

SWE599 – Project LittleRedButton

An Android Based Mobile Emergency Declaration Application

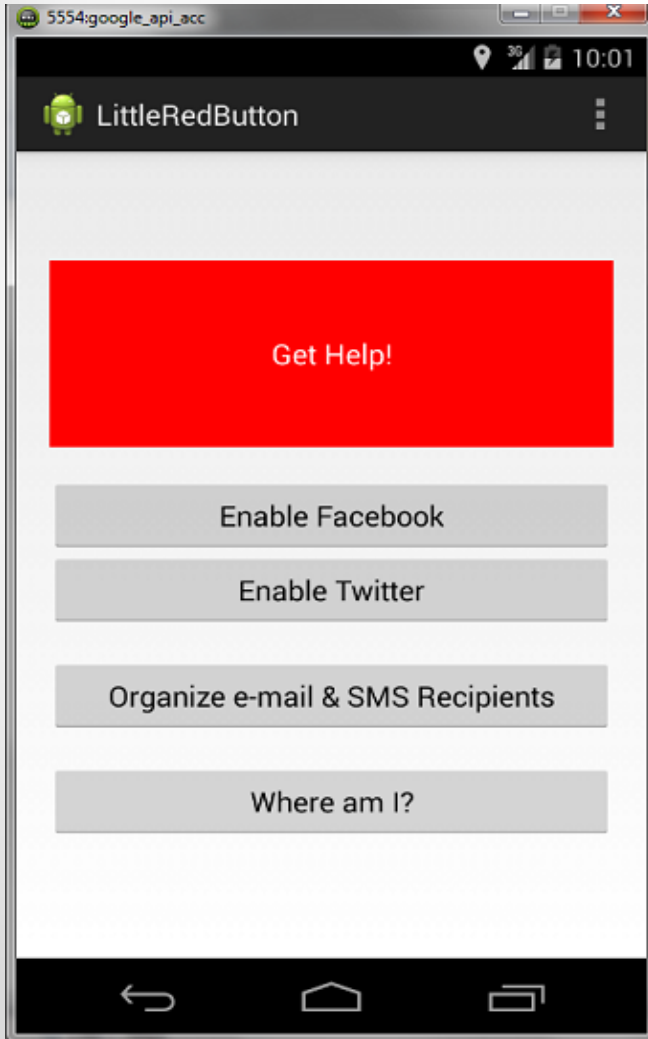
Developed by
Mustafa Göksu GÜRKAY (2011719225)

Project Advisor
Prof.Dr. Fatih ALAGÖZ

Outline

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- Technologies Involved in Development
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Introduction



- The LittleRedButton project is a mobile application design and development project for users who need urgent help in some cases.
- The main goal is to notify the user's selected associates via selected notification channels on his/her current situation & place.
- Project's target users are the ones who have a mobile device powered with Android OS.

Functionalities of LittleRedButton

By using LittleRedButton, one shall be able to:

- Send emergency notifications via selected channels on an urgent situation with a single button hit,
- Locate himself/herself by using his/her smart phone's GPS/Network location services on Google Maps,
- Find out which help points (police stations & health institutions) are the nearest ones to his/her current location,

Functionalities of LittleRedButton

- Determine his/her friends to be notified with LittleRedButton e-mail & SMS messages,
- Use his/her Facebook or Twitter account (or both) to notify his current situation and place to his/her followers,
- Make LittleRedButton track himself/herself by sending notifications with updated location coordinates to those previously selected channels every 60 seconds.

Technologies Involved in Development

- **JAVA & Android SDK:** are used to provide the API libraries and developer tools necessary to build, test and debug Android application.
- **ADT (Android Developer Tools):** is a plugin that provides a suite of tools that are integrated with the Eclipse IDE.
- **Facebook SDK:** is a JAVA programming language wrapper to the Facebook APIs.
- **Twitter4j:** is a core JAVA library which makes use of the Twitter API.

Technologies Involved in Development (cont'd)

- **OAuth (Open Authorization):** allows the users to share their private resources (e.g. Photos, videos, contact lists) without having to hand out their credentials. Used in Facebook and Twitter authorization processes.
- **SQLite:** a light weighted SQL engine which is actually a relational database management system.
- **Google Maps Android API v2:** a Google API which automatically handles access to Google Maps servers in order to let the developer add maps based on Google Maps data into his application.

Development Lifecycle of LittleRedButton



- Agile Software Development methodology has been used to develop LittleRedButton project.
- The project has been broken into 5 main functionalities which include:
 - Database operations,
 - Facebook operations,
 - Twitter operations,
 - E-mail & SMS operations,
 - Google Maps operations.

Conclusion & Future Work

As a conclusion;

- LittleRedButton now satisfies the initial requirements that are set to be implemented,
- It has been a great experience to work with a different platform, various frameworks, libraries and mobile application APIs in the same project with a knowledge from scratch.

For enhancement purposes, LittleRedButton may have features such as;

- Recording for a defined length of audio/video data and send them in attachment as well,
- Calling the emergency services such as 112, 155 etc. by a text message or by voice.
- Displaying the shortest route to the selected nearest place on Google Maps .



Thanks

Any Questions?