

Flashcards APP

This project is a Django-based web application designed to create, manage, and share flashcards. It provides a user-friendly interface for studying. The system also supports RESTful API endpoints for advanced integrations.

Features

User Management

- Custom user model with optional admin privileges.
- User authentication: registration, login, and password management.
- Profile management via a dedicated user profile page.

Flashcards

- Create, view, and delete flashcards.
- Define flashcards with:
 - Question
 - Answer
 - Difficulty levels (easy, medium, hard)
- Rate flashcards (1-5) and view the average rating.
- Toggle sharing for flashcards, enabling collaboration.
- Hide flashcards for a clutter-free experience.
- Sort and filter by difficulty, date, or rating

Collections

- Organize flashcards into collections.
- View flashcards within collections in study mode.

Study Workflow

1. Create collections and populate them with flashcards.
2. Enter study mode and select a collection.
3. Review flashcards interactively, tracking performance in real time.
4. Analyze detailed telemetry reports for study progress.

API

- Full support for managing flashcards, collections, and user limits via RESTful APIs.
- API endpoints for flashcard creation, deletion, and sharing.

Admin Interface

- Admin dashboard for managing users, flashcards, and collections.
 - Filter and search flashcards and collections by attributes like date and difficulty.
 - Manage daily limits for flashcards and collections.
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Technologies Used

- **Backend:** Django, Django REST Framework, Python
 - **Frontend:** Django Templates, Bootstrap
 - **Database:** SQLite (development), PostgreSQL/MySQL (production)
 - **Testing:** Pytest, Django Test Framework
 - **Deployment:** Compatible with platforms like Heroku, AWS, or DigitalOcean.
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Installation

★ Clone the Repository

```
git clone https://github.com/AlexxFV/AB_Flashcards.git
cd AB_Flashcards
```

Alternatively, using SSH:

```
git clone git@github.com:AlexxFV/AB_Flashcards.git
cd AB_Flashcards
```

Token

```
git clone
https://github_pat_11BL4TKWI0JOIqUIuWSXE8_taPIEwZ3KjMM0OjID5InaFfSEqWcJmtV5F
nObe4ziTWI6OSFEG4eHucdaY6@github.com/AlexxFV/AB_Flashcards.git
```

★ Create a Virtual Environment

```
python -m venv env
source env/bin/activate # On Windows: env\Scripts\activate
```

★ Install Dependencies:

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

★ Set Up the Database

```
python manage.py migrate
```

★ Create a superuser:

```
python manage.py createsuperuser
```

★ Run the Development Server

```
python manage.py runserver
```

★ Access the Application

Web: Open <http://127.0.0.1:8000/>

Admin Dashboard: <http://127.0.0.1:8000/admin/>

APIs

- **Base API URL:** </api/>
 - **Documentation:** <http://127.0.0.1:8000/api/schema/redoc/>
 - Endpoints:
 - </users/>: Manage users
 - </flashcards/>: Manage flashcards
 - </collections/>: Manage collections
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Testing

To run the test suite:

```
pytest
```

Includes:

- Ten + one extra unit tests
 - API tests to validate endpoints.
 - Integration tests for user flows like registration and study sessions.
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File Structure

testvar/

```
├── flashcards/
│   ├── __init__.py
│   ├── admin.py      # Admin panel configurations
│   ├── apps.py       # Application configuration
│   ├── models.py     # Database models
│   ├── forms.py      # Django forms
│   ├── serializers.py # API serializers
│   ├── urls.py       # URL routing
│   ├── views.py      # View functions and classes
│   ├── migrates/     # Migrates for de base
│   ├── templates/    # HTML templates for the app
│   │   └── flashcards/
│   │       ├── login.html
│   │       ├── register.html
│   │       ├── change_password.html # change password
│   │       ├── index.html # Home page
│   │       ├── flashcard_create.html # Flashcard creation page
│   │       ├── flashcard_list.html # List of flashcards
│   │       ├── study_mode.html # Study mode page
│   │       ├── shared_flashcards.html # Shared flashcards page
│   │       ├── collection_list.html # List of collections
│   │       ├── collection_create.html # Create a collection
│   │       ├── collection_flashcards.html # Flashcards collection
│   │       ├── study_question.html # Study questions
│   │       └── study_results.html # Study results
│   ├── static/      # Static files (CSS, JS, images)
│   │   ├── js/      # JavaScript files
│   │   ├── images/   # Image assets
│   │   └── styles.css # Main stylesheet
│   └── tests/
│       └── test_models.py # Model tests
├── manage.py      # Django management script
└── readme.docx    # Documentation
```

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