

Habit Tracker Full Stack Web App

A productivity-focused habit tracker that helps users build consistent routines, monitor their progress, and stay motivated using analytics and a clean, user-friendly interface.

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Features

- User Authentication using JWT
- Add Habits Include name, frequency, category, and start date
- Toggle Habit Completion Mark/unmark habits daily
- Calendar View Check completion history per date
- Analytics Dashboard Shows:
 - Current streak
 - Longest streak
 - Success rate
 - Most consistent days
- Categorization Organize habits under categories like Health, Work, Learning
- Daily Check-ins and Notes

- Edit/Delete Habits
- Per-user Data Isolation Secure data for individual users

Tech Stack

Frontend:

- ReactJS
- React Router
- Bootstrap / Custom CSS

Backend:

- Django
- Django REST Framework
- JWT Authentication (djangorestframework-simplejwt)

Database:

- SQLite (can switch to PostgreSQL/MySQL)

Architecture

Frontend (React)

Dashboard (View Habits, Toggle)

AddHabit (Form)

CalendarView (Check daily habits)

Analytics (Charts)

Auth (Login / Signup)

Token-based auth

Backend (Django REST API)

/api/habits/ [GET, POST]

/api/habits/<id>/toggle [POST]

/api/analytics/ [GET]

/api/calendar/<date>/ [GET]

/auth/token/ [POST]

Setup Instructions

Prerequisites

- Python 3.8+
- Node.js 14+
- MySQL/PostgreSQL/SQLite
- pip, npm, virtualenv

Backend Setup (Django)

```
$ cd habitbaackend
```

```
$ python -m venv env
```

```
$ source env/bin/activate # or use env\Scripts\activate on Windows
```

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

```
$ python manage.py makemigrations
```

```
$ python manage.py migrate
```

```
$ python manage.py createsuperuser
```

```
$ python manage.py runserver
```

Frontend Setup (React.js)

```
$ cd habit-tracker
```

```
$ npm install
```

\$ npm start

API Overview

Endpoint	Method	Description
/api/habits/	GET	Get users habits with toggle info
/api/habits/	POST	Add a new habit
/api/habits/<id>/toggle	POST	Toggle today's check-in
/api/analytics/	GET	Returns habit stats
/api/calendar/<date>/	GET	Get habit completion for a day
/auth/token/	POST	Login and get JWT token

Folder Structure

habitbaackend/

habits/

models.py

views.py

serializers.py

urls.py

manage.py

requirements.txt

habit-tracker/

src/

components/

pages/

services/

App.js

public/

package.json

Future Improvements

- Mobile-friendly responsive design
- Export habit data to PDF/CSV
- Weekly habit planning feature
- Habit reminders via email or notifications
- AI Suggestions for habit improvement