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Documentation Journal for Software Design and Database Management System FINAL Project

Entitled

Herbal Remedy Finder for brgy. Rosita

In Partial Fulfillment

of the Requirements for the Program

Bachelor of Science in Computer Engineering

By

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Submitted to:
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Project Overview

The **Herbal Remedy Finder System** is a web-based application designed specifically for the residents of **Brgy. Rosita**. Its main purpose is to provide a convenient and reliable platform where community members can search for natural remedies using local medicinal herbs. Users, also referred to as clients, can look up herbs by name or by the symptoms they are experiencing. Each herb entry in the system contains detailed information, including the local name, English name, scientific name, common uses, preparation methods, and any precautions that need to be observed. This ensures that residents have access to accurate and useful information about the traditional herbal medicines available in their community.

On the administrative side, the system includes a secure login area for barangay health personnel or authorized users who are responsible for managing the database. The admin has full control over the herb entries and can add new herbs, update existing information, or delete herbs that are no longer relevant or recommended. This helps maintain an up-to-date and trustworthy repository of herbal knowledge that reflects the latest practices and available plants in Brgy. Rosita.

The system supports both desktop and mobile access, making it user-friendly and accessible to a wide range of residents. Technically, it can be built using Django for the backend, with a simple and intuitive frontend interface. By promoting the use of safe, natural remedies and empowering residents through education and easy access to information, the Herbal Remedy Finder System contributes to improved community health and supports the preservation of traditional medicinal knowledge in Brgy. Rosita.

Features

- **Client/User Features:**

- **Herb Search by Name or Symptom:** Users can search for herbal remedies either by typing the name of the herb or the symptoms they are experiencing.
- **Herb Information Display:** Each herb has a dedicated page showing its local name, English name, scientific name, medicinal uses, preparation methods, and precautions.
- **Mobile-Friendly Interface:** Designed to work smoothly on smartphones and tablets for easy access by residents of Brgy. Rosita.
- **Community-Based Content:** The herb list and remedies are tailored to local plants commonly found and used in the barangay.
- **Admin Features:**
- **Add New Herbs:** Admins can input complete details of new herbs into the system database.
- **Update Existing Herb Information:** Allows correction or improvement of herb data to reflect current practices or discoveries.
- **Delete Herb Entries:** Remove herbs that are no longer relevant, available, or recommended.
- **Secure Admin Login:** Only authorized personnel from Brgy. Rosita can access and manage the system's backend.
- **User-Friendly Dashboard:** Simple and organized admin panel for easy management of herb records.

Prerequisites

- Python 3.8+
- pip (Python package installer)
- Git
- (Optional) VS Code or your preferred IDE

Why I Chose to Create the Herbal Remedy Finder Website

The beauty and uniqueness of the Herbal Remedy Finder website lie in its strong connection to culture, health, and community empowerment. Unlike ordinary medical websites, this platform focuses on traditional and natural healing methods using local herbs that are accessible, familiar, and trusted by the people of **Brgy. Rosita**. It is not just a digital tool—it is a bridge between ancestral knowledge and modern convenience.

What makes this website special is that it values **heritage and sustainability**. Many communities still rely on herbal medicine as a first aid or alternative remedy, especially in places where access to hospitals or expensive treatments can be limited. By offering easy access to herbal information through a clean, simple, and mobile-friendly website, it empowers residents to make safe and informed decisions about their health using nature's gifts around them.

Additionally, the admin panel allows **barangay health workers** to update and manage the herb database. This ensures that the information remains accurate, community-specific, and up to date. It's a system that grows with the barangay and adapts to their real needs.

Choosing this website project is meaningful because it's not just about technology—it's about **preserving local wisdom**, promoting **affordable healthcare**, and making a real impact in people's daily lives. The combination of functionality, culture, and purpose is what makes the Herbal Remedy Finder beautiful and unique.

Summary of Development Journey

To get started with the Herbal Remedy Finder system using Django, begin by setting up your development environment by installing Python and Django, then create a new Django project and app. Define a Herb model to store data such as local name, scientific name, uses, preparation, and precautions. Set up the admin panel to manage herbs and create views for listing and displaying herb details. Use simple HTML templates for the user interface and enable search functionality. Finally, run the server to test the site locally and make sure both clients and admins can interact with the system effectively.

