

## Author

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Hello My Name is Jayvin. I am Currently in Diploma Level in IITM Bsc Degree .

I have Completed Electrical Engineering and Have Done 1 Year internship as Graduate Engineer Trainee.

I am currently doing this degree full-time

## Description

In this project i much i can understand we have to build python web application

Using Flask and Flask-SQLAlchemy and users should be able to add tracker,update tracker, delete tracker , within tracker users should be able to add,update and delete logs.

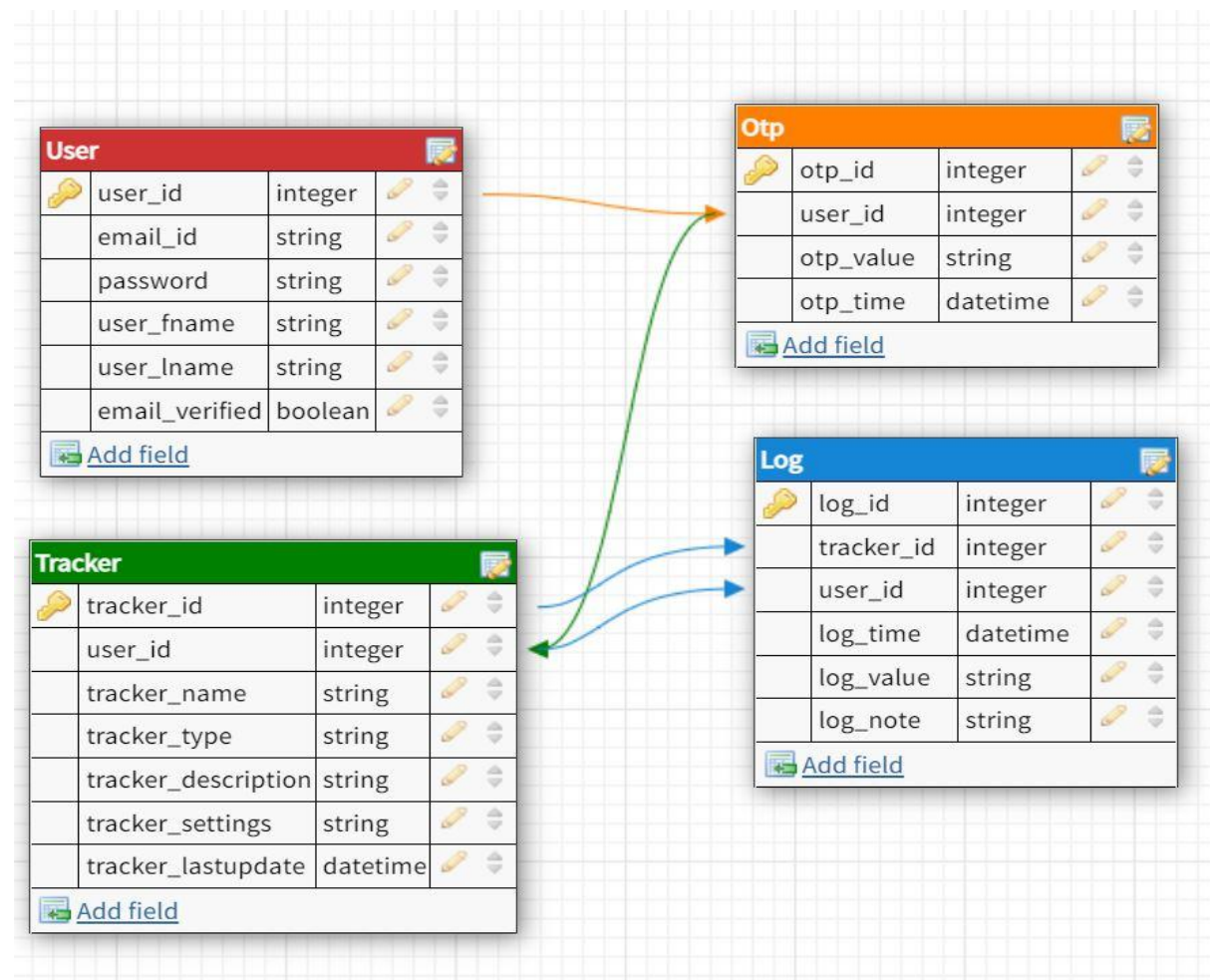
I have also added email otp verification using flask-mail library.

## Technologies used

Flask, Flask-SQLAlchemy, Flask-RESTful, Flask-Mail, Jinja2, matplotlib, DateTime, requests and Passlib.hash

- Flask : Flask is a Python framework for developing web applications, implemented on Toolkit and Jinja2. Use of the Flask framework has several advantages: It has a built-in development server and a fast debugger.Flask is part of the categories of the micro-framework. Micro-framework is normally a framework with little to no dependencies to external libraries.
- SQLAlchemy: SQLAlchemy is the Python SQL toolkit and Object Relational Mapper that gives application developers the full power and flexibility of SQL.It is designed for efficient and high-performing database access, adapted into a simple and Pythonic domain language.
- Flask-RESTful : It is an extension for Flask that adds support for quickly building REST APIs. It is a lightweight abstraction that works with your existing ORM/libraries. Flask-RESTful encourages best practices with minimal setup. If you are familiar with Flask, Flask-RESTful should be easy to pick up.
- Flask-Mail : Flask mail is an extension for Flask which allows you to send mails.
- Jinja2: Jinja is a fast, expressive, extensible templating engine. Special placeholders in the template allow writing code similar to Python syntax. Then the template is passed data to render the final document.
- Matplotlib: Matplotlib is a comprehensive library for creating static, animated, and interactive visualisations in Python. Most of the Matplotlib utilities lie under the pyplot submodule.

## DB Schema Design



## API Design

I have made UserAPI, SignUpAPI, ForgotPasswordAPI, MailAPI, TrackerAPI, LogAPI and GraphAPI. These are in my application.

UserAPI lets you get info for users and is also used for sign in process.

SignUpAPI as the name suggests is used for the signup process. Similarly, ForgotPasswordAPI lets the user reset their password by verifying the OTP sent by MailAPI.

TrackerAPI is used to perform CRUD operations on trackers. Similarly, LogAPI and GraphAPI generate graphs from data and store them in a static folder, sending verification as output to indicate if it has enough data or not.

## Architecture and Features

I have also used API to render the pages to communicate with the database, and forgot password and new user will be verified by the OTP sent to their email.

## Video

<https://drive.google.com/file/d/1CoZ3WfEgqcEOXxCjGkmlJluqGVINUXcY/view?usp=sharing>