Final Assignment

Technological Basics 2

Report

Major: Digital Media

Matrikel-Nr. 3047958

Semester 3

Liv Gahleitner

E-Mail: liv.gahleitner@stud.leuphana.de

Table of contents

1. Introduction

The idea for my tech basics 1 project revolved around womens safety and the difficulty to keep track of friends' locations through the current apps available. The idea was to build an app that could allow individuals and groups to actively share their location, alert each other in case of emergencies, or call for help if they found themselves in a dangerous situation. Since I have personally experienced being followed or feeling the need to purposely take a longer route on my way home, in order to not give away where I live, I wanted to continue this idea and focus on aspects I could improve, add or leave out. The concern around women's safety seemed to be acknowledged by the other female participants in the seminar, as well as my own friends, and I was able to receive further support on the difficulty of sharing one's location successfully. This solidified my approach on the topic and I started to look into the concepts we had covered over the past semester for what I could implement into enhancing my app.

2. Methodology

Since I decided to continue working on my tech basics 1 project, I intended to receive qualitative feedback and criticism in order to get some inspiration in moving forward. There were a few different directions I could keep developing my initial idea and I wanted to hear from an outside perspective what aspects of my app should be the focal point. After being able to receive verbal feedback in the seminar it became obvious that the most important feature of my app revolved around women being able to alert help in the case of an emergency. This would need to be done quickly and without any long login structure that would hold up the user from acting quickly. The location tracking feature should continue to be implemented as well, since it was the origin of my idea and aided in the concept of looking out for women's safety. Therefore, it would not be beneficial to focus on building multiple user flows or tracking user or other data. Instead of utilizing the advanced data programming methods we had learned, I decided to concentrate on building a smooth user flow between multiple pages and initialize my app with a demonstrative first window immediately guiding the user to an emergency option.

Since my app incorporated the idea of tracking a friends' locations, I built profile pages and simulated the friends' movements with the concepts we had covered over the last two semesters. I used buttons, labels and entry box widgets in order to visualize my pages and employed concepts from the tkinter library, including messagebox, and the pillow library.

Additionally I researched within the tkinter library and made use of tkmacosx which allowed me to change the color of buttons which had limited my design concept in the last semester. The use of ttk gave me a broader scope of options to enhance my pages like building checkbox widgets. I also turned to the code we used for building with pygame and employed these tactics to show the active motion of my friends' locations. Furthermore I had fun using the pygame methods for incorporating music into my app and was able to simulate a call taking place.

3. Design

The design of my first page upon launching the app should immediately catch the users eye. Since it was designated to visualize an option to call for help in an emergency, I decided to work with bold font and red and white colors. Exclamation marks and the use of a red telephone icon should further demonstrate the urgency of making sure the user is safe. From there the user could quickly alert help or proceed to the homepage via a less prominent button on the bottom of the window. There the user is then greeted by a map and the names of friends and their location. The profile pages of the friends were supposed to remain abstract and simple yet pleasing to the eye and invoking familiarity.

By looking at my own phone and different apps on how they portrayed profile features I chose a sterile black&white attitude and only highlighted with color for important buttons. Similar to that, the design and structure of the call pages was closely replicated with the options the tkinter library offered. Emojis were used for the symbols present on an iPhone when an active call is taking place and a distinct red button sat at the bottom, familiar for hanging up on a call. Looking back at the beginning of my tech basic 1 project, I revisited the idea of implementing fun avatars for the locations within the map. My inspiration came from apps like "Snapchat" and "Pokémon Go", guiding me to use emoji figures to represent my friends. For the overall design I made my window size fit the general parameters of a vertical phone screen in order to bring the design as close as possible to a real app.

4. Limitations

While working on my code I encountered some limitations to my concept idea. I could not actually call for an emergency, for practical and legal reasons, and I had not yet the skill to use data to truly track my friends' locations. So I chose to simply mimic those functions with the abilities I had gained throughout the semester. My laptop also held some limitations since it often depicts the gui windows quite differently in comparison to newer technological

models. Because of this I made use of tkmacosx to increase my visual options. Another limitation was using the pygame concept we had covered in class. This only succeeded in a new window opening for the location pages of my app, however I almost preferred the result since I liked the visual of the profile page continuing to be displayed next to it. Initially I also tried to use multiple images or use the labels concept to place images upon the window as I wanted to show real life photos for the profile pictures. However it proved a lot more difficult than I had anticipated and the use of emoji icons made for a lot more leeway in altering the design for my different pages.

5. Bibliography

App References:

App: Find My. 2022. Apple Distribution International: AppStore/Utilities (pre-installed)

App: Findmykids - Phone Tracker app. 2021. Geo Track Technologies Inc: AppStore

App: Maps. 2016. "Share my location function" Apple Distribution International: AppStore/Utilities (pre-installed)

App: Pokémon Go. 2016. Niantic, Inc.: AppStore/PlayStore

App: Snapchat. Snap, Inc.: AppStore/PlayStore

App: WhatsApp. 2023. "Share my location via chat function" WhatsApp Inc.: AppStore/PlayStore

Code References:

Code to change button background color on mac in tkmacosx:
https://stackoverflow.com/questions/1529847/how-to-change-the-foreground-or-background-colour-of-a-tkinter-button-on-mac-os
(Line: 228, 238, 248, 376, 394, 430, 440, 567, 585, 621, 631, 758, 776, 812, 822, 896, 969, 1042, 1316, 1327, 1338, 1368, 1389, 1460, 1512, 1541)

Code to change the borderwidth of a label and button:
https://stackoverflow.com/questions/39416021/border-for-tkinter-label
(Line: 1305, 1316, 1327, 1338, 1512)

Code to build a checkbox in tkinter:
https://www.pythontutorial.net/tkinter/tkinter-checkbox/
(Line: 218, 420, 611, 802)

Code to place a background image in pygame:
https://medium.com/@01one/how-to-set-background-image-in-pygame-2ea4d777a2b4
(Line: 1066, 1124, 1145, 1204, 1225, 1283)

Code to build a button in pygame:
https://medium.com/@01one/how-to-create-clickable-button-in-pygame-8dd608d17f1b
(Line: 1082, 1161, 1241)

5. Eidesstattliche Erklärung

Eidesstattliche Erklärung Liv Gahleitner Matrikelnummer: 3047958 Hiermit versichere ich, dass die Arbeit – bei einer Gruppenarbeit der entsprechend gekennzeichnete Teil der Arbeit – selbstständig verfasst und keine anderen als die angegebenen Quellen und Hilfsmittel benutzt wurden und alle Stellen der Arbeit, die wortwörtlich oder sinngemäß aus anderen Quellen übernommen wurden, als solche kenntlich gemacht wurden und die Arbeit in gleicher oder ähnlicher Form noch keiner Prüfungsbehörde vorgelegen hat und die schriftliche sowie die elektronische Fassung der Arbeit mit der Ausnahme der gem. Abs. 10 Satz 2 vorzunehmenden Anonymisierung der elektronischen Fassung inhaltlich übereinstimmen.