



UNIVERSITÀ DI PISA

MSc Computer Engineering

Mobile and Social Sensing Systems Project

JustBreathe Application

User Manual

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Introduction

JustBreathe is an application developed for Android devices that monitors the user's breathing by taking advantage of the smartphone's built-in accelerometer and measures its quality by giving a score from 0 to 100. This score indicates how well the user's breathing conforms to a certain breathing pattern, if performed correctly it will enable the user to improve his or her well-being.

User GUI

The aim of this *User Manual* is to guide the user to proper use of the **JustBreathe** application by analyzing in detail what happens when interacting with the components of its Graphical User Interface

Home Page Activity

When the application is launched on the Android smartphone, the app presents a Home Page through which it is possible to navigate through the various features made available to the user. The figure shows an overview of the Home Page and in the next paragraphs the behavior of the app when clicking in the various buttons visible in the image below will be analyzed.



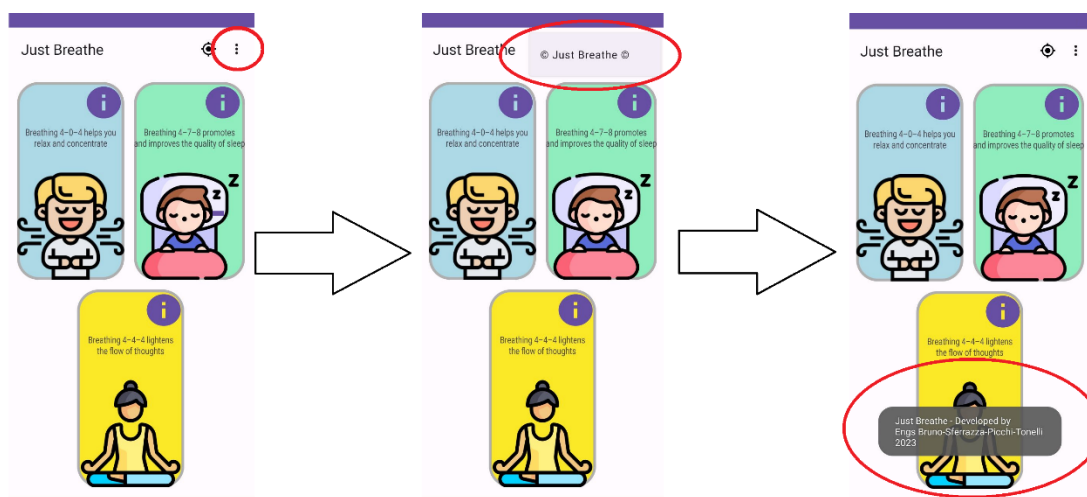
Information Button

By clicking on the **"i"** button at the top right of one of the 3 different elements representing breathing patterns, circled in red in the image below, it is possible to obtain more information about the related pattern, thereby gaining more information regarding the well-being that can be achieved.



