

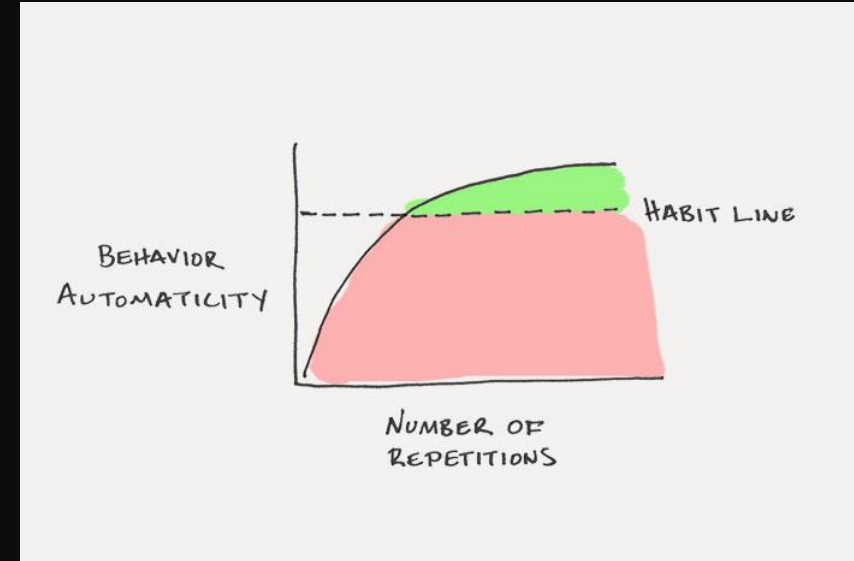
Habit Tracking App

Object Oriented and Functional Programming with Python
Development Phase/Reflection Phase

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Explanation of the App

- Defining habits/choosing existing ones
- Setting periodicity for each habit
- Checking off habits regularly
- Analyzing habit tracking journey

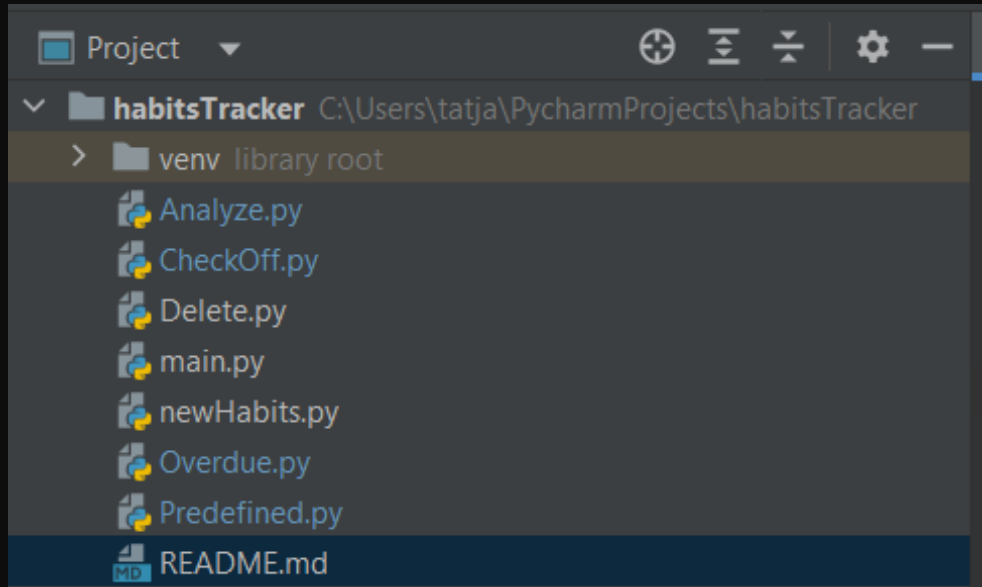


<https://jamesclear.com/wp-content/uploads/2015/03/habit-automaticity.jpg>

Goals:

- establish new habits in his life in a playful way
- Being able to track and analyze habits constantly (even on the go)
- Having a digital reminder to do something healthy

File Structure



- The project consists of 8 files
- 7 of them are Python files, 1 is a **README** file with an explanation of the usage/installation of the application
- **main.py** is the main file to which the other ones are connected
- **Analyze.py** : contains functions to analyze different characteristics of the habits
- **CheckOff.py** : function that enables user to mark a habit as done
- **Delete.py** : enables user to delete a habit
- **newHabits.py** : lets user create a new habit & choose period
- **Overdue.py** : changes Due Date if user fails to check off a habit in the given period
- **Predefined.py** : defines 5 habits which the user can choose to use

Tutorial on how to use the Habit Tracker

```
Welcome to your Habit Tracker!
```

```
Do you want to use predefined habits? Yes/No : |
```

