

Habit Tracking App

Program Usage Guide

After registering user information, the program prompts the user to input the parameters for habit attributes. The program determines the registration time by calculating the current day. Subsequently, the user is prompted to indicate whether the habit in question is performed on a daily or weekly basis. Following this, the user is asked to specify the number of hours required to complete each habit. Furthermore, whenever the user accesses the program, they have the opportunity to update their habits. The variable 'practice_time' is responsible for storing the cumulative activity of the corresponding habit. When the user modifies it, the new value will be appended to the previous value. The progress of each habit is determined by considering both the total required time for each habit and the time allocated to each habit. Additionally, the application has the capability to manually mark the user's status as complete in order to fulfill a habit. This application not only calculates the numerical progress of habits, but it also presents a horizontal graph that depicts the development of habits, either as individual entities or as a collective group. Furthermore, if a user is unable to complete a habit within the specified time frame, the status of said habit will be considered as "Habit is broken."

Data storage :

The sqlite3 database was used to store and retrieve user information. Within this specific database, two separate tables, namely Habit and User, have been designated. The program includes two separate classes, User and Habit, each of which contains its respective functions. The User class is responsible for storing, retrieving, and preventing the storage of duplicate information within the User table through its associated functions. The User class is designed to store the user's general information, including username, password, surname, and trace number, within the user table. The Habit class, on the other hand, is designed to store the user's habit information in the habit table. Both tables share a common attribute, a randomly generated trace number that is identical in both tables. This trace number is generated at the time of user registration. During the login stage, if the user's information is deemed correct, the trace number will be extracted from the User table. Subsequently, with the help of this trace number, the user's Habit information will be retrieved from the Habit table. This program also has the capability to display the update history for each individual habit. For each habit, the user specifies the duration of the activity at any given point in time. This duration will not only be accumulated with previous durations, but it will also be recorded in a separate file along with the date, duration, habit name, and trace number. Consequently, the user can examine the temporal values of activity for each specific habit.

Structure of the User and Habit tables, as well as the User and Habit classes, together with their corresponding internal functions.

