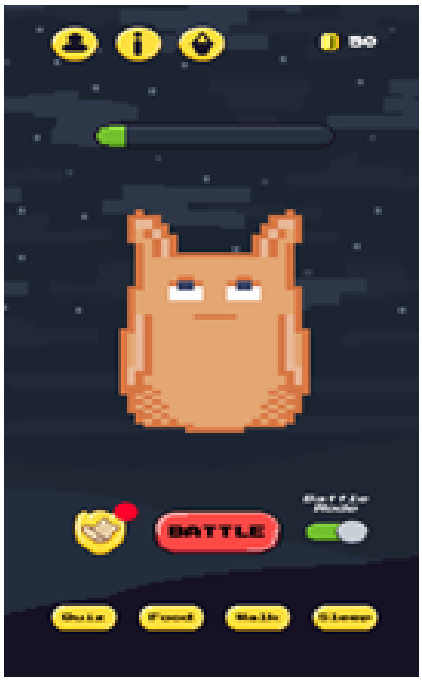
Co-funded by the
Erasmus+ Programme
of the European Union

Supporting Gamified Physical Activity in & out of Schools

User Manual *Battle4Health*



September 2022

European University Cyprus

Brief information for the Erasmus+ project "SUGAPAS" ….

The sedentary way of life, the insufficient physical activity and the overconsumption of food are characteristics of the modern way of life in all the developed world with substantial negative consequences to the health and quality of life. Partners from eight (8) different countries participate in a European funded Erasmus+ project titled "Supporting Gamified Physical Activity in & out of Schools" (SUGAPAS) which aims to help teenagers adopt a healthier way of life.

Project SUGAPAS uses technology via 'serious game' applications in an effort to motivate young people to record and evaluate their physical activity and dietary habits while at the same time helping them to acquire more general health-related knowledge. To achieve its aims, the project created and has made available to students, teachers and parents the following:

1. A Virtual Community of Practice (VCP) where students, teachers and parents can share information, discuss and exchange educational material as well as cooperate using the internet on matters of health. Link: https://sugapas.csd.auth.gr/observatory/
2. Three (3) massive open online courses (or MOOCs) with scientifically substantiated education material relating to physical exercise, dietary habits and other behaviors that affect health. The courses contain interactive material, quizzes, videos and more. Link: https://sugapas.csd.auth.gr/mooc
3. A 'serious exergame' titled Battle4Health which aims to educate and motivate teenagers to evaluate and differentiate their personal attitude in health matters (by logging their daily pacing physical activity, their dietary habits and their hours of sleep). It is available at Google Play Store as a mobile phone app. Link: https://play.google.com/store/apps/

The images below demonstrate digital "educational tools" that have been created in the context of the SUGAPAS project, for the support of the project aims.

The current manual is a usage guide of the Battle4Health game. The guide has been created for educational purposes only as a help implement for students and their instructors, to understand the philosophy and the functionalities of the application.

SUGAPAS Project Partners

Participants			
CON	LIETUVOS SPORTO UNIVERSITETAS	KAUNAS	Lithuania
PAR	ALLGEMEINER SPORTVERBAND SALZBURG (ASVO SALZBURG)	SALZBURG	Austria
PAR	ARISTOTELIO PANEPISTIMIO THESSALONIKIS	THESSALONIKI	Greece
PAR	EUROPEAN PHYSICAL EDUCATION ASSOCIATION	GLARUS	Switzerland
PAR	EUROPEAN UNIVERSITY CYPRUS	NICOSIA	Cyprus
PAR	FUNDACION UNIVERSITARIA SAN ANTONIO	MURCIA	Spain
PAR	SCHOOLS FOR HEALTH IN EUROPE NETWORK FOUNDATION	HADERSLEV	Denmark
PAR	STICHTING GAMES FOR HEALTH EUROPE	HELMOND	Netherlands

Lietuvos Sporto Universitas is the project coordinator

SUGAPAS, Battle4Health creation team

Scientific coordinator	Thrasyvoulos Tsiatsos, PhD, Associate Professor Aristotle University of Thessaloniki
Scientific content writing team	▪ Andreas Avgerinos, PhD, Assistant Professor European University Cyprus ▪ Christina Philippou, PhD, Adjunct Assistant Professor European University Cyprus ▪ Stella Douka, PhD, Professor Aristotle University of Thessaloniki
Scientific digital environment implementation team	▪ Lambros Karavidas, PhD Candidate ▪ Georgina Skraparli, PhD Candidate ▪ Georgia Zafiriou, Artist
User guide writing, adaptation and final editing	Andreas Grondoudis, PhD, Assistant Professor European University Cyprus

