Task Tree Prototype Phone Application Documentation

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Developers and Collaborators

The task tree application was designed and developed by Brittany Melton, Nathan Bishop, and Michael Phillips. As an outside consultant, we would like to thank those from the United Cerebral Palsy foundation and the Alabama State Health Department for giving us what we needed to get started. A special thanks to Dr. Jeff Gray for helping us as we went along and providing information and support.

Introduction

The phone application for the Task Tree program is the main application to be used by those in need of it. This application has been designed for use by anyone who needs it with a special emphasis on making it compatbile for those with low motor and cognitive capapbilities. The desktop application created by Brittany Melton is the applicaiton which will allow you to build the necessary files for this program to work. This program is easy to use and will be growing to include more functionality as we can include it.

Uses

This application is a very specific application designed to fit the need if a task schedule reminder. This application can not be used in any other way besides the viewing of a task list for a reminder.

Features

This application at the moment has very limited features and is in a beginning stage. The current features are a task list, an alarm to remind the user, a set of break buttons to take a break, a task description to provide a more detailed description of the task at hand, a call help button which will call a specific phone number, and a login button which is not fully functional at this time.

Design and Development

The phone application itself is a very intricate web of activities that have been created to perform a specifiv part or function of the program. It has been broken down into 4 different activities, a stand alone class, and an android service. The main architecture of the program starts with the main screen. When the user begins the application, it pulls up the main activity which will acquire the list of tasks at hand (in the background) and display the current task at hand. This activity will set the text description, the duration of the task for an alarm, and initialize all buttons. Once a button is clicked, the individual actions are

spawned. Based on what button this is, that action could be one of four things.

1.) The Break Button is Pressed - The main activity will save it's current task, kill start the break activity with the current task passed as an extra and will kill the main activity.

2.) The Task Help button is Pressed - The main activity will start the task help description panel and pass it the necessary description as stated in the users task file. The main activity continues to run in the background.

3.) The Login Button is Pressed - The main activity passes the current task as a parameter and will start the login activity at which point the main activity will be destroyed.

4.) The Call Help Button is Pressed - The application will spawn the phone service with the phone number given in the xml file and will continue to run the main activity in the background.

0.1 Break Activity

The Break Activity is the activity in which the user can select a break to take. This activity will have up to 3 break options and an exit option. Select the one that is appropiate for the case and the main activity will spawn when the break is over. Pressing the cancel/exit button will also spawn the main activity.

0.2 Task Help Activity

The Task Help activity is the activity in which the description for the current task at hand is. The only functionality in this interface at the current moment is to read the description and return to the main activity.

0.3 Login Activity

The Login Activity is a skeleton construct of what will soon be available. The login screen right now can only exit and go back to the main activity, however, our hopes is that soon we will be able to allow the user to login to a cloud account and download the necessary task list. Whenthe cancel button is pressed, it will return to the main activity.

0.4 Call Help Activity

The Call Help Activity is actually a service that we have implemented from the phone itself. The call help button will retreive the number that the user has listed in the task list xml file and use that to make a phone call. The default number can be set in Brittany's desktop application.

0.5 The Xml Reader

The XmlReaderActivity class is not an activity that will be veiwable by the user. This activity written by Nathan Bishop is solely responsible for reading in the information that will be used to provide the above functionality in the main program. It uses a certain algorithm to obtain, parse, and return the information that the main application needs in a specific format.

Further Development

In later version of this application, we would like to add in a lot more functionality to the phone and desktop applications. We will be looking to add text to speech options, logging into the cloud, audio and video streaming for the help description menu, and possibly multiple phone numbers that the user will be able to select form in the event that that user has more than one person that can help them. We will also be making graphical upgrades that are more aesthetically pleasing to look at so that our application will be more easily used.

Version Information

This version of the phone application is 0.0.1 codename Prototype. This is not an official release of the application and will not be available for download by the general public. This application is not guarenteed to work in every Android environment. All uses of the application have been stated and further use beyond what we have intended can not be guarenteed by the developer's of the application. THIS IS A PRTOTYPE ONLY. Please be patient with us as our cats and dogs in the labs are working on fixing and providing more functionality.

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if you attempt to reuse this application or source code in violation of what is ethically right. When we do publish this application, we will most likely file under GNU/GPL or BSD public licenses so please use those as a guideline.

Source Code Availability

All source code for the phone application only will be posted on GitHub under the user name Crimson-Coders and is freely available for downloading and modification. Please let us know if you find any bugs with our application and send an email to maphillips1@crimson.ua.edu if you have any questions/concerns. No phone numbers as we are only college students. We are broke, so any donations for our code would be highly accepted. I'm tired of eating ramen, just thought you might want to know that.