MODELS:

Admin:

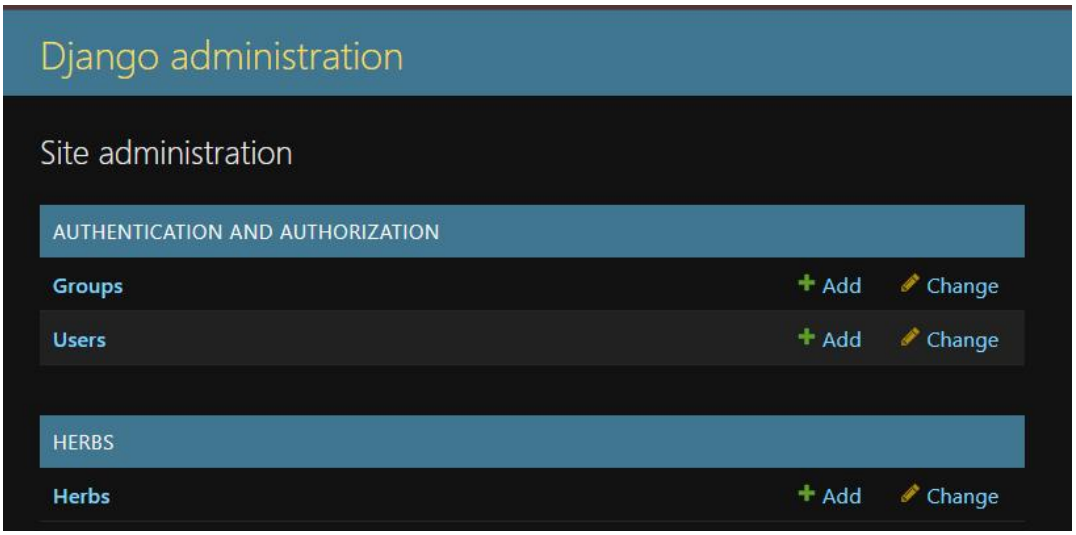
admin.py 2

herbal_remedy_finder > herbs > admin.py > ...

```python
from django.contrib import admin
from .models import Herb

@admin.register(Herb)
class HerbAdmin(admin.ModelAdmin):
    list_display = ('local_name', 'english_name', 'scientific_name')
```

CONFIGURING THE ADMIN:



Views:

herbal_remedy_finder > herbs > views.py > herb_list

```python
from django.shortcuts import render, get_object_or_404
from django.shortcuts import render
from .models import Herb
from django.db.models import Q



def home(request):
    return render(request, 'herbs/home.html')

def herb_list(request):
    query = request.GET.get('q')
    herbs = Herb.objects.all()
    if query:
        herbs = herbs.filter(
            Q(local_name__icontains=query) |
            Q(english_name__icontains=query) |
            Q(scientific_name__icontains=query)
        )
    return render(request, 'herbs/herb_list.html', {'herbs': herbs})


def herb_detail(request, pk):  # Accept pk here
    herb = get_object_or_404(Herb, pk=pk)
    return render(request, 'herbs/herb_detail.html', {'herb': herb})

from rest_framework import generics
from .models import Herb
from .serializers import HerbSerializer

class HerbListAPI(generics.ListAPIView):
    queryset = Herb.objects.all()
    serializer_class = HerbSerializer

class HerbDetailAPI(generics.RetrieveAPIView):
    queryset = Herb.objects.all()
```

Then next a build the herb_list. Html file serves as the main page where users can view the list of available medicinal herbs and search for them by name or symptom. This page is designed for easy navigation and readability, especially for community members of Brgy. Rosita who may be accessing it on mobile devices or low-spec computers.

Purpose:

Display all herbs stored in the database.

Allow users to search for herbs by typing in a keyword.

Provide clickable links to view full herb details.

Features:

- **Search Form:**

  Users can input a search keyword in the text box.

  The form uses the GET method so the search query appears in the URL.

  A search button is available to filter the list.

- **Herb List Display:**

Herbs are displayed in a simple list format using <ul> and <li>.

