

Bauhaus-Universität Weimar

SUSTAINABILITY TRACKER

Hand-over III – Project Document



Software Engineering
Summer Semester 2024

Group F

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INTRODUCTION. -

This document presents the results and conclusions reached during the stakeholder meeting with the group that improve the Sustainability Tracker program. [Group "O" in charge of the delivery - Group "F" as recipient of the work].

This document will present a summary of what was discussed during the "Handover" and some of the points identified in the "Handover" with possible errors that need to be tested.

BLACK BOX TESTING - BUGS (ONLY BY USING PROGRAM). –

System do not allow to save Users – (Create each time).

The system does not allow you to enter a user, only to create a new one. This user is not saved when you close the program, so you must create it each time.

You can skip the login and there is no system of logout.

Is not necessary to log in (you can jump to the next window without any problem). When returning to the login menu (logout). You can return to the previous menus even if you have not logged in again (you can still see the information of the previous session).

The box of “planted Trees” should only accept Integers but accept also decimal values.

One of the options where values can be entered is "planted trees". This should accept only an integer value, but you can enter a decimal value (which is not correct, you don't plant only half or quarter trees).

Do not save the info about Index Sustainability and Tips.

In the project description it is indicated that the program should store user information and how to improve its carbon footprint (its sustainable index and tips). But as the users are not saved, this relevant information and tips for the user cannot be saved either. So, to see the information you must perform all the steps every time you open the program.

The program does not specify the time lapse for the input

The program asks you to enter consumption information. But nowhere in the program does it indicate whether this data should be by "day", "week", "year", etc. So, it is quite a confusing system.

WHITE BOX TESTING – IDENTIFY DURING READING OF DOCUMENT AND LOOKING CODE

In one of the cases of testing we test the program and his functionality by using data related to reality:

- In the first case we have the consumptions of a regular U.S citizen (Not very ecological). We check if the outcome of the program detect that is not a very ecological one.
- As a second case we put the values of consumption and ecological effort that the OMS following de OSD (objectives of sustainable development). And in this case the program should agree that this user in effect is very “green”.

When we speak with group “O” they mentioned that the program works with the consumptions for day (**this is not properly specified in the program or the documents**). And mention that the index work in base of the value mean production per human of CO2 (14 kg/day).

In the test, all values of CO2 are taken in base of document “Initial Parameters for Implementation.pdf”.

PARAMETER	US CITIZEN (Case 1)	GREEN CITIZEN (Case 2)
Water Consumption (Lt/Day)	300 – 380 (take 340)	50-100 (take 100)
Electricity Consumption (KwHr)	30	20
Household Fuel Consumption (Kg/day)	5-10 (take 8)	5
Priv. Transp. Fuel Consumption (Lt/day)	50 km (5Lt/day)	20 km (2Lt/day)
Waste Generated (Kg/day)	2	1
Trees planted (Tree/year)	0	80
Use of Public Transport	10	15-20 (take 20)
Distance by Feet or Bicycle	1.5-3 (take 2)	5-10 (take 5)

Data extracted from:

<https://baumglanz.de/wie-viele-baeume-muessen-gepflanzt-werden/>

<https://www.epa.gov/watersense/statistics-and-facts>

The calculations performed by the program do not fully agree with what is specified in the "Initial Parameters for Implementation.pdf" document. Therefore, a search should be carried out to find out where the program fails in this.

During the execution of the tests, it was identified that during the development of the program there was no parameter for which to compare when the consumption is good or should be improved. Therefore, the recommendations are arbitrary and do not make logical sense. In the tests, the consumption of the "Green citizen" (WHO Recommendation) is being taken as the value at which recommendations should or should not be given.

SUMMARY OF HANDOVER MEETING. –

During the meeting with group O, they explained to us the basics about the use of the program, how they received it and the improvements they implemented (the system of personalized suggestions for each point that generates a carbon emission). As the most important thing we can highlight the following:

- Information was requested about one of the detected bugs "The User System". We were informed that the program has not implemented a system that allows the saving of users. Therefore, one must create a new user each time he/she enters the program.
- We showed them another observation regarding the interface in which when we go back to the login. We can advance back to the results window even if we have not yet logged back in. They confirmed that this is indeed a bug that they had not noticed before.
- It was observed that in the documents section there is no "Maintenance" file, so we asked where the information was on what was implemented in the previous stage. We were told that in the "Handover 2" file they put this relevant information.
- Based on several observed bugs, the documents and the meeting, the first 12 cases of "Black-Box Testing" were created. A more detailed reading of the code must be done by the corresponding members of the team to build the "White-Box Testing" cases.

More info about this Testing in test_description.pdf.