

Task Management Application

This is a Django-based web application designed to help users manage their tasks efficiently. It includes features like user authentication, task creation, updating, deletion, and reordering. Below is a detailed explanation of the project's functionality.

Features

1. User Authentication

- Login: Users can log in using the `CustomLoginView`, which redirects authenticated users to the task list page.
- Registration: New users can register using the `RegisterPage` view, which automatically logs them in after successful registration.

2. Task Management

- Task List: Authenticated users can view their tasks on the `TaskList` page. Tasks are filtered by the logged-in user, and incomplete tasks are counted.
- Task Search: Users can search for tasks by title using the search bar.
- Task Detail: Users can view the details of a specific task using the `TaskDetail` view.
- Task Creation: Users can create new tasks using the `TaskCreate` view. Tasks are automatically associated with the logged-in user.
- Task Update: Users can update existing tasks using the `TaskUpdate` view.
- Task Deletion: Users can delete tasks using the `DeleteView`. Only tasks owned by the logged-in user can be deleted.
- Task Reordering: Users can reorder tasks using the `TaskReorder` view, which updates the task positions in the database.

Code Overview

Views

1. CustomLoginView

- Handles user login.
- Redirects authenticated users to the task list page (`tasks`).

2. RegisterPage

- Handles user registration.
- Automatically logs in users after successful registration.
- Redirects authenticated users to the task list page.

3. TaskList

- Displays a list of tasks for the logged-in user.
- Filters tasks by the logged-in user and counts incomplete tasks.
- Implements a search functionality to filter tasks by title.

4. TaskDetail

- Displays detailed information about a specific task.

5. TaskCreate

- Allows users to create new tasks.
- Automatically associates the task with the logged-in user.

6. TaskUpdate

- Allows users to update existing tasks.

7. DeleteView

- Allows users to delete tasks.
- Ensures that only tasks owned by the logged-in user can be deleted.

8. TaskReorder

- Handles task reordering.
- Updates the task positions in the database based on user input.

Setup Instructions

1. Clone the Repository

```
```bash  
git clone https://github.com/your-username/your-repository.git
cd your-repository
```

### 2. Install Dependencies

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

3. Run Migrations

```
```bash
```

```
python manage.py migrate
```

#### 4. Create a Superuser (Optional)

```
``bash

python manage.py createsuperuser

...

```

#### 5. Run the Server

```
``bash

python manage.py runserver

...

```

#### 6. Access the Application

- Open your browser and go to `http://127.0.0.1:8000/`.`
- Register or log in to start managing your tasks.

#### Technologies Used

- Django: A Python-based web framework for building the application.
- Django Authentication: Handles user authentication and authorization.
- HTML/CSS: For the front-end templates and styling.
- SQLite: Default database for development (can be replaced with PostgreSQL, MySQL, etc.).

#### Contributing

Contributions are welcome! If you'd like to contribute, please follow these steps:

1. Fork the repository.
2. Create a new branch for your feature or bugfix.
3. Commit your changes.
4. Submit a pull request.

## License

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## Contact

For any questions or feedback, please reach out to [your-email@example.com](mailto:your-email@example.com).