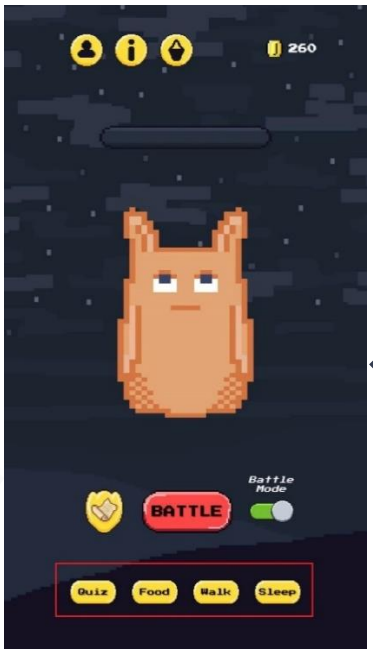
SUGAPAS, Step Tracker App team

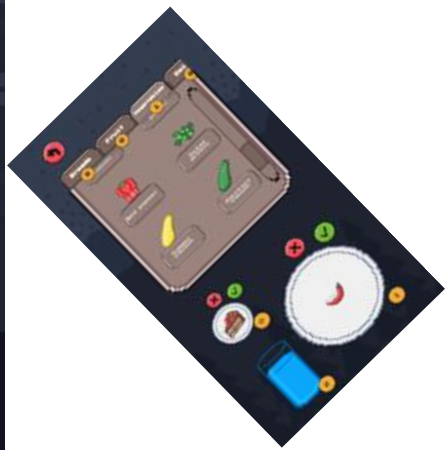
Authors	• Garcia-Roca, Juan Alfonso, PhD, Professor Catholic University San Antonio Of Murcia • Gonzalez-Galvez, Noelia, PhD, Professor Catholic University San Antonio Of Murcia • Sanchez-Pato, Antonio, PhD, Professor International University of La Rioja
Developer	KOMENCO

Thank you to all the students from the Spring 2022 semester course
CSC135 - Writing for Computer Science and Engineering
of the European University Cyprus that invested their time in the SUGAPAS ecosystem and created various manuals providing many ideas and imagery.

Battle4Health User Manual

Table of contents





https://play.google.com/store/apps/

1 Introduction and installation

Dear student….

Our quality of life is primary determined by our dairy choices. The way we live (our lifestyle) is a grid of behaviors that eventually determine our health, the duration and quality of our life. Our dietary habits, the physical activity, how we manage our free time, getting sufficient sleep, the consumption of substances, are just some of these behaviors. Our lifestyle also affects the image you create of ourselves, the image others have of us, the way we react to daily challenges, our resilience to difficulties and our ability in handling every job in all areas of our activity. It is therefore important to take care of ourselves, making the correct choices.

The **BATTLE4HEALTH** game is based on the idea of taking care of a creature that has the same needs in physical movement, dietary habits and sleep as all humans have. The **aim** is to **take care of the creature as if it was you** for it to cope with the adversities and difficulties of everyday life. Taking care of your creature, via the game, you will improve your way of life and succeed in your goals of health, in behaviors that you want to improve or change. The ultimate goal is to be an informed and educated citizen, with developed reflexes and defenses to manage choices directly related to your health.

Good luck in your attempt ☺

1.1 About the user manual

This GUIDE aims to explain how to download, install and use the **Battle4Health** application. As mentioned before this game introduces a creature and the aim is to take care of the creature ensuring its good health. If you manage to increase the health-line by completing the daily required jobs, your creature can take part in battles with other users to win trophies.

