My Habit Tracking App.

Technical Foundations:

For the programming side of things, I will be using Python 3.7 combined with SQLite3 as a database for the data to be stored in. All habit data will be stored using a database file created through the program using SQLite3 and basics of the SQL Language. I will be using 'Sublime-Text' as my text editor where the programming will be done.

To store the data, I will simply write in the SQL language writing basic INSERT and UPDATE commands. A connection will be made to the Data-Base and the database file, followed by the instructions ending when closing the connection.

For retrieving data, SQL offers a simple method of retrieving data requested for using a basic query (called a SELECT statement), I plan on creating a for loop that can iterate through each item in the database very easily.

The general flow of the program will be very basic starting with only three main branches to choose from and continuing from there, all other possible features will then be extended. (Please see Flow-Chart.png)

The program will be run simply by double-clicking on the file which will create a pop-up window/terminal on the computer screen for it to run. Users interact with the program through simple 'user-input' from the keyboard. Most of the input will be limited to simple number input (e.g., 1-5) to keep the flow as simple as possible.

Creating new habits and marking old ones complete, will be done with simple input from the user. The program will then automatically store all these data-entries in the database file as necessary for future use. Checking Habit Progress/Analysis will also be very easy as it is one of the main branches of the program.

Users should interact with this program with care and basic understanding of reading and typing as it is a very simple and basic program that requires no supernatural intelligence.

The structure and design of this program (As seen in the Flow-Chart), was created by me to make it as easy and basic as possible, to minimize confusion and to maximize simplicity.

The only considerations that had to be made was whether to use a JSON file or a Database to store the information. I decided on using a database since it is relatively easy to store and retrieve selected data.

```mermaid
flowchart

START

CHECK TIME AND ALL HABIT'S LAST TIME COMPLETED. IF TIME HAS PASSED WITHOUT COMPLETION THEN CURRENT STREAK RESET TO ZERO.

USER ENTERS PROGRAM

HABIT ANALYSIS

VIEW ALL HABITS AND THEIR CURRENT STREAK

CHECK CURRENT HABITS

HABIT PROGRESS

LONGEST STREAK FOR GIVEN HABIT

LONGEST STREAK OF ALL HABITS

ADD NEW HABIT

DELETE HABIT

MARK HABIT COMPLETE

LIST OF HABITS WITH SAME PERIODICITY

LIST OF ALL HABITS BEING TRACKED

DEFINE HABITS AND PERIODICITY (eg. DAILY, WEEKLY,)

UPDATE STREAK FOR HABIT
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