Entering „yes“ inserts 5 predefined habits in the list of habits

Entering „no“ leaves the list of habits empty for now

```
Do you want to use predefined habits? Yes/No : Yes
```

Next, there is the main menu where the user has 5 options:

```
Now 5 different predefined habits are part of your tasks that you need to check off regularly. Go to Analyze habits to have a look at them!
```

```
Enter 1 to define a new habit
```

```
-----
```

```
Enter 2 to check off a habit
```

```
-----
```

```
Enter 3 to delete a habit
```

```
-----
```

```
Enter 4 to analyse your habits
```

```
-----
```

```
Enter x to exit the program
```

```
Choose a number to proceed: |
```

1. Option : Define a new habit

```
Choose a number to proceed: 1|
```

```
Do you want to create a new habit? Yes/No: Yes
```

```
What is the name of your new habit?: Eating healthy
```

```
Eating healthy
```

```
This habit was created on: : 2022-12-06
```

```
Should the period be daily or weekly? daily/weekly : daily
```

```
Period: Daily
```

```
Due Date: 2022-12-07
```

```
Do you want to create a new habit? Yes/No: No|
```

Type in „No“ if user wants to go back to the menu and „yes“ if user wants to define another habit

2. Option : Check off a habit

```
Choose a number to proceed: 2
```

```
The habits are: 1
```

```
(1, 'Eating healthy', 'Daily', '2022-12-06', '2022-12-06', '2022-12-07', 1, 1)
```

```
Type in the ID of the Habit that you want to mark as done: 1
```

```
Your chosen habit has been marked as done
```

First the count of habit is displayed which in our case is only 1 habit that we defined with option 1.

The habit and its info is returned and the user can choose which habit ID he wants to mark as done.

In our case it's only one habit so the ID = 1

3. Option : Delete a habit

```
Choose a number to proceed: 3

Please, type in 1 to delete a habit or [exit] to go back to the main menu: 1
The habits are: 1

(1, 'Eating healthy', 'Daily', '2022-12-06', '2022-12-07', '2022-12-07', 2, 2)

DELETE Habit's ID number : 1
Habit was successfully removed from the list!
```

User can navigate between deleting a habit and returning to the main menu.

If 1 = deleting is chosen, user is asked to enter an ID of a habit he wants to delete

4. Option : Analyze habits

```
Type in 1 to return all habits
-----
Type in 2 to return all daily habits
-----
Type in 3 to return all weekly habits
-----
Type in 4 to return longest run streak of all defined habits
-----
Type in 5 to return longest run streak for a given habit
-----
Type in [exit] to go to the main menu
-----
```

When choosing option 4 another menu is opened where the user is asked to decide between the 6 options

4. Option : Analyze habits

To give a few examples of the analyze functionalities:

```
Please, type in your choice: 1
The habits are: 5

(2, 'Walk 9.000 steps', 'Daily', '2022-01-01', '2022-12-06', '2022-12-07', 0, 7)
(3, 'Do a Workout', 'Weekly', '2022-03-20', '2022-12-06', '2022-12-13', 0, 4)
(4, 'Eat Vegetables', 'Daily', '2022-01-01', '2022-12-06', '2022-12-07', 0, 3)
(5, 'Meet Friends', 'Weekly', '2022-01-01', '2022-12-06', '2022-12-13', 0, 3)
(6, 'Read a book', 'Daily', '2022-05-02', '2022-12-06', '2022-12-07', 0, 7)
```

1. Option: when user enters 1 all existing habits (does not matter if predefined or created by user) are displayed

```
Please, type in your choice: 3
The habits are: 2

(3, 'Do a Workout', 'Weekly', '2022-03-20', '2022-12-06', '2022-12-13', 0, 4)
(5, 'Meet Friends', 'Weekly', '2022-01-01', '2022-12-06', '2022-12-13', 0, 3)
```

3. Option: when user enters 3 only the habits with a weekly periodicity are displayed

Navigation

An important part of the application is the navigation. How does the user go from analyze menu to the main menu and how does he close the program?

```
Enter 4 to analyse your habits
```

```
-----
```

```
Enter x to exit the program
```

The analyze menu has the option „exit“.

When the user enters „exit“ he is returned to the main menu

```
-----
```

```
-----
```

```
Enter x to exit the program
```

In the main menu the user can type in „x“ to terminate the application

Error Handling

It is normal and common that the user types in something wrong – whether it's a non-existing Habit ID or a number that is not part of the menu options.

That is why an easy to understand Error message is important for the user to correct the mistake.

Here an example:

```
Enter 2 to check off a habit
-----
Enter 3 to delete a habit
-----
Enter 4 to analyse your habits
-----
Enter x to exit the program

Choose a number to proceed: 6

Your choice is not one of the given options
```