

Quantified Self App

**Capstone Project for Modern
Application Development I Course
(IIT Madras)**

Jameel Kaisar Khan

21F1006786

March 18, 2022

Main Features

- Basic User Model with Password Based Authentication
- 5 Different Tracker Types: Boolean, Integer, Decimal, Duration, Single Select, Multi Select
- Add, Edit, Delete, View Trackers
- Add, Edit, Delete, View Tracker Logs
- Dashboard with Option to Export Data as CSV and TSV
- Dashboard with Trendlines
- Token for API Validation
- Get Tracker Types, Trackers, Logs, Trendlines using API
- Add Trackers, Logs using API
- Delete Trackers, Logs using API
- Special Focus on UI/UX

Libraries and Frameworks

- Python Libraries
 - Flask, Flask-Login, Flask-RESTful, Flask-SQLAlchemy
 - Werkzeug, SQLAlchemy, Jinja2
 - matplotlib, numpy
 - humanize, python-dotenv, requests
- Database
 - SQLite3
- Frontend
 - HTML5, CSS3, Javascript
 - Bootstrap, Font Awesome
- API
 - OpenAPI, SwaggerUI

- Version Control
 - Git, GitHub

Issues

- Trendlines generated are stored in `static` folder which is accessible to everyone. We could add some kind of authentication to allow only specific users to access the generated trendlines.
- It is not clear what to do to the existing logs when a user deletes an option in case of `Single Select` and `Multi Select` Tracker Types. It may depend on the user preference. So, I did not implement this option.

GitHub Link

- <https://github.com/JameelKaisar/Quantified-Self-App>

Replit Link

- <https://replit.com/@JameelKaisar/Quantified-Self-App>

Video Link

- <https://drive.google.com/drive/folders/1kFtFhoHPbjJmAHukmn8IAtEyAFQk6ccT?usp=sharing>