Vladyslav Cherevkov

Teona Ristova

Mikołaj Dębicki

**Test Plan**

**Hospital Management System**

The main purpose behind implementing this Gym Buddy software is to help our users achieve their fitness and health goals an easy-to-use and intuitive application. These intentions are reflected in the system design and further mirrored in this Test Plan and Test Cases. The specific purpose of the Test Plan and test cases, however, is to ensure that all functional and design requirements are implemented as specified in the documentation and the software is as reliable and secure as possible.

**Scope of testing:**

Customer requirements:

Through personally talking to our customers while performing one-on-one interviews (12 students and 2 members of the NYUAD gym staff) we were able to identify these key customer requirements:

Functional requirements:

* Registration
* Login
* Calculate and display Basal Metabolic Index
* Calculate and display ideal caloric intake
* Calculate and display ideal daily water intake
* Calculate and display ideal sleep length
* Provide user with workout weight-lifting exercises

Non-functional requirements:

* Data should be safely stored and access limited
* Each user should have a unique Login ID
* Each user should have a powerful password to not compromise security
* Performance must be ensured so that the application is responsive to ensure user satisfaction and good experience
* Validity of the workouts must be in accordance to the user’s physique and physical ability

Therefore the test cases chosen for this project target several specific most-critical customer requirements in order to ensure that these requirements are fulfilled in a reliable way.

The scope of this testing is purposefully reduced to validation testing through white and black box testing. In fact, we are also planning to perform Alpha-Beta testing. The purpose of alpha testing is to ensure the quality of the product internally in the development team before moving to Beta testing. Finally, beta testing will be performed by to make sure that the product is ready for real time users.

**Purpose of each case:**

For the purposes of this Test Plan, three important use cases were selected:

|  |  |
| --- | --- |
| **Use Case** | **Description** |
| 1. Login/Register | User needs to be able to log in and register, in order to access the service and receive a personalized continuous service |
| 1. Display Workout | This use case will display workouts suggested to the user after they have chosen their workout plan. It will provide workouts and exercises that correspond to the user’s experience level and workout preference |
| 1. Insert daily stats | The user can choose to enter daily information about their water intake, their sleep length and/or their calories intake. Based on the information entered the system can propose better and more personalized workout plan and suggestions for calorie intake |

These use cases were selected due to the fact that each one of them belongs to a different crucial part of the value proposition that the Gym Buddy app provides: a way of using the service in a personalized continuous way (through register/login), ability to see pre-curated workouts according to skill and type for each user, as well as a feature where users can put in their daily health data and see what they need to improve on

Test case 1:

Module: Login/Register

Title: Ensuring that each user’s login (email) is unique at registration

Purpose: Make sure that a registration of a patient is reflected correctly in the database

Pass condition: Error message displayed: “This user already exists”, user redirected to login page

Test case 2:

Module: Login/Register

Title: Ensuring that the user’s login exists in the database

Purpose: Make sure that only users with valid login (or valid login and password) combination can successfully log in.

Pass condition: Error message displayed: “Login or password are invalid, please re-enter them or register”, user redirected to login page

Test case 3:

Module: Display workout

Title: Ensuring that the user gets displayed the correct workout according to their experience level and preference (Push pay, Pull day, Heavy day)

Purpose: Ensure that the user is provided with the exercises that match their preference and experience level.

Pass condition: When checked in the database, the exercises provided are the same ones that are marked with the difficulty which corresponds to the user's experience level and the selected workout type

Test case 4:

Module: Display workout

Title: Ensuring that the user gets displayed the correct number of exercises that they should be according to their experience level and preference (Push pay, Pull day, Heavy day)

Purpose: Ensure that the user is provided with the correct number of exercises that match their preference and experience level.

Pass condition: When checked in the database, the number of of exercises that match the user’s preference and experience level match to the number of exercises displayed to the user

Test case 5:

Module: Enter daily info

Title: Enter daily info and store it in the database

Purpose: Ensure that the integrity of the daily information that the user put in, is conserved when the data is stored in the database

Pass condition: Pass if the entry in the database is correct and all the fields correspond to the inputs that the user had put in

Test case 6:

Module: Enter daily info

Title: Ensure integrity of daily info data

Purpose: Ensure that the integrity of the daily information that the user put in, is conserved and only valid data is being put in to the database

Pass condition: Pass if the Error message is shown: Please input correct daily data and the incorrect data is not written to the database

**Test schedule and resources:**

Since all of these use cases are crucial to the successful operation of the Gym Buddy app, they will be the first ones to be developed and consequently tested. However, the Alpha-Beta (especially the Beta testing ) testing part of the validation process will be performed towards the end of the project’s development cycle, in order to eliminate all the bugs.

The anticipated period of time that will be allocated purely to testing the reliability of this software is 3 days, depending on how many issues/bugs will be found in the process. The developer team will be (Vladyslav Cherevkov, Mikołaj Dębicki, and Teona Ristova) utilized to perform most of the testing, including Alpha testing, and the resources will include the laptops used to develop this software in the first place.

**Participants:**

As mentioned previously, as a part of the validation testing process, Alpha-Beta testing (AB testing) will be performed. Alpha testing will be executed by the developers (us) in order to make sure that most obvious bugs and imperfections are caught and fixed before showing the product to the client. However, only Alpha testing is not enough due to the fact that we, as developers of this software, do not know perfectly how our future clients and users will use the tool on a daily basis.

This is why before releasing the final product, we will also perform Beta testing right before the release by bringing in and utilizing the real users such the students we interviewed in order to gather the requirements as well as the two members of the NYUAD gym staff to go through their usual workflows and realistic every-day scenarios. This will make sure that even the most difficult-to-find hidden bugs and imperfections are eliminated and the product is reliable and secure.