Figure 1-1: *The game icon (left) and that of the step tracker application (right)*

In this GUIDE we will present and explain four (4) different functions, plus one bonus-function. These include: (1) Quiz, (2) Food, (3) Walk (4) Sleep with the bonus being “Battle”. The game aims to: (a) increase your knowledge on how to improve your daily lifestyle, (b) have you adopt a healthy diet and (c) suggest ways of becoming more physically active, by introducing multiple activities and exercises indoors as well as outdoors. Additionally, the GUIDE includes a section that explain how to download and use the step counter (or pedometer) application which is a vital game element as it records your daily steps providing data for the “Walk” function of the game. Finally, the GUIDE will provide some useful advice in order to experience all game aspects and continuously complete the daily functions.

1.2 Installation

The game is available for Android and iOS (see Fig 1-1). In what follows, you will find information for downloading and installing: (1) of the Battle4Health game and (2) of the pedometer (only available for Android)

For Battle4Health:	1. Open Google Playstore 2. Search for “Battle4Health by mlab.csd” 3. Select the application as it appears above (fig 1-1, left) and click on install 4. Wait for the game to download and install on your device.
Respectively for the pedometer	1. Open Google PlayStore 2. Search for ‘sugapas step tracker’ 3. Select the application as it appears above (fig 1-1, right) and click on install 4. Wait for the application to download and install on your device

Creating an account

Start the Battle4Health application. The starting page asks you to login. Given that you don’t have an account yet, click the ‘Sign up’ button on the left (See fig 1-2)

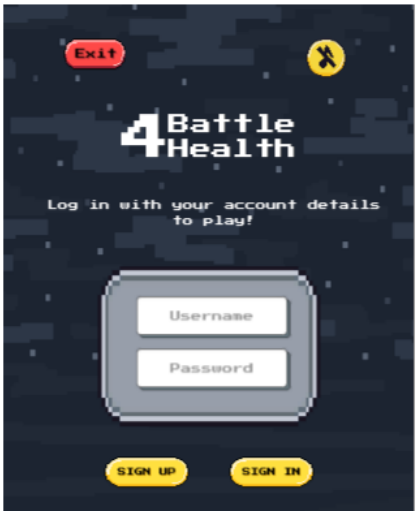


Figure 1-2*: the start page of the game*

The game loads the form (fig 1-3) for you to register and create an account. You will need to select a **username** and a **password**. You also have to complete your email address. The application asks for some more items for statistical purposes, as well as some demographics (like your gender, weight and height) which will be used for your dietary analysis.

Figure 1-3: *Creation of account (all fields)*

It is **important** to mention that during this procedure you can use **only Latin characters**. Also, you must select the correct country (Cyprus, if you reside in Cyprus).

As soon as you complete the information, click the green icon at the bottom right of the form (the one that looks like a floppy disk). The data will be stored and the account will be created. So, the next time that the application starts you can use the 'Sign in' button use your credentials to login.

The pedometer (step tracker)

The pedometer works in combination with the game and, when in use, will log the steps that will be 'credited' to your account. It is **important** to know that when you create an account for the pedometer **you must use the same credentials as you did for the game** (meaning the same username and password.

Find the pedometer icon (fig 1-1 right) and start it. Once started the application will ask you to login. Click on the three (3) bars appearing at top left (fig 1-4, left) and when the menu appears (fig 1-4, centre) click on 'Register'

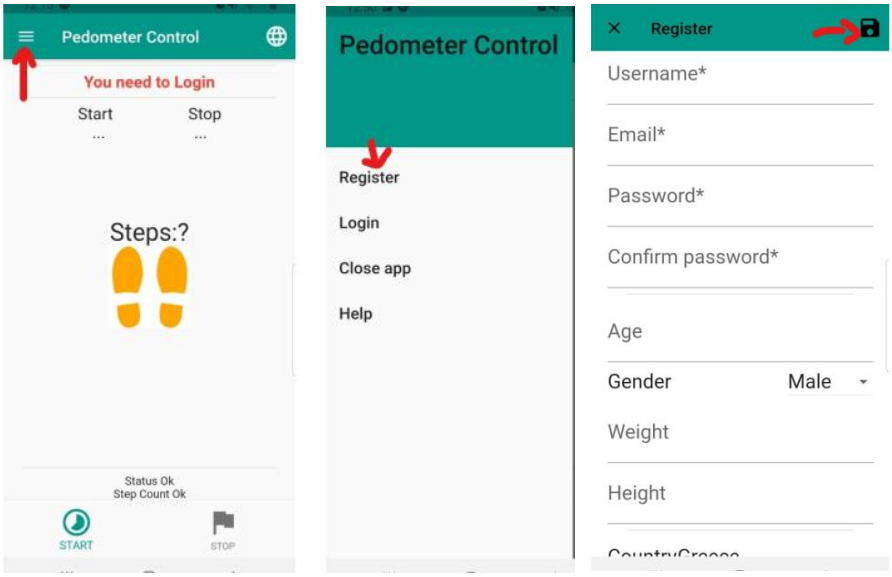


Figure 1-4: *The starting page (left), the menu (center), the form to register (right)*

