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CIS 4951
Professor Sadjadi
July 24th, 2024

OTPGen Project Documentation

Project Title: OTPGen

Date: July 25th, 2024

Project Manager: Dillan Bailey

Key Project Members: Edwin Villarroel, Thinh Nguyen, Jonathan Francis, Noah Smith

Project Proposal: The OTPGen app is a two-step authentication password generator similar to the likes of Google Authenticator. Whenever someone tries to login to an account, they will need to input a 6-digit authentication passcode as a second step. Its purpose is to provide an extra layer of protection to the accounts of users associated with the app and maximize security against potential hackers and security breaches.

Project Charter: The manager of the project is Dillan Bailey, and he proposed several key actions that were needed to bring the project to life:

- First, the main functionalities of the app needed to be established. Several meetings were held to determine what features should be included to optimize the experience for the app's users.
- Second, a prototype had to be created. This prototype would be the basis for the overall structure of the app, the design of the UI, and how functionalities of the app would be implemented.
- Next would be the back-end and front-end programming and actual implementation of the discussed features.
- After that, was the testing and debugging phase, where any issues with the app were scouted out, fixed, and removed by the programmer.
- Then, it was time for the finalization of the app, where the finishing touches were implemented and everything was retouched to ensure that the user could get the maximum utilization of all of the functionalities.

Project Management Plan: Across each sprint, a different goal was set in mind for the development of the OTPGen app:

- During Sprint 1, the team decided to plan things out and establish the intended functionalities for the app that would be implemented later down the line to ensure a smoother process. This included the main password generation feature, a login and registration feature, and a list of all of the accounts that have been created.

- During Sprint 2, the prototype was developed on a website called Figma. This prototype model contained all of the established features and functionality at this point, as well as a minimalist UI design. This prototype was updated throughout the sprint until it acted as a good basis for the programmers to go off of.
- Sprint 3 is when the programming phase started, a basic prototype was made with the main functionalities put into place: a login feature, password generation feature, a QR code scanner, and the list of saved accounts with a timer that reset the accounts every few seconds. It was still in the early stages of development, so the UI and some other features were still in the works. This is also when some more features, such as the password reset feature and an account password deletion feature were considered as additions to the app. The Figma prototype model was also updated to match these new suggestions.
- During Sprint 4, programming continued and, simultaneously, the debugging process began, as the main features were being polished and fully implemented, the design of the UI was also being set into place, and other features suggested for the app were beginning to be implemented as here.
- During Sprint 5, the features of the app would be finalized, and the features of the app would be tested more often as the finishing touches were added onto the project. The members of the team also began working on their posters during this time of the sprint.

Issues & Improvements: Most of the issues ran into the project were more so just improvements that needed to be made along the way, as well as the debugging of certain features. These included:

- The user possibly not being able to get back into their account if they forgot their password once they logged out, which led to the conceptualization of the password reset feature.
- Accounts piling up, leading to some trouble locating certain accounts, which led to the creation of the delete function on certain accounts.

OTPGen Guide

The OTPGen app is relatively simple to use, so the user should not have much trouble navigating it if they adhere to the following steps:

- **Step 1:** Register or Login with your email and password.
 - When the OTPGen app is opened, the user is greeted with a title screen with two options: Register and Login.
 - If the user has not created an account, then they should press *Register* and enter the email and password that they want to use when logging into the account.

- If the user has already created an account, then they should press *Login* and enter the email and password they registered with.
- **Step 2:** Creating a passcode account.
 - Once logged in, the user will be greeted with the option to enter a secret key and an account name, or scan a QR code, where they must do just that and type out the information they want to associate with that account or scan a QR to automatically create a new account.
- **Step 3:** Manage your accounts
 - Once the user has entered the secret key and account name, or scanned a QR code, they will be directed to a list of accounts with the name they entered and a randomly generated 6-digit authentication passcode that resets every 30 seconds. Here the user can choose to:
 - Go down the list of account passcodes to find the one they need and copy paste it.
 - Delete an account passcode from the list.
 - Or, go back and create a new account to create an authentication passcode for.