Column
names in
User table

name: text
surname: text
password: text
trace_number: Integer

Function
names in
User class

1 - check_user
2-save_user_in_database

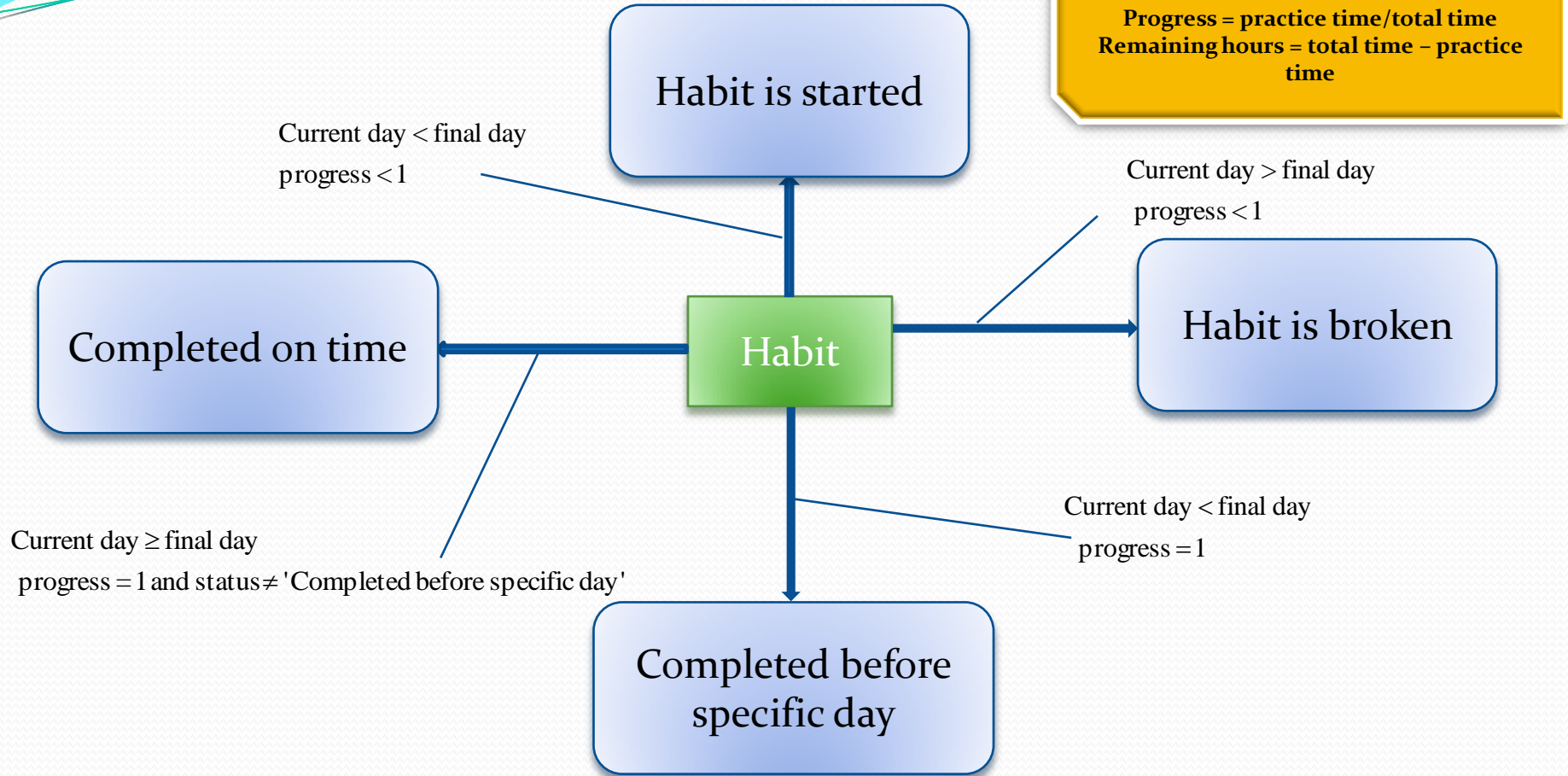
Column
names in
Habit table

habit_name: text
period: text
practice_time: text
datetime_of_creation: text
trace_number: Integer
status: text
datetime_of_completion: text
total_practice_time: text
last_alter_date: text
last_practice_time: text

Function names in
Habit class

save_habit_in_dataBase
see_last_alter_habits
weekly_habit
daily_habit
all_habit
delete_habit
longest_habit
edit_habit :
Specific_habit:
{total_practice_time, time of
completion, practice_time, da
te of creation
, status, period, habit_name}

How to calculate the status of habit



Start the program

```
C:\Users\Def\Documents\85 Python\Project_Habit_Tracker-main\U_85_Project\dist\Main.exe
\Database created successfully!!!
this is the app for tracking habits
? register user or login or exit? (Use shortcuts)
» 1) register_new_user
   2) login
   3) Exit
```

Registration of a new user

```
C:\Users\Def\Documents\85 Python\Project_Habit_Tracker-main\U_85_Project\dist\Main.exe
\Database created successfully!!!
this is the app for tracking habits
? register user or login or exit? register_new_user
registering ....
? What's your first name? Jack
? What's your surname? nielsen
? What's your password? *****
Do you follow current habit?
? Reading Yes
How many hours do you want to complete this habit?
? input_number: 890
? What's period? Daily
Type expected days for completion
? input_number: 10
Input is not valid
? input_number: 100
How many hours did you practice today?
? input_number: 5
new habit saved in Database
Press any key to continue . . .
```

Prevent wrong entry

```
registering ....
? What's your first name? Jack
? What's your surname? nielsen
? What's your password? *****
Do you follow current habit?
? Reading Yes
How many hours do you want to complete this habit?
? input_number: 890
? What's period? Daily
Type expected days for completion
? input_number: 10
Input is not valid
? input_number: 100
How many hours did you practice today?
? input_number: 5
new habit saved in Database
Press any key to continue . . .
Do you follow current habit?
? Studying Yes
How many hours do you want to complete this habit?
? input_number: ui
Input cannot be empty or string or space.
```

