```sql
CREATE DATABASE RationCardDB1;

USE RationCardDB1;


CREATE TABLE Ration_Card (

    card_id INT PRIMARY KEY,

    card_type VARCHAR(20) CHECK (card_type IN ('APL','BPL','AAY')),

    issue_date DATE,

    status VARCHAR(10) DEFAULT 'ACTIVE'

);


CREATE TABLE Family_Members (

    member_id INT PRIMARY KEY,

    card_id INT,

    member_name VARCHAR(50),

    age INT,

    relation VARCHAR(30),

    FOREIGN KEY (card_id) REFERENCES Ration_Card(card_id)

);


CREATE TABLE Officer (

    officer_id INT PRIMARY KEY,

    officer_name VARCHAR(50),

    designation VARCHAR(30)

);
```

```sql
CREATE TABLE Stock (

    item_id INT PRIMARY KEY,

    item_name VARCHAR(30),

    quantity INT CHECK (quantity >= 0)

);


CREATE TABLE Distribution (

    dist_id INT PRIMARY KEY,

    card_id INT,

    item_id INT,

    quantity_given INT,

    dist_date DATE,

    officer_id INT,

    FOREIGN KEY (card_id) REFERENCES Ration_Card(card_id),

    FOREIGN KEY (item_id) REFERENCES Stock(item_id),

    FOREIGN KEY (officer_id) REFERENCES Officer(officer_id)

);


DELIMITER //


CREATE TRIGGER check_stock_before_distribution

BEFORE INSERT ON Distribution

FOR EACH ROW

BEGIN

    DECLARE available_stock INT;
```

```sql
    SELECT quantity INTO available_stock

    FROM Stock

    WHERE item_id = NEW.item_id;


    IF available_stock < NEW.quantity_given THEN

        SIGNAL SQLSTATE '45000'

        SET MESSAGE_TEXT = 'Not enough stock available';

    END IF;

END;

//


DELIMITER ;


INSERT INTO Ration_Card VALUES

(1001,'BPL','2023-01-10','ACTIVE'),

(1002,'APL','2022-05-12','ACTIVE'),

(1003,'AAY','2021-08-15','ACTIVE'),

(1004,'BPL','2023-03-21','ACTIVE'),

(1005,'APL','2022-07-11','ACTIVE'),

(1006,'BPL','2023-02-18','ACTIVE'),

(1007,'APL','2022-09-05','ACTIVE'),

(1008,'AAY','2021-11-22','ACTIVE'),

(1009,'BPL','2023-04-01','ACTIVE'),

(1010,'APL','2022-10-19','ACTIVE'),
```

```
(1011,'BPL','2023-06-25','ACTIVE'),

(1012,'AAY','2021-12-30','ACTIVE');


INSERT INTO Family_Members VALUES

(1,1001,'Zaara Shaikh',21,'Self'),

(2,1001,'Ahmed Shaikh',50,'Father'),

(3,1002,'Priya Sharma',30,'Self'),

(4,1003,'Ravi Patel',45,'Self'),

(5,1004,'Ayesha Khan',28,'Self'),

(6,1005,'Rahul Verma',35,'Self'),

(7,1006,'Fatima Shaikh',25,'Self'),

(8,1007,'Arjun Singh',40,'Self'),

(9,1008,'Meena Kumari',55,'Self'),

(10,1009,'Imran Khan',38,'Self');


INSERT INTO Officer VALUES

(201,'Mr. Khan','Food Inspector'),

(202,'Mr. Sharma','Supervisor'),

(203,'Ms. Patel','Clerk'),

(204,'Mr. Singh','Inspector'),

(205,'Ms. Verma','Officer'),

(206,'Mr. Gupta','Supervisor'),

(207,'Ms. Shaikh','Clerk'),

(208,'Mr. Khan','Inspector'),

(209,'Mr. Yadav','Officer'),
```

(210,'Ms. Sharma','Supervisor');

INSERT INTO Stock VALUES

(101,'Rice',500),

(102,'Wheat',400),

(103,'Sugar',300),

(104,'Oil',200),

(105,'Salt',150),

(106,'Dal',250),

(107,'Tea',180),

(108,'Milk Powder',120),

(109,'Maize',220);

START TRANSACTION;

UPDATE Stock

SET quantity = quantity - 5

WHERE item_id = 101;

INSERT INTO Distribution

VALUES (1, 1001, 101, 5, CURDATE(), 201);

COMMIT;