records: 15 Duplicates: 0 Warnings: 0
```

```
mysql> INSERT INTO demands (region, food_required, water_required, medical_kits_required) VA
LUES
-> ('Delhi', 60, 40, 20),
-> ('Punjab', 75, 55, 30),
-> ('Gujarat', 90, 45, 25),
-> ('Odisha', 110, 70, 50),
-> ('Himachal Pradesh', 45, 30, 15),
-> ('Assam', 80, 55, 35),
-> ('Rajasthan', 40, 20, 10),
-> ('Kashmir', 65, 40, 20),
-> ('Mumbai', 30, 15, 10),
-> ('Bangalore', 50, 25, 15),
-> ('Uttarakhand', 55, 35, 25),
-> ('Chhattisgarh', 70, 45, 30);
Query OK, 12 rows affected (0.01 sec)
Records: 12 Duplicates: 0 Warnings: 0
```

```
mysql> INSERT INTO feedback (person_name, message, date_submitted) VALUES
-> ('Ravi Singh', 'The relief center helped us greatly during the floods.', '2025-11-13'
),
-> ('Meena Devi', 'Food distribution was well organized.', '2025-11-14'),
-> ('Amit Verma', 'Medical support was timely and effective.', '2025-11-12'),
-> ('Rohini Sharma', 'Volunteers were helpful and kind.', '2025-11-15'),
-> ('Suresh Thapa', 'Need more blankets at the center.', '2025-11-11'),
-> ('Neha Gupta', 'Clean drinking water was insufficient.', '2025-11-10'),
-> ('Pooja Sethi', 'Great coordination by the Delhi team.', '2025-11-09'),
-> ('Jaspreet Kaur', 'Happy with the assistance provided.', '2025-11-08'),
-> ('Zahid Khan', 'Transport arrangements needed improvement.', '2025-11-07'),
-> ('Anil Kumar', 'Appreciated the volunteers.', '2025-11-06'),
-> ('Shaila Rani', 'Medical team very supportive.', '2025-11-05'),
-> ('Rahul Sharma', 'Supplies were delivered on time.', '2025-11-04');
Query OK, 12 rows affected (0.02 sec)
Records: 12 Duplicates: 0 Warnings: 0
```

## Triggers:

```
mysql> DELIMITER $$
mysql>
mysql> CREATE TRIGGER trg_low_inventory
-> AFTER UPDATE ON supplies
-> FOR EACH ROW
-> BEGIN
->     IF NEW.quantity < 30 THEN
->         INSERT INTO low_inventory_log (supply_id, item_name, center_id, quantity)
->         VALUES (NEW.supply_id, NEW.item_name, NEW.center_id, NEW.quantity);
->     END IF;
-> END$$
Query OK, 0 rows affected (0.03 sec)
```

```
mysql>
mysql> create trigger trg_supplies_check
-> before insert on supplies
-> for each row
-> begin
->     if new.quantity is null or new.quantity < 0 then
->         set new.quantity = 0;
->     end if;
-> end$$
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> create trigger trg_supplies_low_update
-> after update on supplies
-> for each row
-> begin
->     if new.quantity < 30 then
->         insert into inventory_low(item_name, center_id, quantity, status, checked_at)
->         values (new.item_name, new.center_id, new.quantity, 'low stock', now());
->     end if;
-> end$$
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> create trigger trg_supplies_low_insert
-> after insert on supplies
-> for each row
-> begin
->     if new.quantity < 30 then
->         insert into inventory_low(item_name, center_id, quantity, status, checked_at)
->         values (new.item_name, new.center_id, new.quantity, 'low stock', now());
->     end if;
-> end$$
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> create trigger trg_victims_age_check
-> before insert on victims
-> for each row
-> begin
->     if new.age < 0 or new.age > 120 then
->         set new.age = null;
->     end if;
-> end$$
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> create trigger trg_feedback_check
-> before insert on feedback
-> for each row
-> begin
->     if new.message = '' then
->         set new.message = 'no feedback provided';
->     end if;
-> end$$
Query OK, 0 rows affected (0.02 sec)
```

## Procedures:

```
mysql> DELIMITER $$
mysql>
mysql> CREATE PROCEDURE allocate_resources_weighted()
-> BEGIN
->     DECLARE region_name VARCHAR(100);
->     DECLARE food INT;
->     DECLARE water INT;
->     DECLARE kits INT;
->     DECLARE demand_weight FLOAT;
->
->     DECLARE done INT DEFAULT 0;
->
->     DECLARE cur CURSOR FOR
->         SELECT region, food_required, water_required, medical_kits_required
->         FROM demands;
->
->     DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = 1;
->
->     OPEN cur;
->
->     read_loop: LOOP
->
->         FETCH cur INTO region_name, food, water, kits;
->         IF done = 1 THEN
->             LEAVE read_loop;
->         END IF;
->
->         SET demand_weight = (0.5 * food) + (0.3 * water) + (0.2 * kits);
->
->         INSERT INTO allocation_log (region, item_name, quantity_allocated)
->         VALUES (region_name, 'Weighted Score', demand_weight);
->
->     END LOOP;
->
->     CLOSE cur;
-> END$$
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> DELIMITER $$
mysql>
mysql> CREATE PROCEDURE distribute_supplies()
-> BEGIN
->     INSERT INTO allocation_log (region, item_name, quantity_allocated)
->     SELECT demands.region, supplies.item_name,
->         LEAST(supplies.quantity, demands.food_required)
->     FROM demands
->     JOIN supplies
->     ON supplies.center_id IN (SELECT center_id FROM relief_centers);
-> END$$
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> DELIMITER $$
mysql>
mysql> CREATE PROCEDURE get_center_utilization()
-> BEGIN
->     SELECT rc.center_id, rc.center_name, rc.capacity,
->         COUNT(v.victim_id) AS victims_present,
->         ROUND((COUNT(v.victim_id) / rc.capacity) * 100, 2) AS utilization_percent
->     FROM relief_centers rc
->     LEFT JOIN victims v ON rc.center_id = v.center_id
->     GROUP BY rc.center_id;
-> END$$
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> CREATE PROCEDURE check_low_inventory()
-> BEGIN
->     -- clear old alerts
->     DELETE FROM inventory_low;
->
->     -- insert new low-stock items
->     INSERT INTO inventory_low (item_name, center_id, quantity, status, checked_at)
->     SELECT item_name, center_id, quantity, 'LOW STOCK', NOW()
->     FROM supplies
->     WHERE quantity < 30;
-> END$$
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> DELIMITER $$
mysql>
mysql> CREATE PROCEDURE generate_disaster_report()
-> BEGIN
->     INSERT INTO disaster_report_log (region, victims, total_demand, supplies_availabl
e)
->     SELECT
->         d.region,
->         COUNT(v.victim_id),
->         (SUM(d.food_required) + SUM(d.water_required) + SUM(d.medical_kits_required))
->         ,
->         IFNULL(SUM(s.quantity), 0)
->     FROM demands d
->     LEFT JOIN victims v ON d.region = v.region
->     LEFT JOIN relief_centers rc ON v.center_id = rc.center_id
->     LEFT JOIN supplies s ON rc.center_id = s.center_id
->     GROUP BY d.region;
-> END$$
Query OK, 0 rows affected (0.01 sec)
```

## Tables:

```
mysql> select * from relief_centers;
+-----+-----+-----+-----+
| center_id | center_name | location | capacity |
+-----+-----+-----+-----+
| 1 | Central Relief Camp | Delhi | 300 |
| 2 | North Flood Shelter | Punjab | 220 |
| 3 | South Quake Support Center | Gujarat | 280 |
| 4 | East Cyclone Relief Point | Odisha | 250 |
| 5 | West Landslide Camp | Himachal Pradesh | 150 |
| 6 | Metro Emergency Hub | Mumbai | 320 |
| 7 | Valley Relief Zone | Kashmir | 180 |
| 8 | Riverbank Evacuation Camp | Assam | 210 |
| 9 | Highway First-Aid Station | Rajasthan | 140 |
| 10 | Urban Multi-Relief Unit | Bangalore | 260 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

```
mysql> select * from victims;
```