Login to observe the habits progress or update

```
? What's period? Weekly
Expected weeks for completion
? input_number: 4
How many hours did you practice this week?
? input_number: 3
new habit saved in Database
Press any key to continue . . .
? Would you like to add new habit? n
? register user or login or exit? Login
logging ...
? Name: reza
? Surname: reza
? Password: ***

Login successful!

Valid username.

? Habit update, edit profile or exit? (Use shortcuts)
» 1) Habit
   2) Edit profile
   3) Exit
```

Observation of
updated habits
from a specific date
until now

```
C:\Users\Def\Documents\B5_Python\Project_Habit_Tracker-main\B5_Project\dist\Main.exe
? Password: *****
This user already exists in database
password is true
Valid username.

? see all habit,edit profile, weekly,daily or edit or add or delete habit or exit? Habit
? all habit,longest habit,weekly habits,daily habits,specific habit,update habit,delete habit
,add habit,see last alter habits,exit? see last alter habits
? What's period? Daily
How many days ago you alter habits
? input_number: 1
2023-10-21 00:07:42.786946
('Reading',)
2023-10-21 00:35:05.954365
('Cycling',)
2023-10-21 00:35:51.003759
('Cleaning',)
? see all habit,edit profile, weekly,daily or edit or add or delete habit or exit? (Use short
cuts)
» 1) Habit
   2) edit profile
   3) Exit
```

Delete a specific
habit

```
C:\Users\Def\Documents\B5_Python\Project_Habit_Tracker-main\B5_Project\dist\Main.exe
? What's period? Daily
How many days ago you alter habits
? input_number: 1
2023-10-21 00:07:42.786946
('Reading',)
2023-10-21 00:35:05.954365
('Cycling',)
2023-10-21 00:35:51.003759
('Cleaning',)
? see all habit,edit profile, weekly,daily or edit or add or delete habit or exit? Habit
? all habit,longest habit,weekly habits,daily habits,specific habit,update habit,delete habit
,add habit,see last alter habits,exit? delete habit
? habit_name: yoga
? Are you sure to delete this habit? y
'Yoga' successfully deleted.
Press any key to continue . . .
```


Observation of habit progress

```
C:\Users\Def\Documents\85 Python\Project_Habit_Tracker-main\U_85_Project\dist\Main.exe

Login successful!

Valid username.

? Habit update, edit profile or exit? Habit
? all habit,longest habit,weekly habits,daily habits,specific habit,update habit,delete habit
,add habit,see last alter habits,exit? specific habit
specific habit
? habit_name: yoga
6 hours added on 11/18/2023, 02:53:05
habit number is Yoga
period is Daily
practice_time is, 6 hours until now
date of creation is 2023-11-18 02:52:50.712604
datetime of completion is 2023-11-22 02:52:50.712604
total_practice_time was defined 89 hours from initial date
last_alter_date is 2023-11-18 02:52:50.712604
last_practice_time is 6
status is Started
Your progress is 0.06741573033707865 and 83.0 hours remaining
Press any key to continue . . .
```

Progress graph of all user habits

```
C:\Users\Def\Documents\85 Python\Project_Habit_Tracker-main\U_85_Project\dist\Main.exe

Reading 0.03
Studying 0.03
Cycling 0.02
Running 0.06
Cleaning 0.05
Yoga 0.16
Shop 1.0
? Habit update, edit profile or exit? (Use shortcuts)
» 1) Habit
   2) Edit profile
   3) Exit
```