This will load another form where you need to complete your credentials (**Remember! The same as Battle4Health)**. After you complete the form click the icon of the floppy on the top right (fig 1-4, right) to save the data and create the account. The next time the application starts, you must again use the menu and select 'Login' and enter your username and password. Then, you can use the 'start' and 'stop' buttons at the bottom of the application to start and stop the counting of steps.

Important: every time that the application starts the language is reset to Spanish. To change to English, use the little globe icon at the top right and select English.

2 Operation of the game

In this section you will learn how to operate Battle4Health and play it with ease. The game has four (4) basic categories of daily functions that must be completed in order to increase the health of the creature (which helps you win "health points"). There is a bonus category that allows you to participate in "battle" with other players and collect trophies depending on your performance in the four (4) basic categories of functions which are:

1. Quiz
2. Food
3. Walk
4. Sleep

The fifth (5th) category is 'Battle'. All functions are accessible from the starting page of the game by using the yellow buttons at the bottom of the screen, expect from the 'battle' which is the red button a little further up. Figure 2-1 demonstrates the starting page. Notice how on the figure you can actually see the health-bar directly above the creature (in the figure below the bar is empty)

Figure 2-1: *the starting page of Battle4Health with the basic operations*

2.1 Daily functions

In this section you will learn about the basic, daily functions that must be completed in order for your creature to collect 'health points' that will be used later on.

2.1.1 Quiz

The first function of the game relates to the improvement of your health and is the acquirement of related knowledge. The quiz enables you to answer questions relating to healthier dietary habits, a healthy lifestyle and physical activity. The purpose of participating in the Quiz is to win 'health-points' for your creature but at the same time to improve your knowledge for a healthier and more active way of life.

The questions could be multiple choice, or simply true or false. It is recommended that you read the question carefully and select the answer that you think is correct. If your choice is right then it becomes green, while if your choice is mistaken it becomes red. The health-bar increases according to the number of correct answers.

You can answer as many questions as you want but **the maximum number of health-points (for the creature) is one hundred (100)**. In figure 2-2 you can see some example multiple choice questions where one (on the left) has been answered correctly while the other (on the right) was wrong.

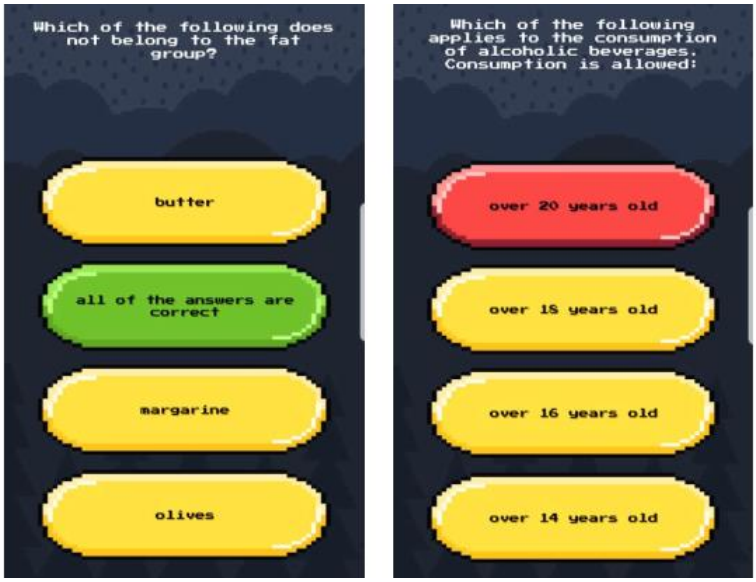


Figure 2-2: *Examples of multiple-choice questions, correct (left) and wrong (right) answers*

2.1.2 Food

Food is the second category of the daily functions that must be completed in order to increase the health-points for your creature. We assume that the creature has the same dietary habits as you, so here, you must select and input to the game the food the **YOU** consume daily. You have the ability to select from nine (9) different categories of foods that are shown below:

Breads	Fruit	Vegetables	Dairy	Meats & beans	Fats	Combinations	Calorie free	Desserts

On the page of food, at the top you have a tabbed control which allows you to switch between categories of food and then select foods from that category.