victim_id	victim_name	age	incident_type	region	center_id
1	Amit Kumar	32	Flood	Punjab	2
2	Riya Sharma	28	Earthquake	Gujarat	3
3	Karan Verma	45	Storm	Delhi	1
4	Meena Devi	38	Cyclone	Odisha	4
5	Sohan Lal	50	Landslide	Himachal Pradesh	5
6	Priya Gupta	22	Building Collapse	Delhi	1
7	Mohit Singh	29	Flood	Assam	8
8	Sunita Reddy	41	Heatwave	Rajasthan	9
9	Jatin Arora	34	Earthquake	Gujarat	3
10	Rohit Das	19	Cyclone	Odisha	4
11	Ananya Mehta	26	Flood	Punjab	2
12	Lakshmi Nair	31	Storm	Bangalore	10
13	Harpreet Kaur	47	Flood	Punjab	2
14	Arjun Singh	30	Landslide	Himachal Pradesh	5
15	Shweta Rawat	27	Snowstorm	Kashmir	7

```
mysql> select * from supplies;
```

supply_id	item_name	quantity	center_id
1	Food Packets	120	1
2	Water Bottles	250	1
3	Medical Kits	70	3
4	Blankets	90	2
5	Sanitary Pads	150	4
6	Baby Food	60	1
7	Torch Lights	40	5
8	Tents	25	7
9	Painkillers	80	3
10	Dry Rations	200	2
11	Winter Jackets	50	7
12	ORS Packets	120	9
13	Masks	300	10
14	Gloves	180	8
15	Energy Bars	140	4

15 rows in set (0.00 sec)

```
mysql> select * from donations;
```

donation_id	donor_name	item_donated	amount	donation_date
1	Rahul Mehta	Food Packets	40	2025-11-10
2	Simran Kohli	Water Bottles	30	2025-11-12
3	Global Aid Org	Medical Kits	20	2025-11-08
4	Priya Foundation	Blankets	50	2025-11-14
5	Arun Kumar	Cash	5000	2025-11-11
6	Hope Trust	Tents	10	2025-11-09
7	Nisha Patel	Sanitary Kits	35	2025-11-13
8	Vikas Sharma	Dry Rations	45	2025-11-10
9	Rotary Club	Winter Jackets	25	2025-11-07
10	Ritu Arora	Baby Food	15	2025-11-12
11	SNS Group	Medicines	80	2025-11-05
12	Harsh Gupta	Energy Bars	60	2025-11-13
13	Metro Charitable Trust	ORS Packets	90	2025-11-14
14	Vcare NGO	Masks	100	2025-11-11
15	People United	Gloves	70	2025-11-10

15 rows in set (0.00 sec)



```
mysql> select * from demands;
```

demand_id	region	food_required	water_required	medical_kits_required
1	Delhi	60	40	20
2	Punjab	75	55	30
3	Gujarat	90	45	25
4	Odisha	110	70	50
5	Himachal Pradesh	45	30	15
6	Assam	80	55	35
7	Rajasthan	40	20	10
8	Kashmir	65	40	20
9	Mumbai	30	15	10
10	Bangalore	50	25	15
11	Uttarakhand	55	35	25
12	Chhattisgarh	70	45	30

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

```
mysql> select * from feedback;
```

feedback_id	person_name	message	date_submitted
1	Ravi Singh	The relief center helped us greatly during the floods.	2025-11-13
2	Meena Devi	Food distribution was well organized.	2025-11-14
3	Amit Verma	Medical support was timely and effective.	2025-11-12
4	Rohini Sharma	Volunteers were helpful and kind.	2025-11-15
5	Suresh Thapa	Need more blankets at the center.	2025-11-11
6	Neha Gupta	Clean drinking water was insufficient.	2025-11-10
7	Pooja Sethi	Great coordination by the Delhi team.	2025-11-09
8	Jaspreet Kaur	Happy with the assistance provided.	2025-11-08
9	Zahid Khan	Transport arrangements needed improvement.	2025-11-07
10	Anil Kumar	Appreciated the volunteers.	2025-11-06
11	Shaila Rani	Medical team very supportive.	2025-11-05
12	Rahul Sharma	Supplies were delivered on time.	2025-11-04

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