Each herb entry shows the local name and English name.

Each herb name is clickable and redirects to a detail page (herb_detail.html) using the herb's ID.

- **Conditional Display:**

  If no herbs are found from the search, a message "No herbs found." is shown using Django's {% empty %} template tag.

- **Styling and Design:**

  The page uses basic CSS for styling.

  Green colors and clean fonts are used to reflect a natural and herbal theme.

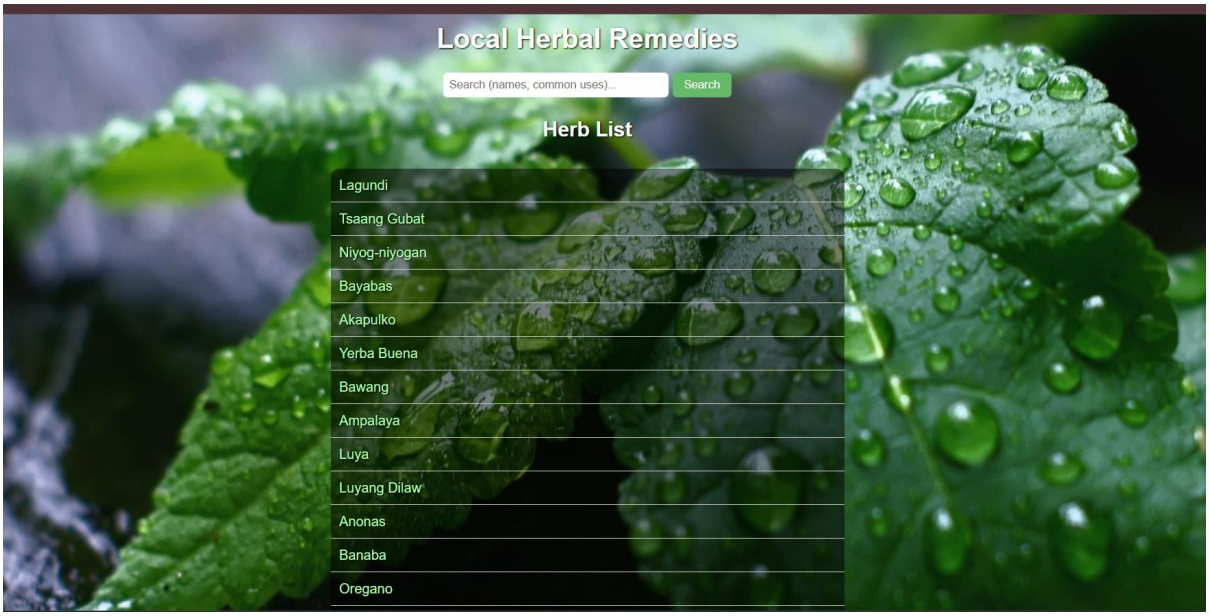
  The layout is responsive and accessible for both desktop and mobile use.

- **Code Location:**

  File path: templates/herbs/herb_list.html

  Required context variable: herbs (a queryset of Herb objects from the database)

Herb_List:



After building the herb_list, I do to make the herb_details where link from the herb_list used to display detailed information about a single herb selected by the user. This page is shown when a user clicks on a herb from the herb list. It allows users to view important data about the herb, such as its names, uses, preparation, and any precautions.

Purpose:

Present complete information about one selected herb.

Help users understand how the herb can be used safely and effectively.

Features:

- **Herb Information Display:**

  Shows the **Local Name**, **English Name**, and **Scientific Name**.

  Lists the **medicinal uses** of the herb based on traditional knowledge or local practice.

  Describes the **preparation method** so users can make tea, poultice, decoction, etc.

  Warns users about **precautions** to avoid misuse or side effects.

- **Navigation Link:**

  A link labeled "Back to list" allows users to return to the herb list page.

- **Styling and Design:**

  The page uses clean and organized HTML formatting.

  Information is displayed using `<p>` tags with strong labels for clarity.

  Green and earth-tone styles can be used to maintain the herbal theme.

  Simple layout ensures readability and accessibility.

- **Code Location:**

  File path: `templates/herbs/herb_detail.html.`

Required context variable: `herb` (a single Herb object retrieved using its ID).

