

# Django Notes App – Project Documentation

## 1. Project Title

### Smart Notes – Django Class-Based Views Project

## 2. Project Overview

This project is a Notes Application built with Django. It demonstrates:

- Django project structure
- Class-Based Views (CBV)
- Authentication (Login, Logout, Signup)
- CRUD operations on Notes
- User-specific data filtering
- Django templates & Bootstrap integration

The project allows each authenticated user to create, view, update, and delete their own notes.

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## 3. Tech Stack

- **Backend:** Django
  - **Frontend:** HTML, CSS, Bootstrap
  - **Authentication:** Django Auth System
  - **Database:** SQLite
  - **Tools:** VS Code
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## 4. Features

### User Authentication

- Login
- Logout
- Access control using LoginRequiredMixin

## Notes Management

- Create Note
- View List of Notes
- View Single Note
- Edit Note
- Delete Note
- Notes tied to logged-in user only

## Class-Based Views Used

- ListView
  - DetailView
  - CreateView
  - UpdateView
  - DeleteView
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## 5. How the App Works

### Notes Model

Each note contains:

- title
- text
- created timestamp
- user (ForeignKey)

### User-Specific Notes

Using:

```
self.request.user.app.all()
```

The app shows only the logged-in user's notes.

## Notes CRUD Operations

Django class-based views make CRUD operations simple.

## Authentication

Handled using Django's built-in LoginView and LogoutView.

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## 6. Key Django Code Summary

### Notes Model

Stores user-assigned notes.

### Notes Views

- ListView → List all logged-in user notes
- DetailView → View specific note
- CreateView → Add new note
- UpdateView → Edit note
- DeleteView → Delete note with confirmation

### Home Views

Handles login + logout routes.

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## 7. URL Endpoints

Endpoint	View	Description
/	HomeView	Welcome page
/login/	LoginInterfaceView	User login
/logout/	LogoutInterfaceView	User logout
/smart/app/	NotesListView	List of user notes
/smart/app/create/	NotesCreateView	Add new note
/smart/app/<id>/	NotesDetailView	View note
/smart/app/<id>/update/	NotesUpdateView	Edit note

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## 8. What I Learned

- Building Django apps from scratch
- Implementing Class-Based Views
- Working with Django Forms
- Managing user sessions
- Applying Bootstrap in Django templates
- Using LoginRequiredMixin for access restriction
- Handling URL namespaces and template inheritance

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## 9. Conclusion

This Notes App project is an excellent introduction to Django. It taught me how to implement authentication, templates, class-based views, and user-specific CRUD functionality. It lays a strong foundation for building real-world Django applications.