PiClock

Status of Known Bugs and Omissions

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An open source, smart alarm clock platform that aims to improve upon the functionality of traditional alarm clocks by integrating new and useful technologies to motivate users. PiClock increases productivity by helping users overcome their early morning exhaustion and providing general information about their upcoming day.

Version 1.4

December 7, 2018

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1. Status of Known Bugs

1.1 Network Errors

The final submission of code for the PiClock handles network errors the best it can. As it stands, network errors are never logged nor shown. The PiClock application handles network errors by simply retrying network requests until a desirable result is acquired. This can be hindersome to end users because the UI will not update from its previous state until that desirable result is processed. A simple fix for this would be to print all errors to some sort of log files in the output, but our development team did not have time to implement a logging feature.

1.2 Small Memory Leaks

It is known that the PiClock software has small memory leaks throughout the application. This information can be gathered and seen by comparing memory usage of a newly opened PiClock application to a preexisting version. These memory leaks are few, but sparse throughout the app and could cause issues on machines with less available memory like the Raspberry Pi. If given more time, our development team would like to find and remove each memory leak.

1.3 Widget Configuration Issues

For complete functionality of the PiClock, some widgets require additional setup steps by the end user. These setup steps are centered around users producing individualized API keys or geolocations. The PiClock application does not validate the API keys or geolocations. This can cause widgets that use this information to act with unexpected behavior.

1.4 Other Errors

All other bugs found throughout the semester have been recorded, addressed, and fixed before the final submission on December 7th.

2. Omissions

2.1 Alarm Game - Simon Says

This game was omitted early in production due to time constraints. Our development team decided that the game was of low priority and did not need to be implemented because the PiClock application already provided a sufficient amount of games to be played during an alarm. The PiClock development team was then more able to stay on track with higher prioritized work by discarding a small feature.

2.2 Widget - Google Calendar Events

This widget was omitted early in production due to time constraints. However, the Google Calendar Events widget was replaced later in production by the Commute widget. Our development team decided that the widget was of low priority because of the widgets complexity. The development team decided to put this widget on hold and revisit it later if time permitted. Unfortunately, the the widget was not implemented before the deadline. The development team is content with spending time on other features because the PiClock application already provides a sufficient amount of widgets that makes the software extremely functional.

2.3 Raspberry Pi Implementation

Due to time constraints, the development team was never able to compile a fully working executable for the Raspberry Pi running on the Raspbian Jessie operating system. Given more time, it would be the next and last step before the software is ready for production as a release version. However, even though the development team has not provided the specific executable for a Raspberry Pi using ARM Cortex processors, users with sufficient knowledge of operating systems will be able to cross-compile the application as outlined in the instruction manual.