Time Garden

MAPÚA
MALAYAN COLLEGES
MINDANAO

College of Computer and Information Science

Mapua Malayan Colleges Mindanao

Gen. Douglas McArthur Hwy, Talomo,

Davao City, 8000 Davao del Sur

A Project by JNJ Inc.:

Jayford Mahilum

Nathan Yosores

Jhonna Mae Elman

Chapter I. Introduction

Background of the study

In today's digital age, the compulsive use of smartphones has become a widespread issue. Many people find themselves constantly distracted by their devices, leading to decreased productivity and potential mental health issues. The Time Garden app addresses this problem by encouraging users to spend less time on their phones through a unique and engaging method: growing a virtual garden. By setting timers and avoiding phone use, users can plant and nurture a variety of virtual flowers, receiving tangible rewards for their efforts in the form of a flourishing garden.

Statement of the problem

The current design of smartphone usage tracking and management apps lacks engaging and rewarding mechanisms to encourage prolonged and consistent use. Traditional productivity apps often fail to provide a compelling reason for users to return regularly or to feel rewarded for their efforts. This leads to a high abandonment rate and ineffective long-term behavior change.

Assumption of the study

The proposed design of the Time Garden app will effectively address the problem of compulsive smartphone use by incorporating engaging elements such as virtual gardening. The app's features, including a wide array of flowers to plant, customizable timers, and productivity whitelisting, will provide users with a tangible incentive to reduce their screen time. By doing so, the app will promote healthier phone usage habits and improve overall productivity.

Significance of the study

The proposed design of the Time Garden app will benefit various stakeholders, including:

1. **Users:** Will experience reduced screen time and increased productivity through a rewarding and engaging system.
2. **Mental Health Professionals:** Can recommend the app as a tool for patients struggling with compulsive phone use.
3. **App Developers:** Can gain insights into incorporating gamification and user engagement strategies into productivity apps.
4. **Employers:** Will see improved productivity in employees who use the app to manage their phone use during work hours.

Chapter II. Research Design

The User-Centered System Design (UCSD) process was applied to develop the Time Garden app. This methodology focuses on understanding the needs, preferences, and behaviors of users to create an effective and engaging solution. The stages of the UCSD process implemented in this project include Task Analysis, Requirements Gathering, Storyboarding and Prototyping, and Evaluation of the Prototype.

This section discusses the design process model used by the group wherein it is composed of the following stages:

A. Task Analysis

Hierarchical Task Analysis

The task analysis for the Time Garden app is structured hierarchically to outline the primary tasks and subtasks users will perform:

Setting Up the App:

- Download and install the app.
- Create a user profile.
- Customize initial settings (e.g., preferred flowers, timer settings).

Using the Timer:

- Set a timer for a desired phone-free period.
- Select flowers to plant during this period.
- Start the timer.

During Timer:

- Avoid using the phone.
- Use whitelisted productivity apps if necessary.

Post-Timer:

- Receive feedback on successful phone-free period.
- Plant and grow virtual flowers.
- Store finished plants in the garden.

B. Requirements Gathering

Methods Used

Interview:

Interviews were conducted with potential users to understand their phone usage habits and their interest in virtual rewards. Key insights included the need for engaging and visually appealing incentives to reduce screen time.

Survey/Questionnaire:

Surveys were distributed to gather data on user preferences for gamification elements and productivity tools. The results highlighted a strong preference for customizable features and tangible rewards.

Observation:

Observation sessions were held to monitor how users interact with existing productivity apps. This helped identify common pain points, such as lack of motivation and difficulty in sustaining long-term use.

Requirements from Different Perspectives

User Requirements:

- Engaging and visually appealing virtual garden.
- Customizable timers and rewards.
- Easy-to-use interface.
- Options to whitelist essential productivity apps.

Functional Requirements:

- Timer functionality with customizable durations.
- Virtual garden with various flowers to plant.
- Feedback system for successful phone-free periods.

Data Requirements:

- User profile data (e.g., preferences, progress).
- Timer and usage data for tracking productivity.