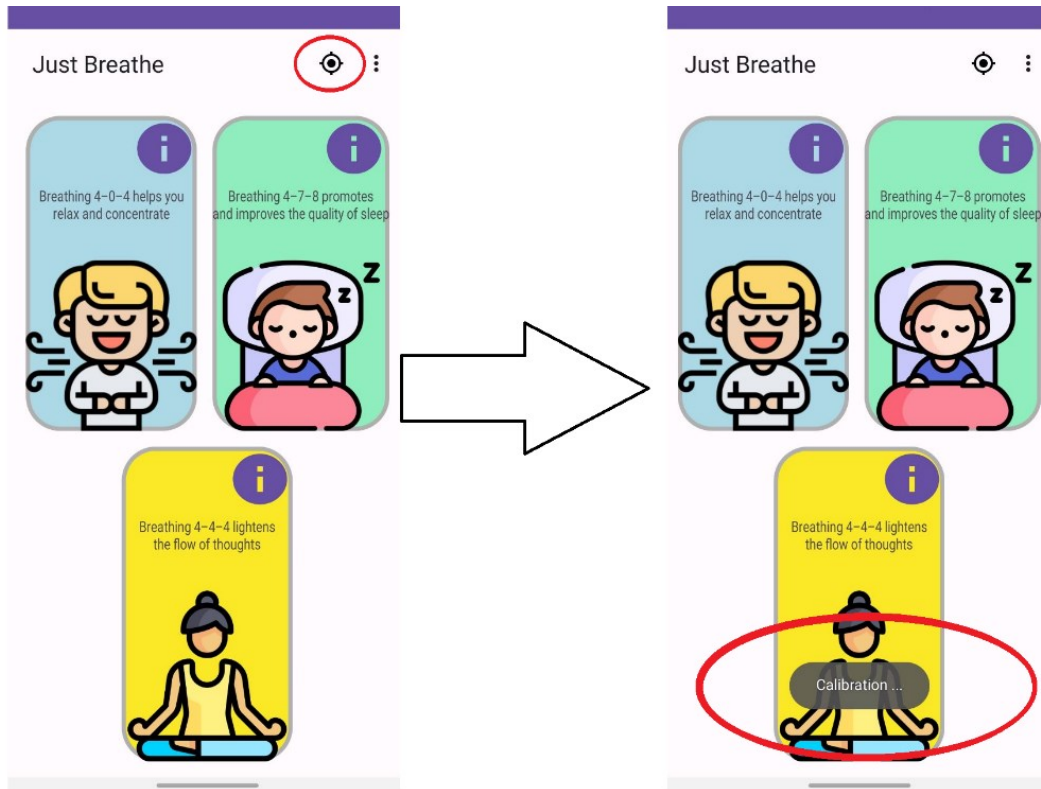
Menu Button

By clicking on the **"Menu"** button located in the top-right corner of the application's toolbar, circled in red in the image below, you can obtain more information about the application's developers. Therefore, by clicking on the **"Just Breathe"** item, circled in red on the second screen, specific details about the authors will be displayed.



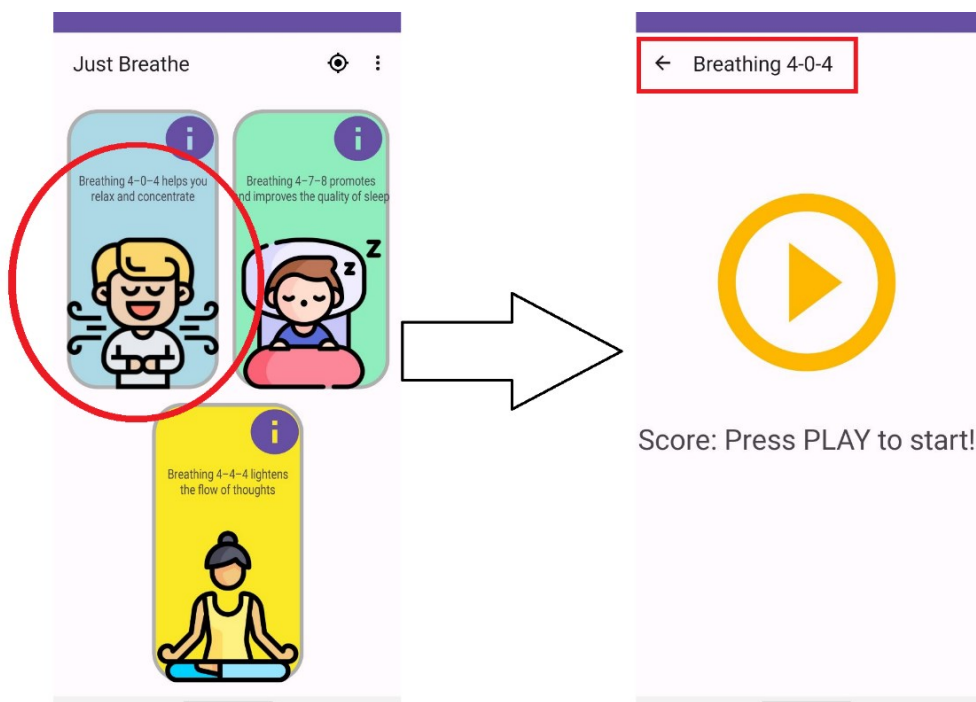
Calibration Button

By clicking on the "**Calibration**" button represented by the crosshair symbol, circled in red in the image below, it will be possible to calibrate the integrated accelerometer of the smartphone, which is useful for obtaining a higher quality of the recorded value. The user will be notified with a specific message once the calibration is complete.