Figure 2-3 shows the tab of 'breads' being shown.

Then you can drag your selection to the bottom of the page when you are given an area to drop your selection

Figure 2-3: *The top part of the food page*

Figure 2-4 shows the bottom part of the food page with the two plates and the glass of water. The big plate accepts any food from all categories except desserts while the small plate can only accept foods from the desserts category

The creature and yourself need to drink plenty of water every day. Click on the glass of water to log that you had a glass (click more times to declare that you have had more glasses of water).

Figure 2-4: *the bottom part of the food page.*

Once you input all the food you consumed to the appropriate plate, you need to confirm the choices by clicking the green tick icon. If for any reason you want to change your choices, then you can click the little red X icon which will clear the plate(s), removing any contents.

The two plates and the glass are linked with a score for health-points. Once a food has been added to a plate the value inside the little yellow circle (at the bottom right) is increased showing the equivalent foods that have been consumed from each category. These counts affect the health-point count that will be added to your creature.

Every time that the choices are recorded, the foods that you selected are transferred at the end of the list of foods so that there is a log of what has been consumed. This will help with information that might 'lead' you to make choices for a more balanced diet.

Note that in 'Food', **the maximum number of health-points that can be achieved for the creature is one hundred (100)**.

2.1.3 Walk

The operation of step tracking records the total number of steps that you take during your day. This is the third of the daily functions that must be completed in order to increase the health-points for your creature.

Walking helps to be more physically active and constitutes a great physical activity to have good health. However, you should know that, according to international guidelines, to cover the daily 'dosage' of walking physical activity for good health you should walk at least twelve thousand (12000) steps if you are a boy and eleven thousand (11000) steps if you are a girl; and this is every day for all days of the week. If your count is too far from the above numbers it is important to try and progressively become more active. Achieving small personal goals (for example increasing the step count by 500 from one day to the next) is very important for your health and confidence. Walking is the best and mildest form of physical exercise which is pleasant, it does not strain the body and does not need any specialized equipment.

The operation of recording the steps is associated with the pedometer app. After the installation and the creation of the account, the only thing that is needed is to start the application, login and press the 'start' button. From that moment onwards, the application will record all the steps you are taking. With the application active, all steps you take during the day will be recorded for all your activities **unless:** (a) you perform activities in water (for

example swimming) or (b) you perform activities on anything on wheels (roller, skate, cycling and more). As soon as you have finished, press the 'stop' button and the app will record/upload the data on the Battle4Health game.

Start Battle4Health and select the 'walk' function. The steps just recorded will be shown along with any steps from previous days. As seen in figure 2-5 below, the walk form shows all the steps taken during all the days of the week.

Figure 2-5: *the walk form of the application*

If you manage to succeed and get the ideal number of steps for your health, you will obtain the **maximum number of health-points (for your creature) which is one hundred (100)**.

2.1.4 Sleep

Sleep in the fourth function from the daily categories that you must complete in order to increase the health-points for your creature.

For this function you must record the number of hours that you slept the night before. Sleeping is one of the most fundamental functions of the body, since it rests the body and helps the brain to assimilate all information recording during the day.

Figure 2-6 shows the page of the sleep operation, from which you have the ability to register your hours of sleeps every day. Simply enter the number of hours you slept last night in the field at the top of the page and click the green 'save' button.

Battle4Health gives you the ability to **win up to one hundred (100) health-points for your creature** if you sleep at least seven (7) hours every day, up to a maximum limit depending on your age, and record this operation.

