

# REPORT DATABASE SYSTEM

PROJECT-TITLE:” FARMING MANAGEMENT SYSTEM”

## SQL QUERIES IN FARMING MANAGEMENT SYSTEM

### 1. CREATE TABLES:

#### a) FARMER TABLE:

```
CREATE TABLE FARMER (  
    FARMER_ID INT PRIMARY KEY,  
    FARMER_NAME VARCHAR (100),  
    FARMER_PHONE_NUMBER VARCHAR (15));
```

#### b) FARM TABLE:

```
CREATE TABLE FARM (  
    FARM_ID INT PRIMARY KEY,  
    FARM_NAME VARCHAR (100),  
    FARM_ADDRESS VARCHAR (100),  
    FARMER_ID INT,  
    FOREIGN KEY (FARMER_ID) REFERENCES FARMER(FARMER_ID));
```

#### c) INPUT INVENTORY TABLE:

```
CREATE TABLE INPUT_INVENTORY (  
    INVENTORY_ID INT PRIMARY KEY,  
    ITEM_NAME VARCHAR (255),  
    QUANTITY INT,  
    FARMER_ID INT,  
    FOREIGN KEY (FARMER_ID) REFERENCES FARMER(FARMER_ID));
```

#### d) FINANCIAL TRANSACTIONS TABLE:

```
CREATE TABLE FINANCIAL_TRANSACTIONS (  
    TRANSACTION_ID INT PRIMARY KEY,  
    TYPE_OF_AMOUNT VARCHAR (255),  
    AMOUNT DECIMAL (15, 2),  
    FARMER_ID INT,  
    FOREIGN KEY (FARMER_ID) REFERENCES FARMER(FARMER_ID));
```

#### e) CROP TABLE:

```
CREATE TABLE CROP (  
    CROP_ID INT PRIMARY KEY,  
    NAME VARCHAR (255),  
    CROP_TYPE VARCHAR (255));
```

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## **f) FARMING FIELD TABLE:**

```
CREATE TABLE FARMING_FIELD (  
    FIELD_ID INT PRIMARY KEY,  
    FARMER_ID INT,  
    FIELD_SIZE DECIMAL (10, 2),  
    CROP INT,  
    FARM_ID INT,  
    FOREIGN KEY (FIELD_ID) REFERENCES FARMING_FIELD(FIELD_ID));  
    FOREIGN KEY (FARMER_ID) REFERENCES FARMER(FARMER_ID),  
    FOREIGN KEY (CROP_ID) REFERENCES CROP(CROP_ID),  
    FOREIGN KEY (FARM_ID) REFERENCES FARM(FARM_ID));
```

## **g) FERTILIZERS TABLE:**

```
CREATE TABLE FERTILIZERS (  
    ANALYSIS_ID INT PRIMARY KEY,  
    FIELD_ID INT,  
    FERTILIZER_TYPE VARCHAR (255),  
    FERTILIZER_LEVEL DECIMAL (5, 2),  
    FOREIGN KEY (FIELD_ID) REFERENCES FARMING_FIELD(FIELD_ID));
```

## **h) IRRIGATION SCHEDULE TABLE:**

```
CREATE TABLE IRRIGATION_SCHEDULE (  
    SCHEDULE_ID INT PRIMARY KEY,  
    WATER_REQUIREMENT DECIMAL (10, 2),  
    FREQUENCY VARCHAR (50),  
    FOREIGN KEY (FIELD_ID) REFERENCES FARMING_FIELD(FIELD_ID)  
);
```

## **i) HARVEST RECORD TABLE:**

```
CREATE TABLE HARVEST_RECORD (  
    HARVEST_ID INT PRIMARY KEY,  
    YIELD_QUANTITY DECIMAL (10, 2),  
    DATE_OF_HARVEST DATE,  
    CROP_ID INT,  
    FOREIGN KEY (CROP_ID) REFERENCES CROP(CROP_ID)  
);
```

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## 2. INSERT DATA IN TABLES:

### a) FARMER TABLE:

```
INSERT INTO FARMER VALUES (1, 'Ahmed Ali', '1234567890');
INSERT INTO FARMER VALUES (2, 'Abdullah Mohsin', '1234567890');
INSERT INTO FARMER VALUES (3, 'Arish Khan', '1234567890');
INSERT INTO FARMER VALUES (4, 'Faheem Abbas', '1234567890');
INSERT INTO FARMER VALUES (5, 'Raman Soquel', '1234567890');
```

### b) FARM TABLE:

```
INSERT INTO FARM VALUES (1, 'Sunny Farm', '123 Green Road',3);
INSERT INTO FARM VALUES (2, 'Green Valley Farm', '45 Canal View', 4);
INSERT INTO FARM VALUES (3, 'Pakistani Orchard', '78 Mango Street', 3);
INSERT INTO FARM VALUES (4, 'Golden Wheat Fields', '12 Lahore Avenue', 4);
INSERT INTO FARM VALUES (5, 'Sindh Dairy Farm', '90 Karachi Road', 2);
```

### c) INPUT INVENTORY TABLE:

```
INSERT INTO INPUT_INVENTORY VALUES (1, 'Wheat Seeds', 500, 3);
INSERT INTO INPUT_INVENTORY VALUES (2, 'Fertilizer (Urea)', 300, 2);
INSERT INTO INPUT_INVENTORY VALUES (3, 'Pesticides', 150, 2);
INSERT INTO INPUT_INVENTORY VALUES (4, 'Tractor Fuel', 200, 3);
INSERT INTO INPUT_INVENTORY VALUES (5, 'Irrigation Pipes', 50, 4);
```

### d) FINANCIAL TRANSACTIONS TABLE:

```
INSERT INTO FINANCIAL_TRANSACTIONS VALUES (1, 'Crop Sale', 1500.00, 5);
INSERT INTO FINANCIAL_TRANSACTIONS VALUES (2, 'Fertilizer Purchase', 2500, 2);
INSERT INTO FINANCIAL_TRANSACTIONS VALUES (3, 'Seed Purchase', 4300, 5);
INSERT INTO FINANCIAL_TRANSACTIONS VALUES (4, 'Equipment Maintenance', 1200, 2);
INSERT INTO FINANCIAL_TRANSACTIONS VALUES (5, 'Milk Sale', 1000, 4);
```

### e) CROP TABLE:

```
INSERT INTO CROP VALUES (1, 'Wheat', 'Grain');
INSERT INTO CROP VALUES (2, 'Rice', 'Grain');
INSERT INTO CROP VALUES (3, 'Cotton', 'Fiber');
INSERT INTO CROP VALUES (4, 'Sugarcane', 'Cash Crop');
INSERT INTO CROP VALUES (5, 'Mango', 'Fruit');
```

### f) FARMING FIELD:

```
INSERT INTO FARMING_FIELD VALUES (1, 1, 10.50, 3,3);
INSERT INTO FARMING_FIELD VALUES (2, 2, 15.00, 4,4);
INSERT INTO FARMING_FIELD VALUES (3, 3, 8.25, 2,2);
INSERT INTO FARMING_FIELD VALUES (4, 4, 12.00, 4,4);
INSERT INTO FARMING_FIELD VALUES (5, 5, 20.00, 3,3);
```

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## **g) FERTILIZERS:**

```
INSERT INTO FERTILIZERS VALUES (1, 2, 'Nitrogen', 12.50);
INSERT INTO FERTILIZERS VALUES (2, 2, 'Phosphorus', 15.00);
INSERT INTO FERTILIZERS VALUES (3, 3, 'Potassium', 10.00);
INSERT INTO FERTILIZERS VALUES (4, 4, 'Organic Compost', 8.00);
INSERT INTO FERTILIZERS VALUES (5, 5, 'Micronutrients Mix', 20.00);
INSERT INTO FERTILIZERS VALUES (6, 3, 'Organic Compost', 20.00);
INSERT INTO FERTILIZERS VALUES (7, 5, 'Micronutrients Mix', 20.00);
INSERT INTO FERTILIZERS VALUES (8, 1, 'Organic Compost', 20.00);
INSERT INTO FERTILIZERS VALUES (9, 4, 'Nitrogen', 20.00);
INSERT INTO FERTILIZERS VALUES (10, 1, 'Micronutrients Mix', 20.00);
```

## **h) IRRIGATION SCHEDULE**

```
INSERT INTO IRRIGATION_SCHEDULE VALUES (1, 500.00, 'Weekly', 2);
INSERT INTO IRRIGATION_SCHEDULE VALUES (2, 300.00, 'Bi-Weekly', 2);
INSERT INTO IRRIGATION_SCHEDULE VALUES (3, 600.00, 'Monthly', 4);
INSERT INTO IRRIGATION_SCHEDULE VALUES (4, 700.00, 'Weekly', 5);
INSERT INTO IRRIGATION_SCHEDULE VALUES (5, 250.00, 'Bi-Weekly', 4);
```

## **i) HARVEST RECORD**

```
INSERT INTO HARVEST_RECORD VALUES (1, 2000.00, '2024-12-15', 4);
INSERT INTO HARVEST_RECORD VALUES (2, 3500.00, '2024-11-30', 4);
INSERT INTO HARVEST_RECORD VALUES (3, 2500.00, '2024-10-20', 5);
INSERT INTO HARVEST_RECORD VALUES (4, 4000.00, '2024-12-01', 3);
INSERT INTO HARVEST_RECORD VALUES (5, 1500.00, '2024-07-15', 3);
```

# REPORT DATABASE SYSTEM

## 3. DISPLAY TABLES:

### 1. Display FARMER Table

```
SELECT * FROM FARMER;
```

### 2. Display FARM Table

```
SELECT * FROM FARM;
```

### 3. Display INPUT\_INVENTORY Table

```
SELECT * FROM INPUT_INVENTORY;
```

### 4. Display FINANCIAL\_TRANSACTIONS Table

```
SELECT * FROM FINANCIAL_TRANSACTIONS;
```

### 5. Display CROP Table

```
SELECT * FROM CROP;
```

### 6. Display FARMING\_FIELD Table

```
SELECT * FROM FARMING_FIELD;
```

### 7. Display FERTILIZERS Table

```
SELECT * FROM FERTILIZERS;
```

### 8. Display IRRIGATION\_SCHEDULE Table

```
SELECT * FROM IRRIGATION_SCHEDULE;
```

### 9. Display HARVEST\_RECORD Table

```
SELECT * FROM HARVEST_RECORD;
```