**Habit Tracker Documentation**

The habit tracking app is a command-line interface application that allows users to create, manage, and analyze their habits. Users can create an account, add and remove habits, complete tasks, and view their progress through various analytics.

1. **Components**

The app consists of four main components:

1. **User**: Represents a user with a username and a list of habits.
2. **Habit**: Represents a habit with a task and a periodicity (daily or weekly).
3. **HabitTracker**: Manages the list of users and their associated habits.
4. **Analytics**: Provides analytics functionalities for calculating the longest streak for a habit and the longest streak among all habits.
5. **Usage**

**2.1 Register a User**

To register a user, enter the command **1** and provide a username. The app will create a new user and add it to the HabitTracker.

**2.2 Select a User**

To select a user, enter the command **2** and provide the username. The app will search for the user in the HabitTracker and set it as the current user.

**2.3 Add a Habit**

To add a habit to the current user, enter the command **3** and provide the habit task and its periodicity (daily or weekly). The app will create a new habit and add it to the user's list of habits.

**2.4 Remove a Habit**

To remove a habit from the current user, enter the command **4** and provide the habit task. The app will remove the habit from the user's list of habits.

**2.5 Complete a Habit Task**

To mark a habit task as completed, enter the command **5** and provide the habit task. The app will record the completion timestamp for the habit.

**2.6 List Habits**

To list all habits for the current user, enter the command **6**. The app will display the habits with their tasks and periodicities.

**2.7 List Habits by Periodicity**

To list habits by periodicity for the current user, enter the command **7** and provide the periodicity (daily or weekly). The app will display the filtered list of habits with their tasks.

**2.8 Longest Streak for a Habit**

To calculate the longest streak for a specific habit, enter the command **8** and provide the habit task. The app will calculate the longest streak for the habit within the last 28 days.

**2.9 Longest Streak Among All Habits**

To calculate the longest streak among all habits for the current user, enter the command **9**. The app will calculate the longest streak and display the habit with the longest streak within the last 28 days.

**2.10 Quit**

To quit the app, enter the command **0**. The app will exit the loop.

**3 Further Improvements**

The current implementation serves as a basic habit tracking app. There are opportunities for improvements, such as:

* Implementing data persistence to save and load user data from a file
* Adding more analytics functionalities to provide more insights into user habits
* Improving user experience with a graphical user interface (GUI)
* Adding more habit attributes, such as priority, difficulty, or reminders

These improvements can be add in another project.