Software Project Report

HelpMate Mobile App

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Abstract

This product is unique and independent by its features but there are many mobile apps in the market which work on the similar concept of interacting with user and handling the user's task more efficiently. Most of the other products are standalone independent software while HelpMate will try to integrate these applications into one product.

HelpMate needs to communicate with other apps on the phone in order to retrieve information and utilize that to alert or notify the user. HelpMate largely utilizes the GPS on the phone to communicate and keep the track record of its locations.

Helpmate also connects to the call history and updates its internal database with number of times calls made to each number. This information is used to classify the contacts list and favorites by prompting to user to help generate a favorite list.

HelpMate is a virtual assistant for android devices. Your very own personal assistant awaits your commands – performing tasks, notifying you about important events, and making your daily routine easier (and, often, more fun along the way).Our goal is to make working with everyday technology easier, more effective, and more fun so that you are free to enjoy the important things in life.

This product is best suitable to everyone who uses smart phone extensively. Helpmate communicates with the other apps on the mobile and sends the user updates and alerts.

Some of the important features of HelpMate:

- Parking lot assist (Park Mate)
- Stay Connected with contact favorites (Stay Connected Mate)
- GPS Tracker (GPS Mate)

Basically the software needs both Internet and GPS to fetch and display results. All system information is maintained in a database. The software also interacts with the GPS-Navigator software which is required to be an already installed application on the user's mobile phone.

Acknowledgements

I would like to thank Dr. Kenneth Magel for giving his valuable suggestions for the project. He helped me in shaping the project and his ideas and inputs were quite helpful in executing the task easily.

Introduction

HelpMate is unique and independent by its features but there are many mobile apps in the market which work on the similar concept of interacting with user and handling the user's task more efficiently. Most of the other products are standalone independent software while HelpMate will try to integrate these applications into one product.
HelpMate needs to communicate with other apps on the phone in order to retrieve information and utilize that to alert or notify the user. HelpMate largely utilizes the GPS on the phone to communicate and keep the track record of its locations.

Helpmate also connects to the call history and updates its internal database with number of times calls made to each number. This information is used to classify the contacts list and favorites by prompting to user to help generate a favorite list.

HelpMate largely utilizes the GPS on the phone to communicate and keep the track record of its locations. This information is fed to the database and is used for parking lot assist and GPS tracker.

Helpmate also connects to the call history and updates its internal database with number of times calls made to each number. This information is used to classify the contacts list and favorites by prompting to user to help generate a favorite list. At regular intervals of time, the user is suggested to get back in touch with that one such person, the user made calls more than a certain number of times. Thus HelpMate takes care of the social aspects of the user when the user is stuck in the daily chores of life.

Back Ground

HelpMate is a user friendly application which is mobile based. Humans have concise their personal and professional life all in a smart phone which takes care of most of the things. So it made more sensible to embed a software with different features in the same phone which can communicate with other apps on the phone and make the human life much easier.
In daily chores of life, we forget to stay in touch with friends and family, so StayConnected Mate takes care of that. The user has minimum actions required to perform. The feature makes its decisions and with minimal user interaction and approval, it does all the work for user. The app feature parkMate is a very useful app. With the increasing population, the traffic and number of vehicles have also increased exponentially. In such case, it so often happens that we park our car and forget its location later. Then comes handy ParkMate. It pins the car parked location and upon users request, it shows the navigation to the save location. GPSMate is more or less similar to StayConnectedMate. It keeps a track of user frequently visited locations and suggests the user if when the user fails to revisit the place after a certain break period. This helps to user to keep on schedule like workout, grocery etc. These three features are very helpful to the user who is busy with day to day chores of life.

Over View

A first-time user of the mobile application should be able to download the app on to the mobile and run the app to install it. It also comes with manual for the first time user and the interface is very user – friendly and application is self-explanatory. It does not require any login username or Password. The first time user can open the app and maneuver the app to set the filters and criteria for the notifications.
If the user is not a first-time user, he/she should be able to operate the software with ease. The user can open the app and maneuver the app to change the filters and criteria for the notifications if required.
HelpMate can be used by any person who carries a smart phone and who can download the app from app store.
The Internet connection is also a constraint for the application. Since the application fetches data from the database over the Internet, it is crucial that there is an Internet connection for the application to function.
The other constraint is that mobile is supposed to be a smart phone which can download the app and function. Regular mobiles will not have this provision.

HelpMate does require certain amount of memory space in the phone, not just for the installation/operational purpose and database but also for future upgrades of the software. When mobile is set to auto download, the mobile should have enough memory to accommodate new changes, hence more space.
HelpMate requires a smartphone with Wifi or (4/3) G connectivity and basic working knowledge of a smartphone such as being able to install the app on the phone and operating an app. The smart phone should be GPS enabled. The smart phone should have tactile screen for interacting with the application. The phone should also have enough hardware requirements such as memory to run and store the data. The user is required to download the app and install it in the phone. While downloading the user has to ensure the installation is complete without any errors. Partial download will not run the software.
The features are completely independent of each other although some features completely depend on the GPS software on the phone without which they cannot operate.