Environmental Requirements:

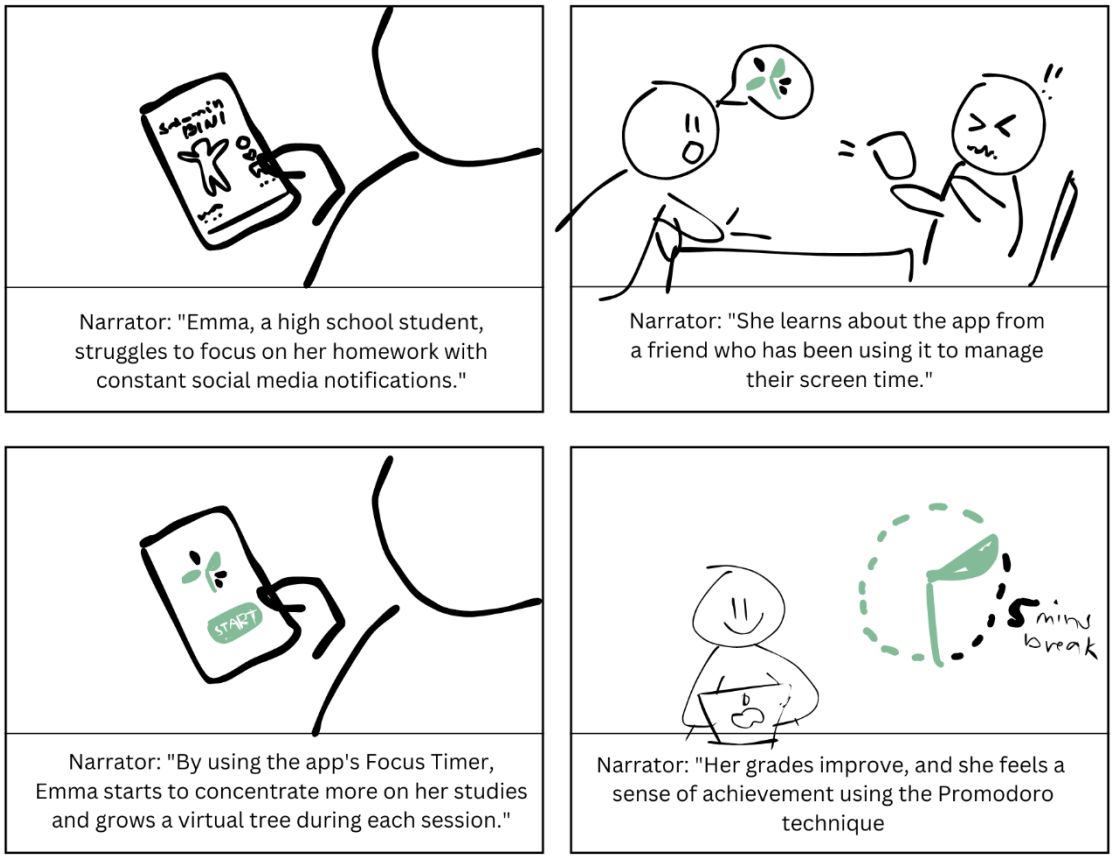
- Compatibility with various smartphone models and operating systems.

Usability Requirements:

