

## Making of the habit tracker app

### Content

While the final flowchart looks not too different from my first upload and ideas, many things changed along the way, and I've learned a lot during this project. In addition to the mandatory requirements for functionality (creating weekly and daily habits, returning a list of all currently tracked habits/all habits with the same periodicity, returning the longest streak of all habits and returning the longest streak for a given habit) I've managed to include options such as monthly habits, a differentiation between active and inactive streaks that allows returning the longest ever streaks for all habits as well and showing the most urgent habit by working with an attribute for when habits need to be checked off next.

### What went well and what didn't?

While my python experience is quite limited, I was happy that I could provide the functionality for the whole app with mostly basic while and for loops and some if statements. Especially the navigation felt very smooth and simple to implement.

On the other hand, I've had several struggles with the database side of things. Although I've had several courses about SQL and database design and maintenance, I've not had to do much other than theory. The little hands-on experience I've had with it was in the scope of a database management system, so connecting a database with sqlite3 and working on it in python code was completely new to me. Hardest part of it was figuring out in which format to save dates and how exactly I could calculate with and order them.

I did however become much more comfortable with the database side of things once I've found a great extension for Visual Studio Code that allows viewing database content in the editor, which helped me a lot working out the quirks of sqlite3.

I've also only never touched unit tests and only read about them in a small subchapter in one of my courses, so they presented another challenge. While I did learn to write and run unit tests, at least simple ones, I feel like with more experience and know how I could've made more (complex) unit tests.

### What pitfalls did you detect that you didn't foresee?

I chose to implement the streak functionality by adding attributes to each habit that saved the date of the last check off and when the next check off would be required. This made tracking streaks quite easy, as every check off would increase the streak and calculate a new date for the next check off. If that check off was missed, the streak is broken. That part was quite straightforward, but my way of implementation makes it impossible to look back on a specific date and see if the habit was completed on that specific date or not.

What features did you build into the application that you're most proud of and that add value to the overall product?

I am very happy with my inclusion of re.match, something I've never done before. As I am quite new to coding it took some experimenting and lots of online research, but I managed to figure out how to properly check any sort of input a user could enter versus a predefined set of allowed inputs. I could've done without it and just relied on the user to follow instructions but even with my limited experience I've found that that is never a safe approach. So, I am quite proud that every single input that is ever required from the user during the usage of the program is error checked and packed in a loop that requires a valid input. This way any value or type errors can be avoided.

I am also glad I chose to add a third habit periodicity (monthly) as in my experience monthly goals can be quite valuable. It also just adds overall functionality and allows for habits such as visiting a hairdresser, looking at your own long-term goals, completing courses, reading books, etc.

On the same line the functionality to not just look at current active streaks, but also at the longest streak you've had in the past can add much value to a user. Looking at past achievements and working to "compete with yourself" so to say can be a great motivation to stick to your plan and work on your habits.

My project can be found under the following link:  
[https://github.com/dariuszarse/oofp\\_habits\\_project](https://github.com/dariuszarse/oofp_habits_project)