Evaluation

This mobile app has few limitations as it requires a smart phone and doesn't work on regular phones. Two of the features require GPS for navigation without which the apps are functionless.
The app is very self-explanatory but the user is still required to know some basic functionality of the app like figuring out the delete option and clicking on options when suggested etc.

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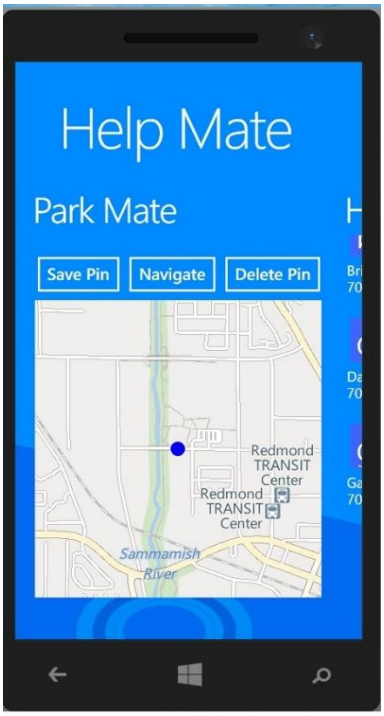
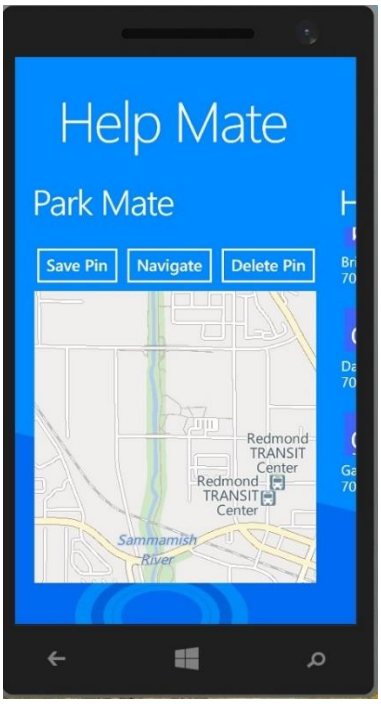
Some of the screenshots of the features on the app are as below.

1. Location Mate (GPS mate)

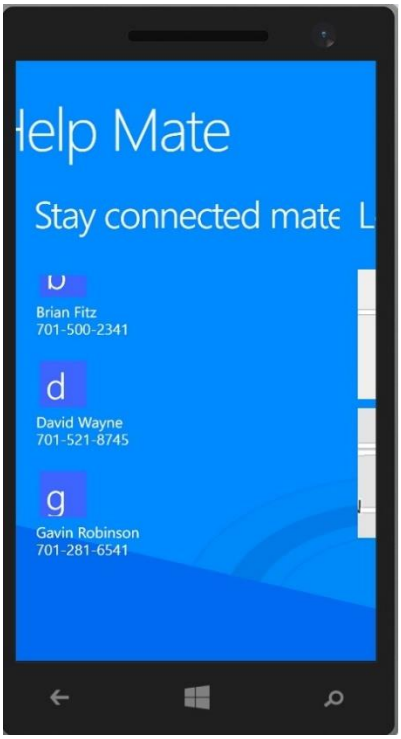
2. Park Mate when location is saved



When the pin is deleted or no pin is created



3. Stay Connected Mate



Stay Connected Mate favorite Contacts look up

Conclusions and Future Work

The mobile application communicates with the GPS application in order to get geographical information about where the user is located. The communication between the database and the application consists of operation concerning both reading and modifying the data, while the communication between the database and the mobile application consists of only reading operations.
Since the mobile application have any designated hardware, it does not have any direct hardware interfaces. The physical GPS is managed by the GPS application in the mobile phone and the hardware connection to the database server is managed by the underlying operating system on the mobile phone and the web server.
The communication between the different parts of the system is important since they depend on each other. The different app on the mobile are configures to the HelpMate and thus it retrieves the data and stores the required data to its database.

In order to get a view of how to divide the requirements into different releases and what requirements should be included in which release, a prioritization of the requirements is needed. This section discusses the choice of prioritization methods and gives a suggestion of how the release plan for these requirements could look like.

Future work includes voice recognition which makes it much more without the touch of any button, the user will be able to interact with the application. There are some dependencies and limitation in the software which could also be resolved with further app extensions and inclusions.
The application can be enlarged and made further user friendly by having a training tool which helps the user guide the application which would avoid any errors to be committed by the user.