Herb_Details:

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API Development

To enhance the flexibility and scalability of the Herbal Remedy Finder System, a RESTful API can be developed using Django REST Framework (DRF). This API will allow both web and mobile applications to access herb data programmatically, enabling third-party integration and future mobile app development.

Key API Endpoints:

- **GET /api/herbs/**
  Returns a list of all herbs in JSON format. Can support search with query parameters like ?search=fever.
- **GET /api/herbs/<id>/**
  Retrieves detailed information about a specific herb by its ID.
- **POST /api/herbs/** *(Admin only)*
  Allows admin users to add a new herb to the system via JSON payload.
- **PUT /api/herbs/<id>/** *(Admin only)*
  Updates an existing herb's information.
- **DELETE /api/herbs/<id>/** *(Admin only)*
  Removes a herb from the database.

Authentication:

Admin access to sensitive routes (POST, PUT, DELETE) can be secured using token-based authentication or Django's session authentication.

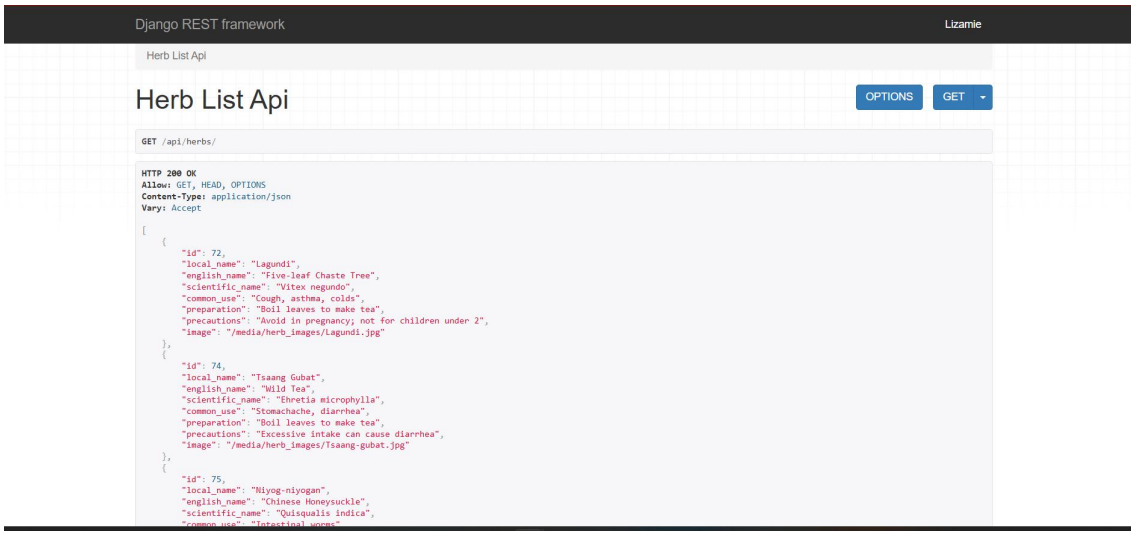
SERIALIZERS FOR REST API:

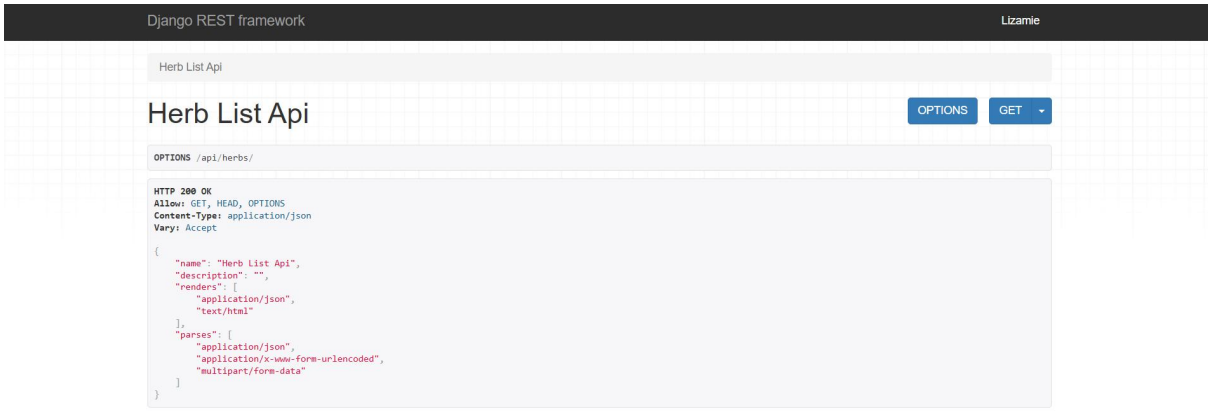
serializers.py 1

herbal_remedy_finder > herbs > serializers.py > ...

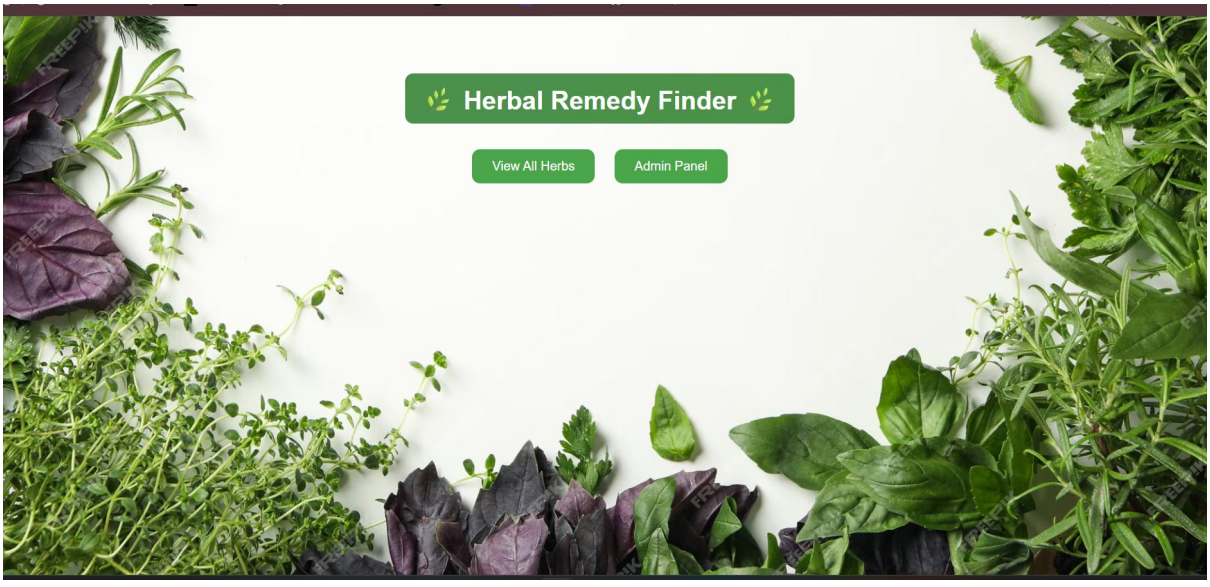
```python
from rest_framework import serializers
from .models import Herb

class HerbSerializer(serializers.ModelSerializer):
    class Meta:
        model = Herb
        fields = '__all__'

```

REST API (/api/residents/):





My HomePage:



Conclusions:

The Herbal Remedy Finder System is a meaningful and practical digital solution designed to preserve, promote, and modernize the traditional knowledge of herbal medicine, particularly in the context of Brgy. Rosita. By combining accessible technology with culturally relevant health practices, the system empowers residents to make informed decisions about natural remedies that are already part of their daily lives.

Through its user-friendly interface, residents can easily search for herbs by name or symptom and learn about their uses, preparation, and precautions. At the same time, the secure admin panel enables barangay health workers or system administrators to manage herb records efficiently—adding, updating, or deleting information as needed. The future integration of API features and potential mobile expansion make the system adaptable to evolving community needs.

Overall, the Herbal Remedy Finder not only enhances healthcare accessibility but also supports the preservation of valuable local knowledge for future generations. It stands as a testament to how simple technology can bring sustainable, culturally rooted health solutions closer to the people.

For more information check my Github Repository: