

# Kisan Pay

## Members:

Muhammad Danish (22K-4381)

Soem (22K-4629)

## 1) Overview:

KisanPay is a digital financial inclusion system aimed at providing banking, transactional, and loan management services for farmers in Pakistan. The system enables users to perform financial operations such as account management, transaction logging, loan applications, sales and purchases, and inventory tracking. It is a completely digital system, without any physical branches, focusing on ease of use and accessibility for farmers through a web-based interface.

## 2) Database Table Descriptions

### Customers

The Customers table stores information about the users of the system, representing farmers who use the platform to manage their finances.

| Column Name | Data Type | Constraints                       |
|-------------|-----------|-----------------------------------|
| cust_id     | INT       | Primary Key, NOT NULL             |
| cnic        | VARCHAR   | UNIQUE, NOT NULL                  |
| u_name      | VARCHAR   | NOT NULL                          |
| pass        | VARCHAR   | NOT NULL                          |
| f_name      | VARCHAR   | NOT NULL                          |
| l_name      | VARCHAR   | NOT NULL                          |
| phone       | VARCHAR   | NOT NULL                          |
| role        | VARCHAR   | NOT NULL                          |
| employee_id | INT       | Foreign Key (Employees), NOT NULL |

### Accounts

The Accounts table stores information about the bank accounts held by customers, including balance data.

| Column Name | Data Type | Constraints                       |
|-------------|-----------|-----------------------------------|
| acc_no      | INT       | Primary Key, NOT NULL             |
| balance     | DECIMAL   | NOT NULL                          |
| cust_id     | INT       | Foreign Key (Customers), NOT NULL |

### Transactions

The Transactions table records all financial transactions, including transfers and payments.

| Column Name    | Data Type | Constraints                      |
|----------------|-----------|----------------------------------|
| transaction_id | INT       | Primary Key, NOT NULL            |
| acc_no         | INT       | Foreign Key (Accounts), NOT NULL |
| date_time      | TIMESTAMP | NOT NULL                         |
| transfer_to    | INT       | Foreign Key (Accounts)           |
| amount         | DECIMAL   | NOT NULL                         |
| receiver_id    | INT       | Foreign key(Customers), NOT NULL |
| sender_id      | INT       | Foreign key(Customers), NOT NULL |

### Loans

The Loans table tracks all loans issued to customers, detailing the amount and the approving manager.

| Column Name         | Data Type | Constraints                      |
|---------------------|-----------|----------------------------------|
| loan_id             | INT       | Primary Key, NOT NULL            |
| loan_amount         | DECIMAL   | NOT NULL                         |
| account_no          | INT       | Foreign Key (Accounts), NOT NULL |
| manager_id          | INT       | Foreign Key (Manager), NOT NULL  |
| Start_date          | DATE      | NOTNULL                          |
| End_date            | DATE      | NOTNULL                          |
| Total_repaid        | INT       | NOTNULL                          |
| Status              | VARCHAR   | NOTNULL                          |
| Last_repayment_date | DATE      | NOTNULL                          |

### Employees

The Employees table holds information about employees responsible for managing customer accounts and transactions.

| Column Name | Data Type | Constraints           |
|-------------|-----------|-----------------------|
| employee_id | INT       | Primary Key, NOT NULL |
| username    | VARCHAR   | UNIQUE, NOT NULL      |
| cnic        | VARCHAR   | UNIQUE, NOT NULL      |
| phone       | VARCHAR   | NOT NULL              |
| email       | VARCHAR   | NOT NULL              |

### Manager

The Manager table represents employees with managerial responsibilities who approve loans.

| Column Name | Data Type | Constraints                                    |
|-------------|-----------|--|
| manager_id  | INT       | Primary Key, Foreign Key (Employees), NOT NULL |
| f_name      | VARCHAR   | NOT NULL                                       |
| l_name      | VARCHAR   | NOT NULL                                       |

### Inventory

The Inventory table manages information about farm products, equipment, and inputs.

| Column Name  | Data Type | Constraints           |
|--------------|-----------|-----------------------|
| inventory_id | INT       | Primary Key, NOT NULL |
| Supplier_id  | VARCHAR   | NOT NULL              |
| product_id   |           |                       |
| quantity     | INT       | NOT NULL              |
| price        | DECIMAL   | NOT NULL              |

### Orders

The Sales table records transactions related to the sale of inventory items to customers.

| Column Name | Data Type | Constraints                       |
|-------------|-----------|-----------------------------------|
| order_id    | INT       | Primary Key, NOT NULL             |
| product_id  | INT       | Foreign Key (Inventory), NOT NULL |
| cust_id     | INT       | Foreign Key (Customers), NOT NULL |
| order_date  | TIMESTAMP | NOT NULL                          |
| quantity    | INT       | NOT NULL                          |
| total_price | DECIMAL   | NOT NULL                          |

### Product

The Sales table records transactions related to the sale of inventory items to customers.

| Column Name  | Data Type | Constraints           |
|--------------|-----------|-----------------------|
| Product_id   | INT       | Primary Key, NOT NULL |
| Product_name | VARCHAR   | NOT NULL              |
| Description  | VARCHAR   | NOT NULL              |
| base_price   | INT       | NOT NULL              |

### OrderDetails

The Sales table records transactions related to the sale of inventory items to customers.

| Column Name      | Data Type | Constraints                       |
|------------------|-----------|-----------------------------------|
| Order_details_id | INT       | Primary Key, NOT NULL             |
| order_id         | INT       | Foreign Key (Inventory), NOT NULL |
| buyer_id         | INT       | Foreign Key (Customers), NOT NULL |
| supplier_id      | TIMESTAMP | NOT NULL                          |
| Inventory_id     | INT       | NOT NULL                          |
| quantity         | INT       | NOT NULL                          |
| Total_price      | INT       | NOT NULL                          |
| price            | DECIMAL   | NOT NULL                          |

### Product\_audit\_log

The Sales table records transactions related to the sale of inventory items to customers.

| Column Name  | Data Type | Constraints                      |
|--------------|-----------|----------------------------------|
| Log_id       | INT       | Primary Key, NOT NULL            |
| Entry_Date   | Date      | NOT NULL                         |
| Action_type  | VARCHAR   | NOTNULL                          |
| product_id   | INT       | Foreign Key (products), NOT NULL |
| Product_name | Varchar   | NOT NULL                         |
| Base_price   | DECIMAL   | NOT NULL                         |
| Description  | VARCHAR   | NOT NULL                         |

## Schema:

OBJ