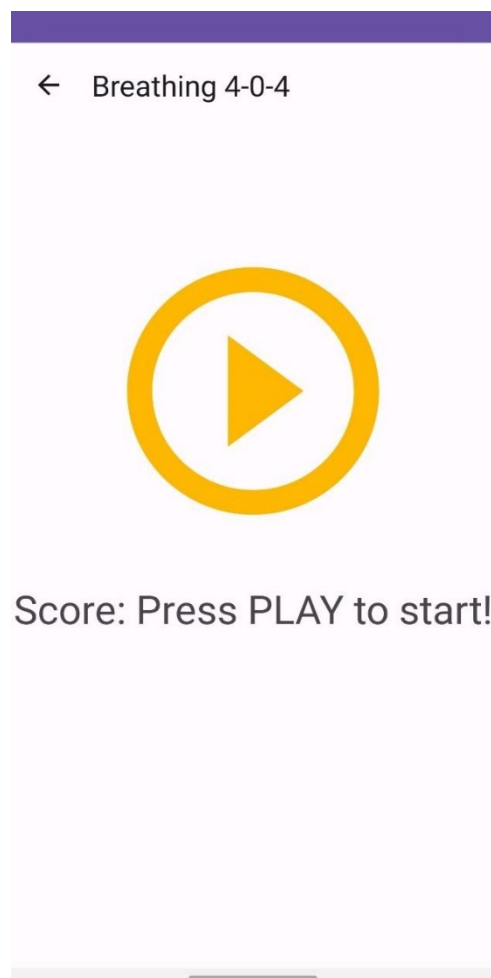
Breathing Pattern

By clicking on the image within the Home Page element representing a specific **breathing pattern**, circled in red in the image below, you will be able to access the section dedicated to breath monitoring and evaluation of the breathing session.



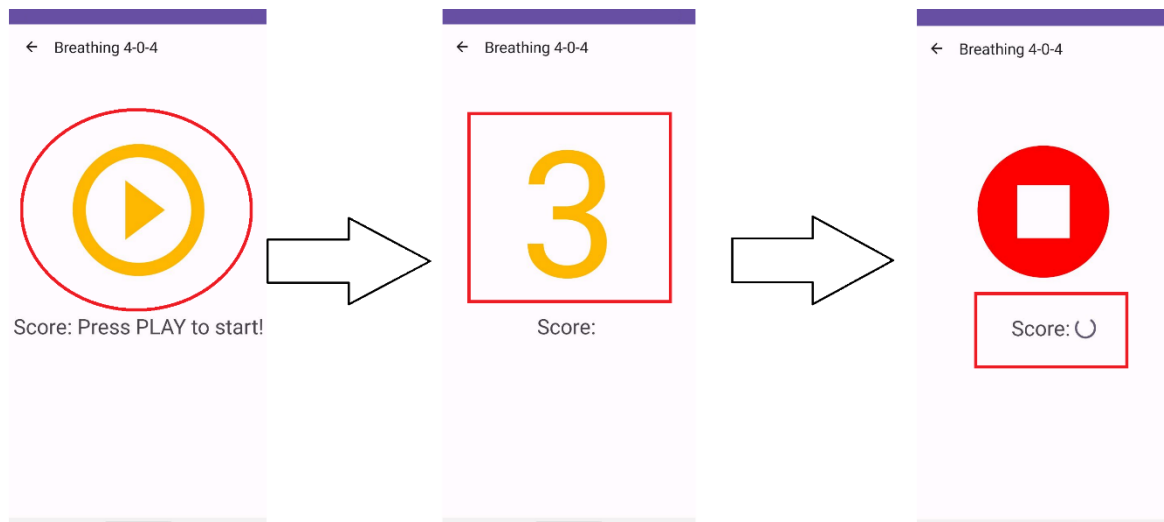
Pattern Page Activity

When the user is accessed in the Pattern Page, the app presents a section through which it is possible to navigate through the various features made available to the user to perform the breath monitoring with respect to the specific pattern was selected. The figure shows an overview of the Pattern Page and in the next paragraphs the behavior of the app when clicking in the various buttons visible in the image below will be analyzed.



