

## CSCI 188 Project Proposal

### Sleep Calculator

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#### ***Project Abstract***

I am going to create an Android app. My app is to collect the user's daily sleep hours. Moreover, this data will be analyzed and displayed with a chart, then give the user an overview of sleep habit. Hopefully, I can add some statistics online and compare the user data with them to create some suggestion for the user.

#### ***Strategy***

The app is based on Android 2.2. I will be developing the application for "Dell streak 5" smart phone, and demo in this real device. There are 2 options for this implementation. One is to connect to the clock alarm to calculate the duration between the start and end of an alarm. The other is to create a clock alarm to the interface inside the app. There would be multiple views on the app, at least, one for setting alarm, and one for viewing result of sleep-hour statistics.

#### ***Unknowns & Problems***

I will learn to store data after the app is turned off. I need to figure out how to give my app access to the clock alarm of Android. Also, I wonder if there are some framework or built-in graphical chart/future in SDK to display the statistics. And the analysis of data will be another challenge.

#### ***Implementation Plan***

Main Classes:

MainView  
Calculator  
Chart  
Database  
Alarm

Milestones:

- Develop start from a single-view application.
- Get access to system built-in clock alarm app.
- Create clock alarm on the interface
  - Test data feedback from the clock alarm
- Create a database to store data
  - Test data storage after the app is shut down
- Function of calculation
  - Accuracy of the sleep duration (TBD)

## Project Proposal

- Display data in a chart
  - Find framework or built-in chart
  - Test everything in a single view.
  
- Add multiple views to display other statistics and setting.
  - Find online statistics of sleep
  - Data analysis algorithm and give suggestion
  - Test and add app icon.