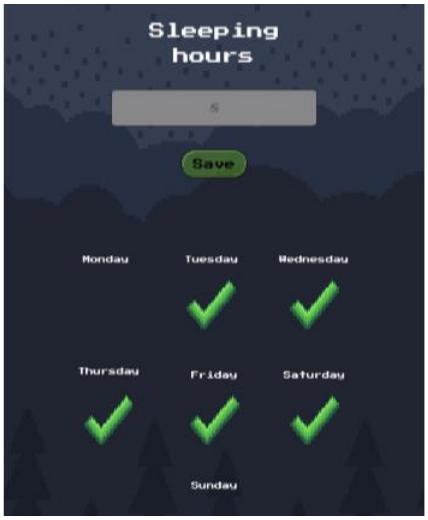


Figure 2-6: *the sleep page of the app*

2.2 Battle

Here you will learn about doing battle with other players of Battle4Health using this bonus function of the game. To be able to do battle you must have at least 30 ‘coins’. Coins are given from the game with daily usage and by entering data on a daily basis for quiz, food, walk and sleep.

2.2.1 Battle initiated by you

When you are ready to do battle, press the red ‘Battle’ button on the main page of the game. The game will show you a ‘preview card’ asking you to select which category you want to do compete with. Figure 2-7 shows a preview card.

The categories are the usual four and depending on in which category you have more health-points, you select which one to compete with. Notice how in the specific example the creature has health-points only in quiz and food so the two relative buttons are yellow and active while the other two (walk and sleep) are not.

You should also know that in order to select a category **you must have more than zero points, while the maximum allowed is one hundred 100 points**. You select the category by clicking the respective button and then wait for an opponent to become available.

Figure 2-7: *the battle preview card*

Once an opponent is found, they must accept the battle request. If they don’t accept, then you have to wait for another available opponent. If they do accept, the battle begins and the creature with the most health-points on the selected category wins. Every victory earns you trophies and you climb up the leader score board. Obviously, to increase your probability of winning you need to have as many health-points as possible. This can be achieved by completing the dialing tasks and the assimilation of health-points.

2.2.2 Battle after accepting a request

It is possible for you not to initiate a battle but rather to configure the game in such a way that battle requests from other users are made to you. This is possible if you activate the 'battle mode' from the control on/off switch which is located on the right of the Battle button. Figure 2-8 demonstrates the switch deactivated (in the off, red, position) on the left image which is also the default when the application starts. By activating the control (switching to on, green, position) on the right image then you are informing the game that you are willing to accept battle requests. Afterwards, the only thing you have to do is to wait for battle requests to arrive.

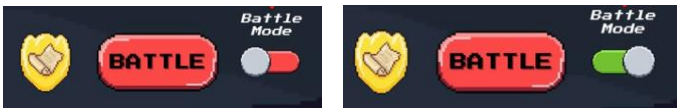


Figure 2-8: *Battle mode, off/disabled (left) and on/enabled (right)*

You can find the requests if you use the yellow button (with the scroll icon) on the left of the Battle button. If you click this button the game opens a page using another tabbed control and you can see:

- **Battle status,** where you can see current and previous (up to eight (8)) battles with their results, the figure below demonstrates.

Figure 2-9: *example of battle status (current and previous)*

- **Preview card,** so that you can check how many battle-points you have in each of the four categories (see figure 2-7 for a preview card example)

- **Requests,** here you will find requests for battle from other users to you. The figure below demonstrates an example of a request.

Figure 2-10: *Battle request from user 'geo' with selected category 'Food'*

2.3 Other functions

In this section you will see brief information about other game functions which will help you get a more complete game experience. On the main game page, at the top, there are three (3) buttons, the figure below demonstrates:

Figure 2-11: *other functions of the game*

More specifically:

- The first (from the left) button is the profile button. Here you can change (if you want) some of the account information (**not** the username or the email). In this page you can also stop the music when playing Battle4Health. All changes are saved by pressing the green button with the floppy icon.
- The second (middle) button is the one for information for your as a user (giving your ranking on the user board and your score). The page includes the three (3) leading (in points) users of the game. At the end of the page there is some advice for a healthier way of living.
- The third (at the right) button is the shop button. Here there exists a page with a tabbed control that give the ability to select and buy other creatures, decorative elements for your creature, different backgrounds for the game, or even different borders for the preview-card. All items cost "coins". The total of coins that you have available is shown at the top right of the screen.

We hope you found this guide useful. If you have any questions in relation to the guide or the game, you can contact us! Good luck with the health goals you set for yourself 😊