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CMPT-220L

Writeup

Abstract:

Meditation is an abstract topic that most people know very little about. Meditation is also a very broad term meaning something different for everyone. The goal of my project is to have a program that teaches people how to meditate effectively and keeps track of their progress. The type of meditation that my program will focus on is the Wim Hof method. The Wim Hof method combines breathwork, exercise, focus, and cold exposure in order for a person to feel in a happy and healthy state. My Java program will help people learn the Wim Hof method and keep a database of their progress.

Wim Hof is a 58 year old dutch man who holds numerous world records for completing challenges that involve cold exposure and insane physical abilities. Some of the feats he has achieved are running a half marathon barefoot in nothing but shorts above the arctic circle, swimming under ice for 120 meters in one breathe, and running a full marathon in the Namib Desert without any water consumption. He achieved this through a method that he now teaches and the Java program that I want to make will help teach it and keep track of how much the user progresses.

One of the main components of Wim Hof method is breathwork. This is done by having the user take 30-40 deep breathes in and out in. After the 30-40 breathes, the user would then exhale all air out of their lungs and see how long they can hold that state with a timer. This is called the retention rate and both the breathing and retention

is called one round. Typically, users would do around four rounds in one session and a database in my program would keep track of how long each retention would be for each of the rounds. The user would then be able to access all of their data and see their progress throughout each week. The data is stored in a sqlite database and there is a working clock inside the program that the user uses when getting their retention for each round for that day.

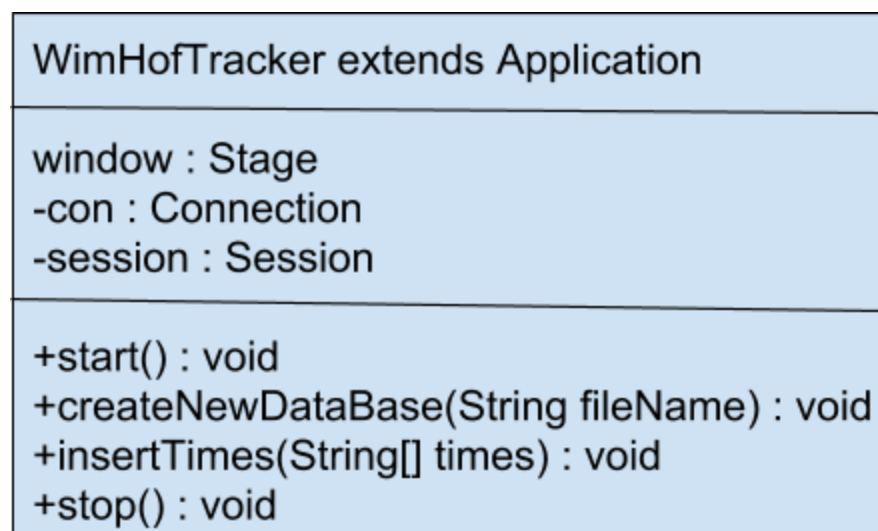
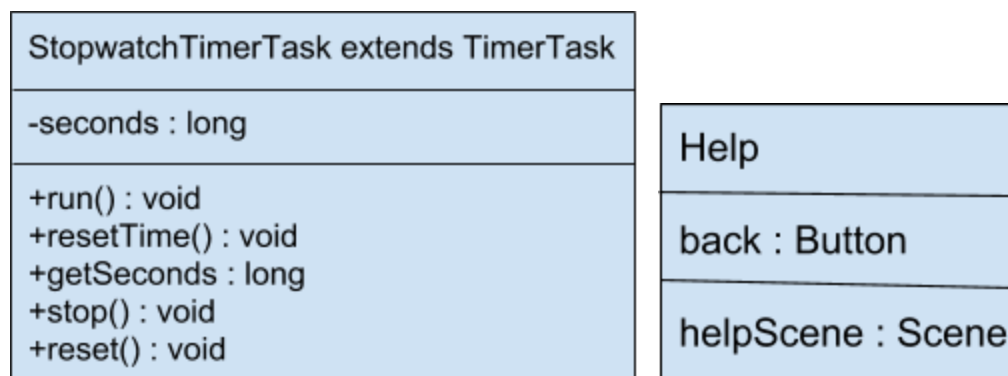
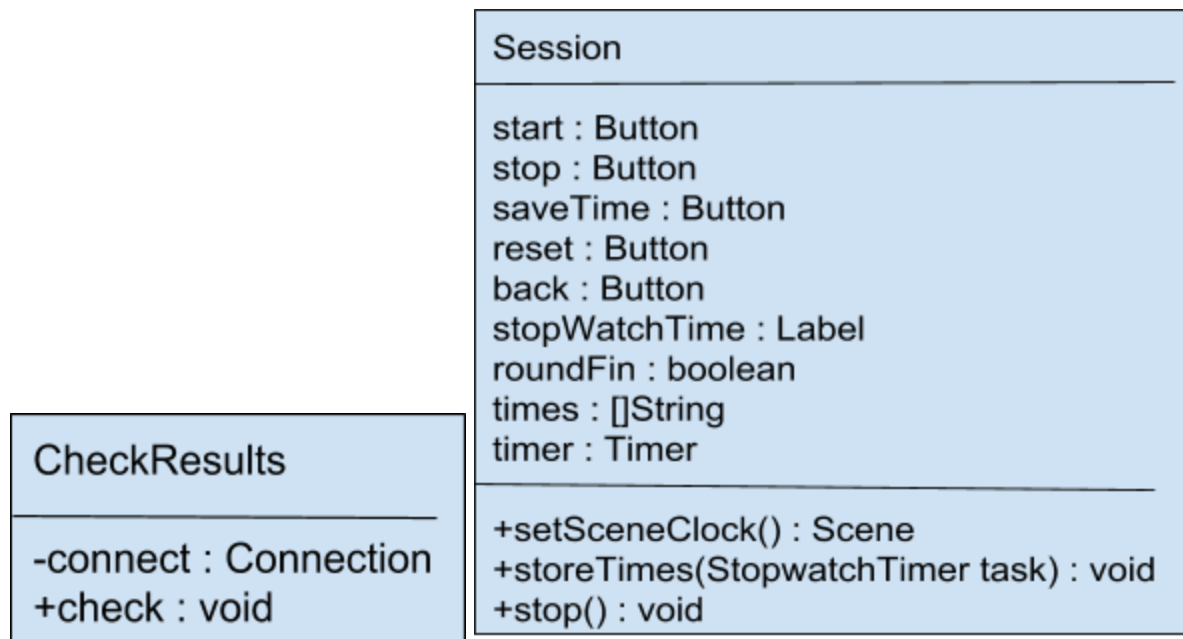
Introduction:

My motivation for creating the database is because I am someone who has been practicing the Wim Hof Method on and off for over a year now. It has helped me keep a happy and healthy lifestyle while also providing me benefits such as not getting sick, not needing jackets or warm clothes during winter, and enhanced focus. Wim Hof Method has had life changing effects on me and I want to help spread what I have learned in order to help others with their problems. Wim Hof method has also been scientifically proven to help fight mental illness such as depression and anxiety, which is far too popular in today's society. The goal of my Java application is not to teach someone a complete new way of life, but it is to provide an introduction to the Wim Hof method.

My Java program is also simple and easy to use. There are no fancy extra features and no accounts to be made, just open up the program and start. The data is also easily accessible in an sqlite database which can be viewed with an option in the main menu.

Detailed System Description:

Upon startup, the user is prompted with a welcome label and three buttons, start, check results and help. The start button has a stopwatch in it to record how long the user retains breathe. Once the user stops clock, they are going to be able to choose whether or not they want to input that retention into the database. The program waits until the user has saved three times and then inputs the data all at once. This also helps prevent the user from inputting too much data at a time. The idea of the program is to do the breathing exercises every day so the program will not let the user input more than three values into the database until they close and reopen the program. The help button will show the user how to perform the breathing exercises and answer and provide a brief description of what the program is about. The check results button will display the data from the sqlite database that they have been using. The database has four columns, day, retention 1, retention 2, retention 3, pushup count.



Requirements:

The problem is that Wim Hof Method is difficult to get into and start doing. The goal of my Java program is to lessen the difficulty curve and provide a very basic and beginner friendly version of the full Wim Hof Method. My program will also be free and very non committal, while the full Wim Hof Method is expensive and take a lot of time out of somebody's day. The progress part of my program is great because it gives the user something to work towards and motivates them to use the program every day until they get better and better.

Literature Survey:

There is a small activity tracker on the iOS app store that is similar to what I am making. The app allows you to store progress and to watch videos showing how to do various exercises. The app is around \$5 and made by Wim Hof himself. The app has more advanced exercises and breathing techniques so I made my program more beginner friendly.

User Manual:

The user will open up the application and have three buttons: start, help, check results. The help button has a simple description of how to do the Wim Hof method. The help button displays the message as follow: "To start a session, the user must start with taking 30-40 deep breaths all the way in and out. After that, the user will exhale all air out of the lungs and see how long he or she can retain that with the built in clock.

After doing this 3 times, do this another fourth time except instead of retaining breathe, hold your breathe and see how many push ups you can do in a row.” There is a back button in the help menu that brings the user back to the main menu. The start button will bring the user to a screen with a working stopwatch that will record retention rates and upload them to a database. The user will lay down, close their eyes, and take 30-40 deep breaths and then exhale all air out of their lungs. Once they do this, they have to press the start button on the timer to start the clock. Tingling in the body may occur and the user will feel in a very relaxed state. When the user feels the need to breathe, they will stop the clock and take a deep breathe in for about 10 seconds and start the next round. When they finish a round, they click the save time button and then they are prompted with an alert box asking if they are sure they want to save the time. The user is only allowed a maximum of three retention inputs per day. The user will get a notification saying they are not able to add anymore data if they try and enter more than three times. The user can check their results and their progress over time with the check results button. The check results button displays another larger window with a table of all of their progress. On the top is the labels for the day, round 1, round 2, and round 3. The day column is a primary key in the sqlite database, so it automatically goes up by one for each row while the user will be able to see all of their data that they input for their other rounds.

Conclusion:

The goal of the program is to get more people into the Wim Hof Method. It is a method that is not well known, especially for how effective it is. It can lead people to live happy, healthier lives.

Bibliography/References:

<https://www.wimhofmethod.com/>