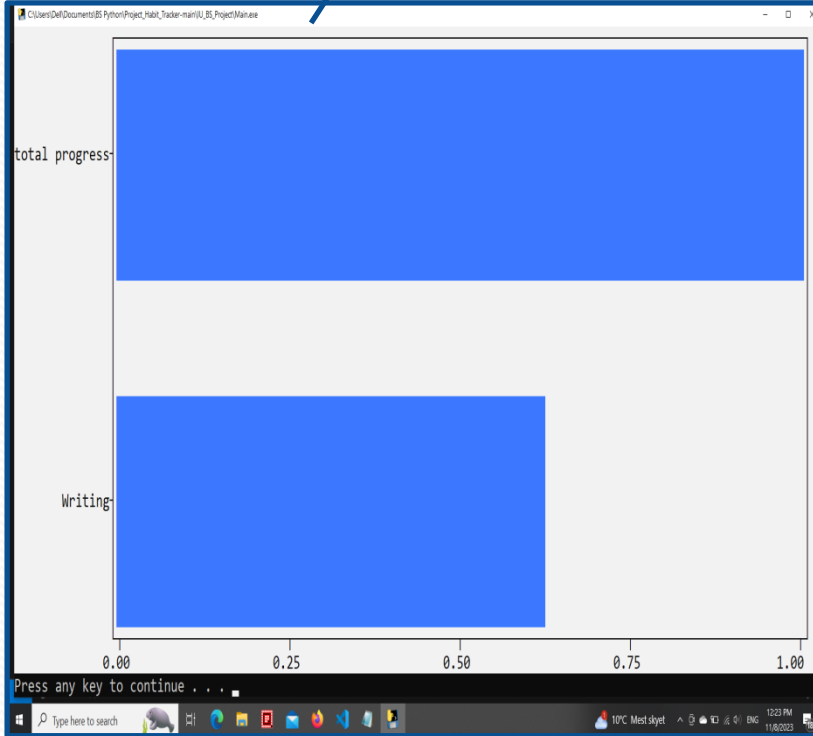
history of habit activity

```
C:\Users\Del\Desktop\BS Python\Project_Habit_Tracker-main\JBS_ProjectMain.exe
> Habit update, edit profile or exit? Habit
> all habit,longest habit,weekly habits,daily habits,specific habit,update habit,delete habit,add habit,see last alt
er habits,exit? specific habit
specific habit
? habit_name: studying
8 hours added on 11/08/2023, 12:10:51
9 hours added on 11/08/2023, 12:32:19
habit number is Studying
period is Weekly
practice_time is, 17.0 hours until now
date of creation is 2023-11-08 12:10:34.333963
datetime of completion is 2023-12-27 12:10:34.333963
total_practice_time was defined 80 hours from initial date
last_alter_date is 2023-11-08 12:32:19.443043
last_practice_time is 9
status is Started
Press any key to continue . . .
```

Completion of the activity time before the specified date

```
C:\Users\Del\Desktop\BS Python\Project_Habit_Tracker-main\JBS_ProjectMain.exe
er habits,exit? specific habit
specific habit
? habit_name: writing
6 hours added on 11/08/2023, 12:12:20
9 hours added on 11/08/2023, 12:13:50
5 hours added on 11/08/2023, 12:14:19
5 hours added on 11/08/2023, 12:14:40
7 hours added on 11/08/2023, 12:15:04
7 hours added on 11/08/2023, 12:21:30
9 hours added on 11/08/2023, 12:21:46
7 hours added on 11/08/2023, 12:22:13
7 hours added on 11/08/2023, 12:22:45
8 hours added on 11/08/2023, 12:24:23
9 hours added on 11/08/2023, 12:24:41
9 hours added on 11/08/2023, 12:24:56
9 hours added on 11/08/2023, 12:25:14
9 hours added on 11/08/2023, 12:25:29
habit number is Writing
period is Daily
practice_time is, 106.0 hours until now
date of creation is 2023-11-08 12:12:01.912600
datetime of completion is 2023-11-17 12:12:01.912600
total_practice_time was defined 100 hours from initial date
last_alter_date is 2023-11-08 12:25:29.548793
last_practice_time is 9
This habit is established streak of '0:13:43.558255' periods
datetime of completion is updated 2023-11-08 12:25:45.475891
status is Completed before specific day
Press any key to continue . . .
```

Graphical
representation of
habit progress



Update variable of
practise_time

```
? Habit update, edit profile or exit? Habit
? all habit,longest habit,weekly habits,daily habits,specific habit,update habit,delete habit
,add habit,see last alter habits,exit? update habit
? You can change habit_name, period, practice_time, status, date of creation,time of completi
on,total_practice_time? practice_time
? habit_name: yoga
Your practice time is , 11.0 hours
new time will be added to previous value
? input_number: 1
? Habit update, edit profile or exit? Habit
? all habit,longest habit,weekly habits,daily habits,specific habit,update habit,delete habit
,add habit,see last alter habits,exit? update habit
? You can change habit_name, period, practice_time, status, date of creation,time of completi
on,total_practice_time? practice_time
? habit_name: yoga
Your practice time is , 12.0 hours
new time will be added to previous value
? input_number: 2
```