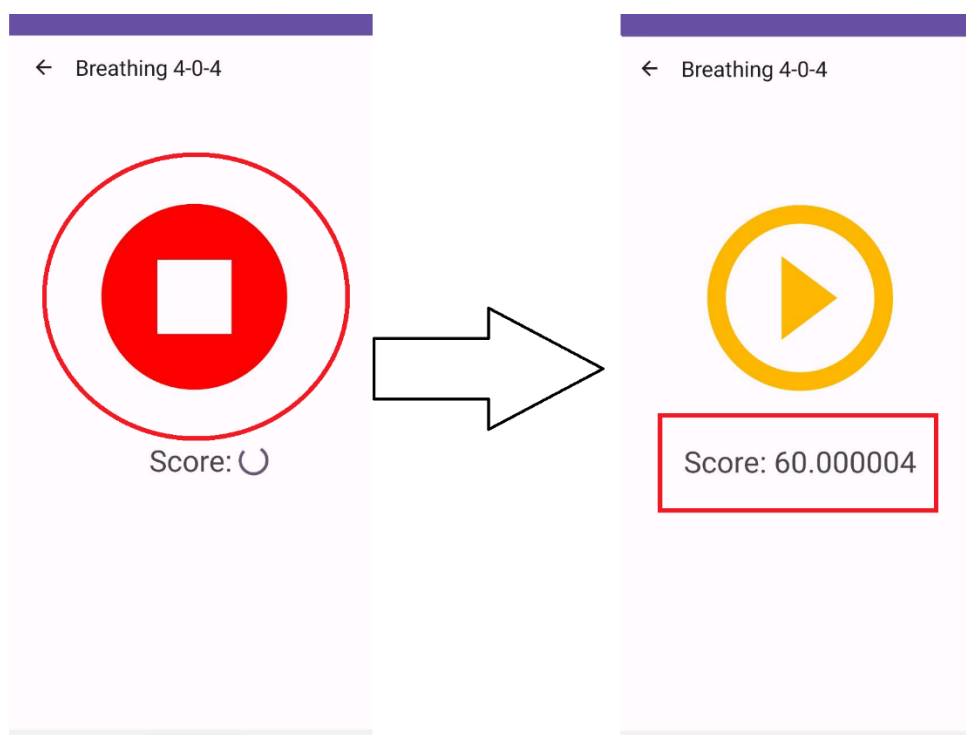
Play Button

By clicking on the **"Play"** button located at the center of the screen, circled in red in the image below, you will be able to start the breath recording session. Before you begin breathing, a 3-second countdown will be displayed to allow the user to start breathing correctly. More precisely, at the end of the 3 seconds, the phone will provide the user with "Vibration" feedback, and a loading screen indicating the processing phase will be displayed.



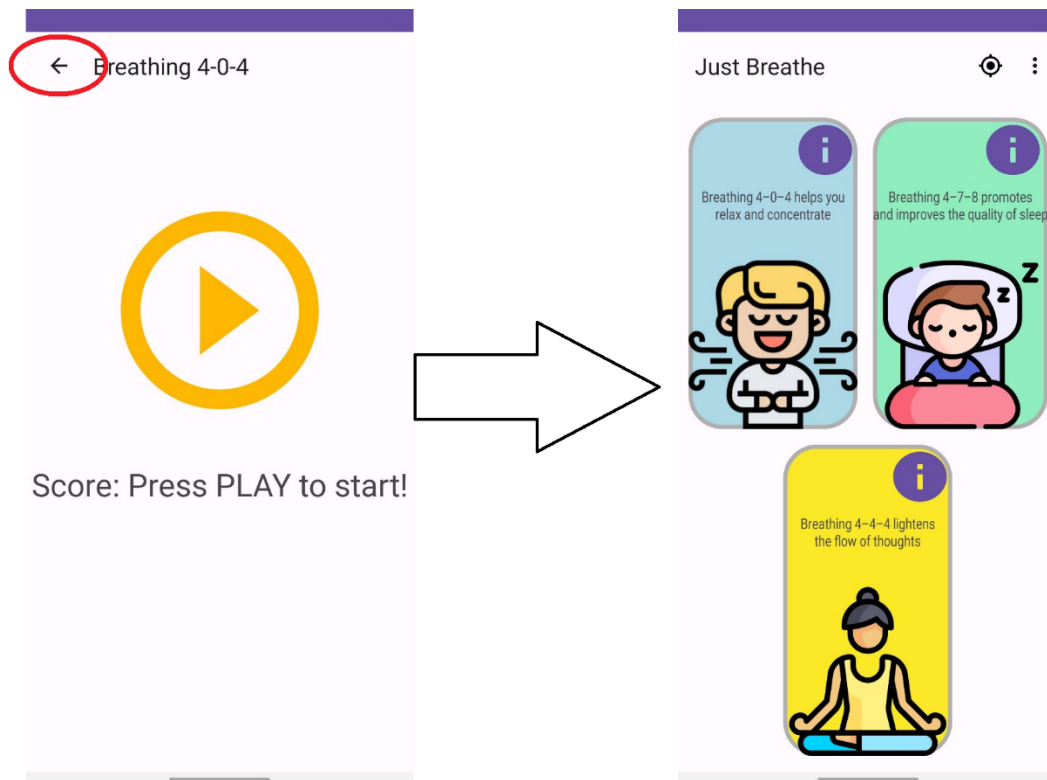
Stop Button

By clicking on the **"Stop"** button located at the center of the screen, circled in red in the image below, you will be able to stop the recording of the breathing session and display the obtained *Score*. This allows you to evaluate how well the chosen breathing pattern was followed.



Back Button

By clicking on the **"Back"** button located at the top left of the application toolbar, represented by a *left-facing arrow*, circled in red in the image below, you will be able to navigate back to the initial Home Page of the application. This allows you to choose a different breathing pattern and challenge yourself.



Enjoy the JustBreathe Application!