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# **Farmers & Fishers Registry (RSBSA-linked): A Digital System for Agricultural and Fisheries Data Integration**

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## Research Introduction:

The **Registry System for Basic Sectors in Agriculture (RSBSA)** serves as the official national database of Filipino farmers, farm laborers, and fishers. It ensures that agricultural support programs, subsidies, and financial assistance are accurately delivered to eligible beneficiaries. However, current RSBSA processes remain partly manual, leading to data redundancy, inefficiency, and limited access for individuals in remote communities.

This study proposes the development of a **digital Farmers & Fishers Registry System** linked directly to the RSBSA. The system will centralize the collection, validation, and management of agricultural and fisheries data through a secure and user-friendly digital platform. By enhancing accuracy, transparency, and accessibility, the project aims to strengthen agricultural governance and improve the delivery of public services to the rural sector.

This research aligns with both **agriculture-related** and **aquaculture-related** categories, focusing on **digital transformation, e-governance, and data-driven decision-making** for sustainable rural development.



## Statement of the Problem:

The implementation of the current RSBSA database faces several limitations that hinder its efficiency and inclusiveness. These issues include:

1. Inconsistent and outdated records caused by manual encoding and fragmented local data collection.
2. Lack of data integration between national and local government systems.
3. Limited transparency and monitoring of government assistance beneficiaries.
4. Difficulty for farmers and fishers in remote areas to access registration services.
5. Absence of real-time analytics and reporting tools for policy and program evaluation.

To address these challenges, this study will develop a **digitized registry system** that links directly with RSBSA to ensure reliable, up-to-date, and accessible data management for the agricultural and fisheries sectors.



## Objectives:

1. To design and develop a centralized and RSBSA-linked digital registry system for farmers and fishers.
2. To implement automated data validation and verification to minimize record duplication and errors.
3. To provide an accessible web-based and mobile-friendly platform for registration and data updates.
4. To generate real-time analytics and reports that support agricultural and fisheries planning and policy-making.
5. To evaluate the system's usability, accuracy, and impact on improving government service delivery.

## Significance of the Study:

The proposed **Farmers & Fishers Registry (RSBSA-linked)** system is significant in promoting **digital innovation** within the agricultural and fisheries sectors. For the **government**, it offers a reliable tool for monitoring, verifying, and delivering programs efficiently. For **farmers and fishers**, it provides an accessible, transparent, and inclusive platform for registration and support tracking.



Furthermore, the system encourages **data-driven governance** by producing actionable insights and reports useful for policymakers, researchers, and development agencies. Ultimately, the project contributes to building a **modern, transparent, and equitable agricultural information infrastructure** in the Philippines.

## AI Prompt Used:

“Generate a professional and academically sound research proposal titled ‘*Farmers & Fishers Registry (RSBSA-linked)*’. The proposal should include the following sections: Proposed Research Title, Research Introduction, Statement of the Problem, Objectives, Significance of the Study, and AI Prompt Used. The content must focus on digital data integration and e-governance within the agricultural and fisheries sectors, emphasizing accuracy, transparency, and system innovation.”



Below is a full recommended setup, explanation, and how we can start building it — step-by-step.

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## **Recommended System Plan: Farmers & Fishers Registry (RSBSA-linked)**

### **Tech Stack (Simple + Future-Proof)**

Layer	Recommended Tool	Reason
Frontend	HTML, CSS, Bootstrap, JavaScript	Easy to learn, supports responsive design
Backend	PHP with Laravel Framework	Beginner-friendly MVC framework, strong authentication, scalable
Database	MySQL	Works perfectly with Laravel, widely supported
Authentication	Laravel Breeze (or Jetstream)	Provides ready-made login, registration, and password reset features
Deployment Option	Localhost via XAMPP or Free Hosting (Render / Vercel + MySQL DB)	Easy setup for testing or presenting

This stack gives you a clean, working system for your final project — and you can easily add more features later (analytics dashboard, data visualization, reporting, etc.).

## System Overview

### System Name:

**Farmers & Fishers Registry (RSBSA-linked)**

### Description:

A centralized digital registry for farmers and fishers, integrated with the existing RSBSA database framework. The system will collect, store, and manage verified user information, providing a platform for government agencies to track registered individuals, programs, and support distribution efficiently.

## Core System Features

### 1. User Registration and Login

- Two user roles: Farmer and Fisher, plus Admin.
- Secure registration and login using Laravel Breeze authentication.
- Farmers and fishers can manage their profiles and update details.

### 2. Data Management

- Admin can view, add, edit, or delete registered farmers and fishers.
- Each record includes: Name, Address, Type (Farmer/Fisher), Farm/Fishing Info, and Government ID or RSBSA reference number.



### 3. Dashboard & Reports

- Displays total number of registered farmers and fishers.
- Graphs and charts (can use Chart.js) for demographic summaries.
- Downloadable reports (CSV or PDF format).



### 4. Verification & Linking

- RSBSA number validation (via input verification logic).
- Admin can mark users as “Verified” after confirming details.

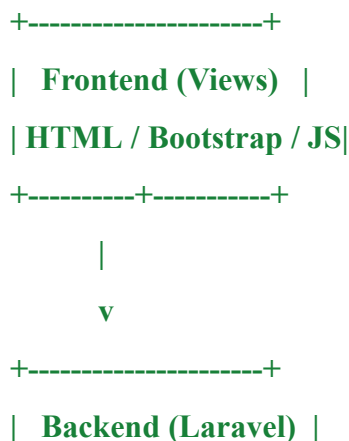


### 5. Notifications & Updates

- Admin can send messages or announcements to registered users (e.g., program updates).



## System Architecture (Simple and Expandable)







## | Controllers / Models |

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## | Database (MySQL) |

| farmers, fishers, |

| users, programs, etc. |

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## Step-by-Step Development Plan

### 1. Environment Setup

- Install XAMPP
- Install Composer

#### Install Laravel:

**composer global require laravel/installer**

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#### Create a new Laravel project:

**laravel new rsbsa-registry**

**cd rsbsa-registry**

●



## 2. Database Setup

Create a new database in phpMyAdmin named:

**rsbsa\_registry\_db**

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Update your **.env** file:

**DB\_DATABASE=rsbsa\_registry\_db**

**DB\_USERNAME=root**

**DB\_PASSWORD=**

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## 3. Authentication

Install Laravel Breeze:

**composer require laravel/breeze --dev**

**php artisan breeze:install**

**npm install**

**npm run dev**

**php artisan migrate**

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- This gives you a working registration and login system instantly.

## 4. Create Tables

Use Laravel migrations for your core tables:



- **farmers**
- **fishers**
- **admins**
- **announcements**
- **verifications**

**Example migration command:**

**php artisan make:migration create\_farmers\_table**

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## **5. CRUD Functions**

**Add controllers and routes for Admin to:**

- **View all registered users**
- **Edit details**
- **Approve or delete registrations**

**Example route ([routes/web.php](#)):**

**Route::resource('farmers', FarmerController::class);**  
**Route::resource('fishers', FisherController::class);**

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## 6. Dashboard

**Install Chart.js for graphical data visualization:**

**npm install chart.js**

**Display:**

- **Total Farmers**
  - **Total Fishers**
  - **Verified vs Unverified Users**
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## 7. (Optional) Linking with Future APIs

**Once the Department of Agriculture releases open APIs for RSBSA data, you can later integrate it with minimal code changes since Laravel handles API connections easily via **Http::get()**.**