USER MANUAL

Pillow Time

CI-103-066-04

June 2019

# GENERAL INFORMATION

## System Overview

PillowTime is an product that allows you to sleep peacefully and wake up without making any noise. It includes an Arduino module that can be embedded in a pillow and a companion app which allows you to set the alarm time and the sleeptracking database.

One simple app can recognize multiple users and different devices, so everyone in the family can enjoy the benefits of revolutionized sleeping.

## Authorized Use Permission

PillowTime website is available to the general public, but you need to buy the module in order to achieve full functionality. The website provides basic information about the functionality of the system.

## Points of Contact

For additional information, please contact Drexel University College of Computing and Informatics.

# SYSTEM FEATURES

## About Page

About page provides a brief introduction to the project as a whole and the website features. By clicking on one of the options in the menu bar, the user can navigate to the described pages.

A screenshot of a cell phone

Description automatically generated

## Creating a User

In order to create a user, you need to navigate to the Add User page by clicking Add User in the menu. Creating a user allows you to set alarm times and access the sleeptracking database that is related to the user. Anyone using a computer with created users can view all records in the database.

The Add User screen displays as shown below.

A screenshot of a cell phone

Description automatically generated

Type the User ID and Time you want to set for your first alarm. The alarm time needs to follow the format displayed as the placeholder in the alarm time field. After filling in the data appropriately as shown below and clicking on the Submit button, a message saying that a user has been created will display on the screen as shown below:

A screenshot of a cell phone

Description automatically generated

In case you wanted to modify the alarm time already associated with a user, you can do so through the Users page. Add User page procedures are only meant to be done once in order to preserve integrity of sleeptracking database and maintain consistent data collection.

## Duplicate user errors

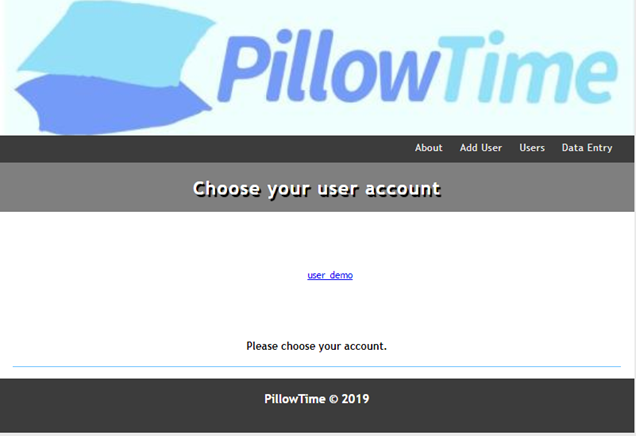
In case a user with a submitted User ID already exists, a message alerting you that you have entered an invalid username will show. A duplicate username will not save to the database and you can enter a new username.

A screenshot of a cell phone

Description automatically generated

## Displaying a list of users

After creating a user, you can navigate to the Users tab and see all the users created on the computer you are using. The Users page looks like this:



You can see the user we created in the previous steps, and in the event of more users they would show up in the list based on the times they were created. For frequent users this page represents the majority of the systems functionality.

## Modifying the alarm time

Clicking on a username, navigates you page to a page similar to the Add Users page, as shown below:

A screenshot of a computer

Description automatically generated

You can enter a new time that will set the alarm off again, and you can save it in settings by clicking the Submit button. The graph at the bottom of the webpage shows the computed sleep times for that user.

## Manually entering data

In case you missed a night of sleep on your pillow with embedded PillowTime, you can manually enter data by navigating to the Data Entry page. The page allows you to choose a user to append the sleep data to, as well as, input a time when you started sleeping and a time when you woke up. By clicking on the Submit button you submit the data, and our program calculates the time spent sleeping. In order for the program to work, the time needs to follow the format outlined by the placeholder values.

The following picture shows the Data Entry page:

A screenshot of a social media post

Description automatically generated

Upon entering times, your Data Entry page should look like this:

A screenshot of a social media post

Description automatically generated

After clicking the Submit button, you are navigated back to the Users page and the graph associated with the chosen user will show a point that represents the amount spent sleeping:

A screenshot of a cell phone

Description automatically generated