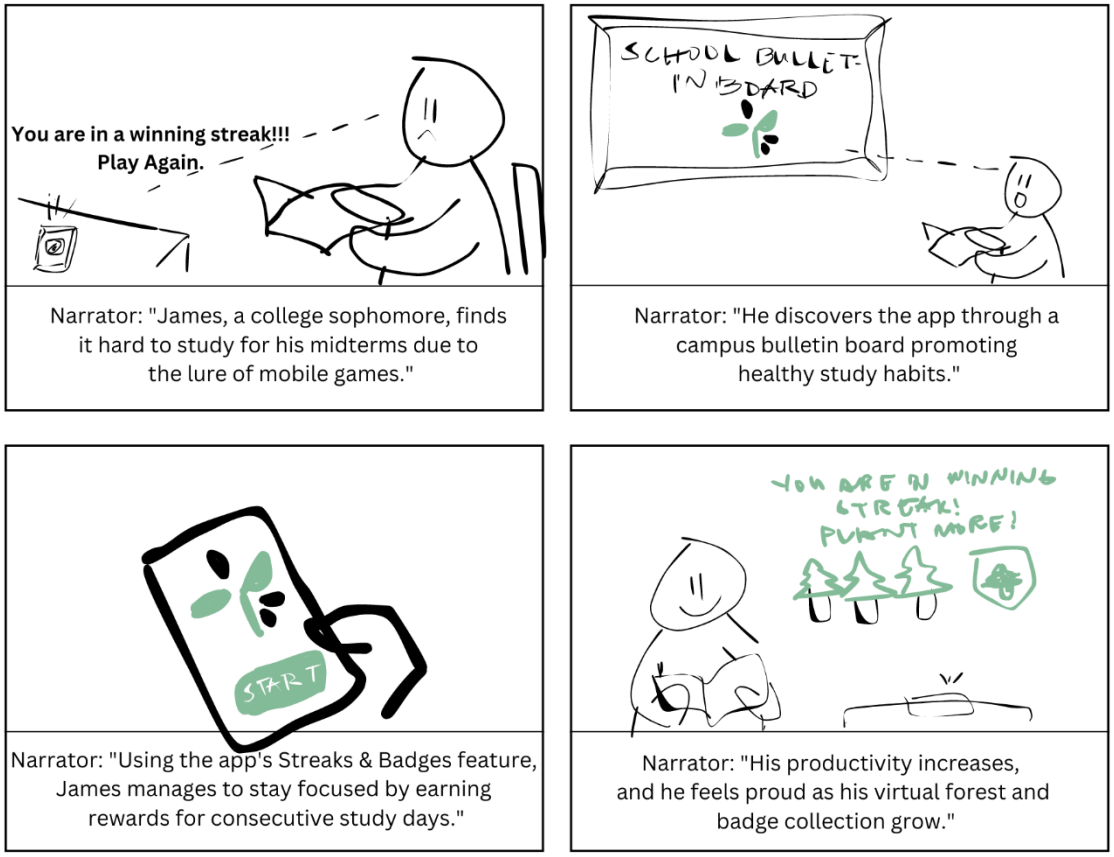
- Intuitive navigation and user-friendly interface.
- Clear instructions and feedback prompts.

C. **Storyboarding and Prototyping**

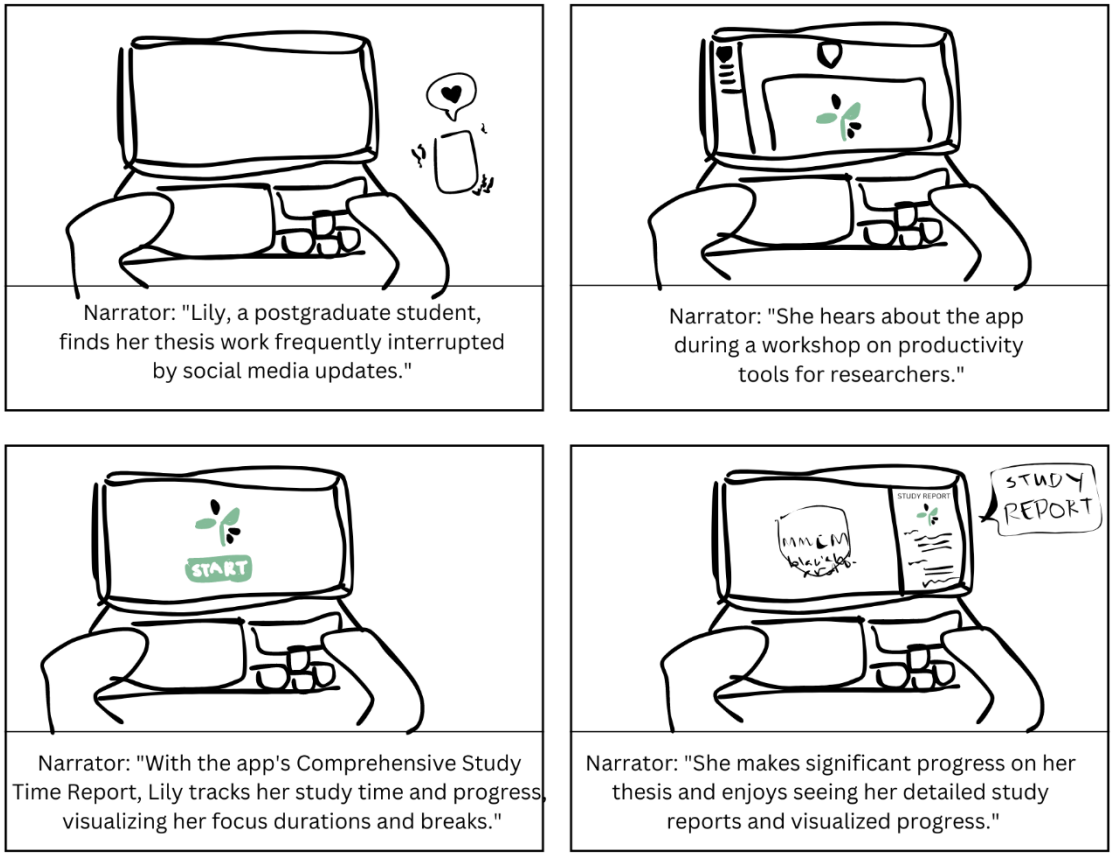
Scenario 1 - "Social Media Distraction"



