WAKEUP Alarm

Designed for HardCore Engineers

EC327 Project

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As college students we often find it difficult to get up in the morning, finding it easy to hit snooze and sleep through our classes and commitments. We do not want it to be this way, but sometimes after staying up until the small hours of the morning doing our 327 assignments it becomes our unfortunate reality. To save ourselves from this vicious cycle we developed the WAKEUP Alarm app, the app that forces you to wake up with a combination of harsh music and intellectually stimulating games that pry your brain from the realm of sleep.

When the user’s programmed awake time is reached, the app plays a pounding grindcore song on repeat, violently awakening them from their slumber. Whether they are ready to wake up or not is irrelevant because they will not be able to go back to sleep because the music will not stop playing until they complete one of three offered stimulating games. The first game is a “funny” logic quiz, the second is a set semi-difficult addition/subtraction problem, and in the third game the user must choose the correct descending order for a random sequence of numbers. All games take questions randomly from their respective databases, and questions two and three also generate random numbers for these questions, so the user always gets unique questions every time they use the app.

When the alarm goes off, it will hide the alarm set/cancel screen and show the game screen. Each game is available for selection via tabs at the top of the screen. There is a large button above these tabs that says, “Turn Off Alarm”, but if the user clicks this before they have successfully completed a game, a notification will pop up telling them they need to win at least one game. For each question, the user has approximately 12 seconds to answer before the game switches to another question. For the user’s sanity, they only need to get one question correct in each game to turn off the alarm. The hope is by that point they will have been sufficiently woken. If the user enters an incorrect answer on any particular game, they are notified and given a new problem to solve. When they give a correct answer, they are notified and can then stop the alarm by pushing the “Turn Off Alarm” button at the top of the game screen.

This entire app was built using QTCreator in two parts. We originally started to build the “front end” alarm set part in XCode and the game in QTCreator, but in the interest of time decided it best to develop everything solely in QTCreator. The alarm set portion was built by Luke and Aidar, and the game portion and all of its content was built by Assel. We were originally going to include a feature that opened a webpage for the weather which would be set by the user that Aidar worked on, but did not integrate it in the final project due to time constraints.

Although this app would work fine if someone ran it on their computer, ideally it would be an iPhone/Android app. However, due to time constraints this app only runs on computers at the time of submission. We intend to develop it further to accomplish this and possibly post it on the Android store.

There are also a few features that could be improved/implemented. The first would be locking the computers/phones volume control so the user cannot back out of waking up and turn the volume all the way down. The second is beautifying the general layout of the app, making the widgets more neatly organized and possibly adding background images and instructions on how the app works.

*Video report could be found at*

<https://www.youtube.com/watch?v=WTUuZbEzS-Q&feature=youtu.be>

\*\*\***Note:** to properly have alarm play, edit the mainwindow.cpp file, line 107, and edit the local path to the file understanding.mp3\*\*\*