CIS 573 Software Engineering - Fall 2013

Second Iteration Report

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1. Agreed-upon User Stories Targeted for this Iteration:

1. As a user, I want to log my sleep or my naps.

2. As a user, I do not want use of the application to itself be an inhibitor to my sleep

3. As a user, I want to set up my user profile with my class year, school at Penn, and gender.

4. As a user, I want to be able to modify my user profile at any time while using the application.

5. As a user, I want to look at a graphical representation of my sleep patterns over the past week/month/year.

7. As a user, I want to get tips on improving my sleep, tailored to my user profile and data logged so far, so that I can better manage my sleep cycle.

8. As a user, I want to be able to rate my concentration, fatigue and productivity for a given day.

13. As a user, I want the application to automatically guess whether I took a nap or sleep, without me having to provide additional input

14. As a user, I want to be able to modify whether or not a given period of rest should be classified as sleep or a nap, overriding the automatically generated input

1. Iteration Outcomes:

* General User Interface improvements (#1, 2, 5)
  + Updated color scheme from orange to amber
  + Updated application compatibility to target devices running Android 3.0+ to allow for further user interface improvements
* Bug/crash fixes (#1, 2, 5)
  + Inconsistencies in Android version compatibility were causing several crashes
* Implemented User Profile creation and modification (#3, 4)
  + Profile attributes:
    - Class year
    - School at Penn
    - Gender
* Filter sleep tips based on user behavior (#7)
* Allow users to enter concentration, fatigue and productivity self-assessment ratings for a given day when they go to sleep for the night (i.e. when “Go To Sleep” is triggered after 10pm and before 6am) (#8)
* Implemented automatic logging of naps based on the time of day at which that sleep begins (#13, 14)
* Tweaked overall application color scheme (more yellow than neon orange) (#1, 2)
* Modify chart activity color scheme to be more easily readable (#5)
* Ongoing debugging and testing activities (#All)
* Updated application logo and database of sleep tips based on SHS input (#7)

1. Incomplete User Stories:

* None

1. Additional User Stories Targeted Ahead of Schedule:

7. As a user, I want to get tips on improving my sleep, tailored to my user profile and data logged so far, so that I can better manage my sleep cycle.

* List of sleep tips has been incorporated into the application database and is filtered based on the factors impacting sleep that the user has entered
* The user will now only see sleep tips relevant to the data they have logged

1. Known Issues:
   * TK
2. Unit Tests Add this Iteration:

* Additional test cases for MainActivity in MainActivityTests.java
  + Test correct color scheme application (testSleepColor() and testWakeColorAndAddEntry())
  + Test correct filtering of sleep tips with ‘alcohol’ flag enabled (testGetTipsWithAlcohol())
* New unit test framework for DataActivity in DataActivityTests.java
  + Test database setup and access and verify correct object creation (testQueryAllEmptyList())

1. Proposed New User Stories:

13. As a user, I want the application to automatically guess whether I took a nap or sleep, without me having to provide additional input

14. As a user, I want to be able to modify whether or not a given period of rest should be classified as sleep or a nap, overriding the automatically generated input

15. As a user, I want to be able to view all sleep tips relevant to my preferences and activities when viewing the graphical representation of my logged data

1. Proposed Goals for Third Iteration:
2. Ideas for Future Development:

* Integrate alarm clock functionality to minimize user time spent entering data/user error
* Aggregate and anonymize data locally on device and periodically send to central repository (#10, 11)
* Include additional and Penn-specific sleep tips (#7)
* Visualization of correlation of sleep patterns to concentration, fatigue, productivity on subsequent days (#9)
* Allow a user to view all sleep tips relevant to their profile from the chart data screen (#15)

Index of User Stories

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2. As a user, I do not want use of the application to itself be an inhibitor to my sleep

3. As a user, I want to set up my user profile with my class year, school at Penn, and gender.

4. As a user, I want to be able to modify my user profile at any time while using the application.

5. As a user, I want to look at a graphical representation of my sleep patterns over the past week/month/year.

6. As a user, I want to be log any sleep inhibitors I used close to bedtime for any previously logged night of sleep or nap.

7. As a user, I want to get tips on improving my sleep, tailored to my data logged so far, so that I can better manage my sleep cycle.

8. As a user, I want to be able to rate my concentration, fatigue and productivity for a given day.

9. As a user, I want to be able to view a summary of my data that shows how my sleep patterns affect my concentration, fatigue, and productivity the following day.

10. As an SHS administrator, I want to be able to view anonymized, aggregated data from users so that I can better understand sleep habits and use of sleep inhibitors in the student population.

11. As a user, I want to be sure that I cannot be identified from any of the information submitted by the application to the central datastore

12. As a user, I want to be able to listen to the sleep podcast as I’m going to sleep, if I would like, to help me get to sleep faster.

13. As a user, I want the application to automatically guess whether I took a nap or sleep, without me having to provide additional input

14. As a user, I want to be able to modify whether or not a given period of rest should be classified as sleep or a nap, overriding the automatically generated input

15. As a user, I want to be able to view all sleep tips relevant to my preferences and activities when viewing the graphical representation of my logged data