Team Details and Problem Statement

Team Members:

- Juan Garcia
- Bhavya Sharma
- Mitchell Deer

Roles:

- Lead (Juan)
- Security (Bhavya)
- Programmer (Mitchell)
- Design (Everyone)
- Documentation (Everyone)

Rough Idea:

The rough idea behind this project is to develop a software solution aimed at promoting positive habits and productivity among users. Through a user-friendly interface, individuals will be able to track their daily tasks, set goals, and receive incentives for completing them. By incorporating elements of gamification, such as points and rewards, along with features for progress tracking and social support, the program seeks to motivate users to adopt healthier habits and routines. Integration with existing tools like Google Calendar will streamline the process, making it easier for users to incorporate these habits into their daily lives. Ultimately, the goal is to empower users to take control of their well-being and productivity through the cultivation of positive habits.

Executive Summary

There are numerous individuals who tend to either forget or neglect their chores, class work, etc. A reason for this lack of productivity is the absence of motivation to get it done since many don't see the point in doing their bed in the morning since they'll just have to do it again the next day. Our task is to design, implement, and test a program for these people to remember these more important tasks in their day.

We also plan on adding a point system to reward users depending on how fast and frequently these duties are performed. Duties would also be organized from most important to least with when they should be completed. Lastly, we will be grabbing some information from Google Calendar to create this program.

A Statement of Work

Project Objectives:

- Design, implement, and test programs to help individuals remember and prioritize important tasks
- Implement a point system to reward users based on the frequent completed tasks and time that they're done
- Organize tasks from most to least important and specify when they should be completed.
- Integrate Google Calendar for ease of use and organizing events
- Encourage users to create good habits

Scope:

- In Scope

- First create program to implement our design and use-object oriented programming to keep everything organized
- Create all necessary functions that will be used to grab information from google calendar and all other applications
- Create UI from our design and use obtained information to generate a list of tasks
- Check any security risks in our design or code and attempt to avoid any risks by limiting user input

Out of scope

- Deploy our design into an app for ease of use
- Implement point system depending on importance of task
- Reward user with in game rewards
- Implement other rewards besides points such as badges

- Expectations Upon Completion:

- Run program to create a graphical user interface

- All information that generates should be accurate from users google calendar
- Having the users input and features limited to avoid security risks

Timeline


Item
%
Start
End
Feb 2024
Mar 2024
18 - 24
25 - 2
3 - 9
1
Planning and Requirements
2/19/24
2/23/24
Pla...
2
Being Creating and Planning Design
2/24/24
2/28/24
Bei...
3
Being Implementing Design
2/29/24
3/4/24
Bei...
4
Testing and Maintenance
3/4/24
3/6/24
...
5
Security and Privacy Testing
3/4/24
3/6/24
...
6
Organize and Wrap Up Project
3/7/24
3/8/24
C

Problem Statement

Problem:

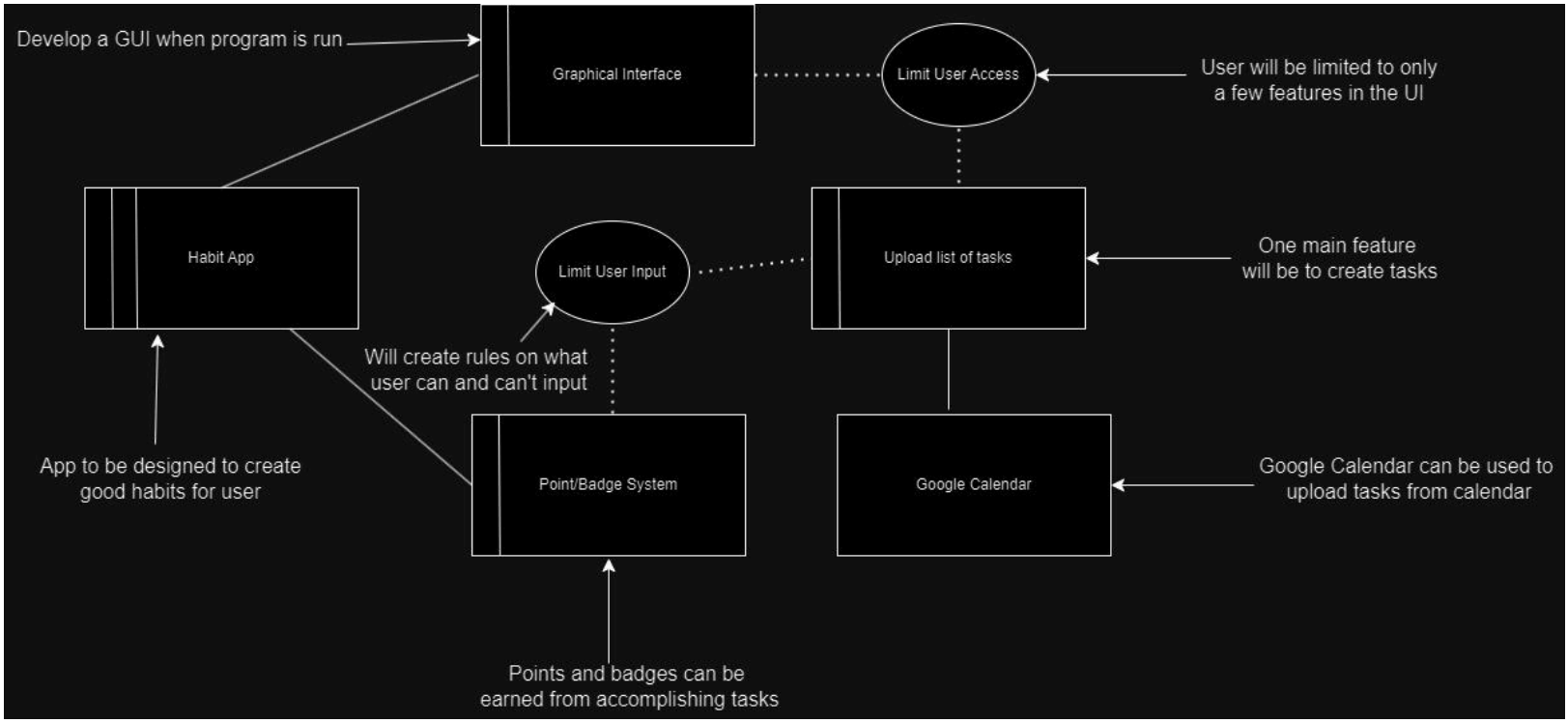
Many individuals forget or to neglect their tasks for the day due to lack of productivity due to an absence of motivation. This lack of motivation could stem from anxiety, depression or other mental health issues that a person has.