Scenario 2 - "Gaming Temptation"



Scenario 3 - "Thesis Interruptions"



Evaluation Criteria (Based on the 10 heuristics of design evaluation)

Area of Evaluation	5	4	3	2	1
A. Visibility of System Status - The system design provides appropriate feedback like message prompts in response to user actions. - The message prompts are clear, visible and understandable.	■ ■				
B. Match between the system and the real world - Used words, phrases and concepts according to users' language rather than system oriented words and computer jargons.		■			
C. User control and freedom - The system design provides ways of allowing users to easily "get in" and "get out" if they find themselves in unfamiliar parts of the system.	■				

D. Consistency and Standards - The colors, text, labels, buttons and other elements in the design are uniform from start to finish**.**	■				
- Text and icons are not too small or too big.		■			
- Menus and other features of the system are arranged and positioned in a consistent way. (For ex. If your website has navigation buttons on the top under the page title on one page, the users will automatically look there for the same features on other pages.		■			
D. **Error Prevention** - The system design provides an automatic detection of errors and preventing them to occur in the first place.			■		
- Idiot proofing mechanisms are applied		■			
F. Help users recognize, diagnose and recover from errors **-** Error messages and the terms used are recognizable, familiar and understandable for the users.			■		
G. Recognition rather than recall **-** Objects, icons, actions and options are visible for the user.	■				
- Objects are labeled well with text and icons that can immediately be spotted by the user and matched with what they want to do.		■			
H. Flexibility and efficiency of use - The system design provides easy to navigate menus.	■				
- the system does not make wasteful time of system resources.			■		
I. Aesthetic and minimalist design **-**Graphics and animations used are not difficult to look at and does not clutter (mess) up the screen.	■				
- Information provided is relevant and needed for the system design.		■			
J. Help and Documentation **-**the system design provides information that can be easily searched and provides help in a set of concrete steps that can easily be followed.	■				

Chapter III. Conclusion and Recommendation

issue of compulsive smartphone use. In our digital age, the constant need to stay connected can lead to decreased productivity, increased stress levels, and various mental health challenges. By applying the User-Centered System Design (UCSD) process, we have created a solution that not only mitigates these

negative effects but also transforms the process of reducing phone usage into an engaging and rewarding experience.

The Time Garden app leverages the principles of gamification to incentivize users to spend less time on their phones. By setting timers and planting virtual flowers that grow during phone-free periods, users are provided with a tangible and visually appealing reward for their self-discipline. This approach taps into the human need for achievement and progress, making the app more likely to be used consistently over time.

Our research and development process involved extensive task analysis, requirements gathering, and iterative prototyping. This thorough approach ensured that the app is user-friendly, functional, and aligned with user needs and preferences. Key features such as customizable timers, the ability to whitelist productivity apps, and a feedback system that tracks progress were all designed to maximize user engagement and satisfaction.