

## Criterion E: Evaluation

1. **User is able to register and login, with error checking for both.**
  - ✓ Everything met. User can register and login to the program which connects to the MySQL database. Passwords are hashed with SHA-256 and the connection can be done through SSL if a valid certification is used. There is error checking for all the inputs (email, password, birthday).
2. **Remain logged function works.**
  - ✓ Met, works perfectly by reading the encrypted details saved in credentials.txt.
  - ? However, future improves might be to associate a HWID with the saved cookies so it cannot just be moved around from a device to another and still have access.
3. **Program is able to add and edit user information (name, email, birthday, height, weight, activity level, waist size, hips size and neck size) to the MySQL databases.**
  - ✓ Met, program can edit all the variables above and it also checks for the correct input.
4. **Using MySQL as the database, program might be vulnerable to SQL injections, patch the basic SQL injections.**
  - ✓ Met, program was tested with various inputs such as "2 or 1=1" and none of them affected the MySQL database in any way.
5. **Check that the BMI and Body fat percentage calculator work as expected.**
  - ✓ Met, I manually did the formulas on paper with Mrs. I. Sochirca and the program gave the expected output, same as hers.
6. **The algorithm updates the download buttons (for cut and bulk diets) with the correct link.**
  - ✓ Met, I tried all the calories range, and the program gave every time the correct link to the accordingly diet for the inputs.
7. **All the graphical interfaces are showing the correct output (without any visual glitches).**
  - ✓ Met, this can be seen in the presentation video. The GUI looks minimalistic and works perfectly. The information from text fields updates from the database in real time, so the users can track his progress. For example, if the user is now 80kg from 85kg, he can notice this into the weight text field and update it, so he can get the most accurate stats (calories burned and body fat percentage).
8. **The details remain in the text fields, to give the user the possibility to track his measurements.**
  - ✓ Met, same as the above, can be seen in the presentation video.
9. **MySQL database which is hosted on a web server can be accessed by Mrs. I. Sochirca.**
  - ✓ Met, the database is hosted on a VPS that she has access.
  - ? However, she told me that she finds the process of changing / adding more diets quite confusing, because she has to firstly login into cPanel, then open phpMyAdmin, select the database to track the users' progress or edit / add diets. A simple webpage where she could login with her account would fix this issue.

## Recommendations for Further Development

After the meeting with Mrs. I. Sochirca (email attached in the Appendix), where we discussed the program and how her last week with it was. I made a list of potential improvements.

### My suggestions:

- Further development is needed for the account management. At the moment users cannot recover their password. Therefore, a web system where they can enter their email address and receive on it a link where they can introduce a new password, is probably the best approach. Also, email confirmation when creating a new account, in order to reduce spam.
- Most of the clients reported that they would also like to have to program on their phone, so a major improvement would be to remake the app for Android & IOS (in Android Studio using Java for Android and XCode using C for IOS). Also, the app could communicate with activity tracking systems like Google Health for more accurate information about how many calories the user should consume.
- Security can also be improved by associating a HWID with the cookies, so people cannot just move around the credentials.txt file and access any account. However, this program does not have any in-built payment system, so it is not a big concern.

### Her suggestions:

- Mrs. I. Sochirca would like a simpler way to administrate the users and change / add diets. Therefore, a web program where she can log in and drag & drop diets to the pre-set calories range should be exactly what she wants.
- There are no logs of the client past inputs. Mrs. I. Sochirca said that this will be useful besides analysing the progress and how aggressive the diet was, for advertising on social media. The logs should be saved in the database, with a function to download it from the app, in case to put the details in an excel spreadsheet and see the progress with the help of a diagram.
- A feature in the main GUI to delete account from the MySQL database by searching the user's full name and birthday, in case the user has multiple accounts made. This is important for the GDPR complaint privacy policy.