Why a solution is needed: Creating good habits can greatly influence those who wish to better themselves with simple things such as doing their bed. Developing good habits can also have positive effects on your physical, emotional, spiritual and mental health.

What void is being filled: Those who lack motivation to get up in the morning and complete their tasks for the day could use an app to help motivate them to get things done. This app will basically act as a life coach to better improve yourself as a person and get others around you to do so as well.

Who will use our system: People that need to be able to easily track and organize good habit cycles in order to benefit their well being. Also individuals who observe others using the app may be influenced to try out the app.

Problem Frame



An Outcome Summary

Our final project should meet the following criteria:

- When running create a graphical user interface for user to interact with
- Should be given the option to connect to google calendar to obtain any other tasks
- Be able to manually insert tasks with how important it is and when it should be completed
- Should be able to generate a report of tasks that must be completed daily, weekly, or monthly

- Users will be notified when a task should be started and a timer will appear with when it should be completed. They will also be able to view how many points they got for how quickly they were able to accomplish their task.
- A point counter should be viewable to see when and how points were earned throughout completing them
- Points can be traded in for items such as wallpapers, stickers, emojis etc.
- User should at a point develop good habits without the need of the habit app
- Users should have improved mental, physical, emotional, and spiritual health after being able to accomplish their daily tasks on their own.

Our final product will be deployed as an app that should be available to both android and ios app stores and should perform with minimal to no bugs and security risks.

Security Statement

Our security strategy encompasses a thorough assessment of potential vulnerabilities and threats, covering both software and hardware components, including third-party integrations like the Google Calendar API. We prioritize secure coding practices to mitigate risks such as injection attacks and cross-site scripting, employing regular code reviews and static analysis tools for early detection and remediation of security flaws. Access controls will be implemented to restrict data access to authorized personnel only, supported by strong encryption measures to safeguard sensitive information during transmission and storage. User authentication will be handled

securely, with considerations for password hashing and multi-factor authentication to bolster account security.

Requirements

User Requirements

For users to access the apps software they simply need any type of android or apple device to download the application from the app store. Then when they first open the app it will prompt the user to sign up or sign in to an existing account. Lastly they will have the option to connect their google calendar to the app for ease of adding their daily task.

Hardware Requirements

Firstly to create and deploy the app we will require a laptop to implement our design for our program in python and test it. Then to view how both apps look like on mobile devices we will need an apple and android device. While both devices may take a while to publish on the app store it seems that the process won't be terribly difficult.

Software Requirements

Our programming language of choice is python, for which we will use PyCharm. Using python, we will also need Google Calendar API for integration between google calendar and our habit program. We will use a python dictionary, Tkinter, that will allow for the generating of windows/elements for a graphical user interface, which, in turn, displays the events from google calendar.

Security Requirements

Security Requirement: Ensure that team members are aware of security protocols and best practices relevant to their roles.

Executive Summary:

Security Requirement: Ensure that user data obtained from Google Calendar integration is handled securely and in compliance with data protection regulations.

User Requirements:

Security Requirement: Implement secure authentication mechanisms for user sign-up/sign-in processes to protect user accounts from unauthorized access. Use strong password policies and consider implementing multi-factor authentication.

Hardware Requirements:

Security Requirement: Ensure that all hardware devices used for development and testing are kept secure and up-to-date with necessary security patches and updates to mitigate potential vulnerabilities.

Software Requirements:

Security Requirement: Regularly update software dependencies, including PyCharm and Python, to patch any security vulnerabilities. Implement secure coding practices to prevent common security issues such as injection attacks or data leaks.

Security Requirement: Conduct a thorough security assessment of the application to find any security risks. Implement security controls such as input validation, and access controls to protect user data and system integrity.