

Personal Notes Application Documentation

1. Project Overview

The **Personal Notes Application** allows users to register, log in, and manage personal notes. Users can create, edit, delete, and search their notes. The application provides a user-friendly interface with dynamic features for smooth interactions.

2. Features

- **User Authentication:** Registration, login, and logout functionalities.
- **User Profile:** Displays username, email, date joined, and last login.
- **Notes Management:** Create, view, edit, and delete notes.
- **Search Functionality:** Search notes by title or description.
- **Responsive Design:** Optimized for various screen sizes using Bootstrap.
- **Modal Pop-Ups:** Edit and delete notes using Bootstrap modals.
- **Dynamic Interactions:** JavaScript-enhanced interactions for better user experience.

3. Technology Stack

- **Backend:** Django (Python)
- **Database:** PostgreSQL
- **Frontend:** HTML, CSS, Bootstrap, JavaScript

4. System Requirements

This section outlines the necessary hardware and software requirements to install, run, and use the **Personal Notes Application**.

4.1 Hardware Requirements

Component	Minimum Requirement	Recommended Requirement
Processor	Dual-core 2.0 GHz or higher	Quad-core 2.5 GHz or higher
RAM	4 GB	8 GB or more
Storage	1 GB of free disk space	2 GB or more
Display	1280×720 resolution	1920×1080 (Full HD) or higher
Internet	Required for installation	Required for deployment and updates

4.2 Software Requirements

Component	Required Version
Operating System	Windows 10/11, macOS, or Linux
Python	Python 3.8 or later
PostgreSQL	Version 12 or later
Django Framework	Django 4.x or later
Node.js (optional)	For advanced JavaScript features (if needed)
Web Browser	Latest versions of Chrome, Firefox, or Edge

5. Setup Instructions

1. Clone the Repository

```
git clone <repository-url>
cd personal_notes
```

2. Create and Activate Virtual Environment

```
python -m venv venv
source venv/bin/activate # For Linux/macOS
venv\Scripts\activate   # For Windows
```

3. Install Dependencies

```
pip install -r requirements.txt
```

4. Configure Database

Ensure PostgreSQL is installed and running.

Update settings.py with database credentials.

5. Apply Migrations

```
python manage.py makemigrations
python manage.py migrate
```

6. Run the Server

```
python manage.py runserver
```

7. Access the Application Open <http://127.0.0.1:8000/> in a browser.

6. Folder Structure

```
personal_notes/
├── manage.py
├── db.sqlite3
├── personal_notes/
│   ├── __init__.py
│   ├── settings.py
│   ├── urls.py
│   ├── wsgi.py
│   └── staticfiles/
├── notes/
│   ├── __init__.py
│   ├── admin.py
│   ├── apps.py
│   ├── forms.py
│   ├── models.py
│   ├── tests.py
│   ├── urls.py
│   ├── views.py
│   └── migrations/
├── static/
│   └── notes/
│       ├── home.css
│       ├── login.css
│       ├── profile.css
│       ├── register.css
│       └── script.js
└── templates/
```

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```
|   └─ notes/
|       └─ add_note.html
|       └─ base.html
|       └─ delete_note.html
|       └─ edit_note.html
|       └─ home.html
└─ users/
    └─ __init__.py
    └─ admin.py
    └─ apps.py
    └─ forms.py
    └─ models.py
    └─ tests.py
    └─ urls.py
    └─ views.py
    └─ migrations/
    └─ templates/
        └─ users/
            └─ login.html
            └─ logout.html
            └─ profile.html
            └─ register.html
└─ venv/
```

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7. Future Enhancements

- **Rich Text Editor** for notes.
- **Categories/Tags** to organize notes.
- **Reminder Notifications** for important notes.
- **Dark/Light Theme Toggle**.
- **Export Notes** to PDF or TXT format.