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Busy World: 3D To-do Lists App

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R.I.T

Busy World

3D To-do Lists App

by

Zhixiao Shen

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Fine Art in Visual Communication Design

Department of Visual Communication Design

College of Art and Design

Rochester Institute of Technology

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RIT | College of Art and Design

Thesis Approval

Busy World (3D To-do List App)

Thesis Title

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Abstract：

Today, people encounter many arduous tasks every day. Heavy work tasks and tedious tasks always remind people, tormenting people who work hard to live. Life is busy, and there are many things to do every day. Without to-do lists to help us organize the tasks we need to get done each day, our lives would be a mess. Not only that, but unplanned tasks can also trigger procrastination. According to a survey, more than 40% of people suffer from procrastination. Procrastination affects the lives of many people, causing them to be inefficient and waste a lot of time. The central theme of my thesis project is to build an interactive lists to-do system. Help people organize and handle tasks in daily life more quickly and interestingly. Making the tasks to-do list more interesting can promote people's work efficiency and let this system help people develop the habit of planning time and tasks reasonably.

The development of "Busy World" was a UI/UX design exploration. I tried to innovate the way users interact with to-do lists by integrating to-do lists with game elements. This is a bold attempt. When I was designing, I not only considered the practicality of this product as a to-do list, but it was also a design exploration that combined productivity products with games. When I designed Busy World, I hoped that users could combine productivity with games, find an intersection between the two, explore the possibility of breaking the traditional to-do list, and use games to enhance users' use of to-do lists. Use experience, and this creative path is intended to discover potential integrations.

Keywords

Busy World; 3D to-do task; 3D Doll; 3D layout to-do list; 3D interactive to-do list; multi-person collaborative to-do list; Cute 3D interactive desktop layout

Dedication

Thanks to Professor Adam Smith and Professor Mike Strobert for their continued guidance and help with the portfolio. Their encouragement and opinions allow me to improve continuously.
Thanks to my friends Russell Luo, Alice Ouyang, and Nicole Ding for their strong support of my portfolio. Thanks to my friends for their company and my friends’ technical help.
Thanks to Long and Alen for helping me solve technical problems in modeling.
Thanks to my parents and family. Without family love, I would not be where I am now.

Busy World: 3D To-do Lists desktop App

Introduction

This article aims to introduce 'Busy World,' an interactive application designed with an interface akin to a computer wallpaper. The development of "Busy World" was a UI/UX design exploration. I innovated how users interact with to-do lists by integrating to-do lists with game elements, which is a bold attempt. When I was designing, I not only considered the practicality of this product as a to-do list, but it was also a design exploration that combined productivity products with games. This innovative app is a comprehensive tool to aid individuals in effectively managing the myriad tasks of daily life and work, facilitating project time management and daily workload planning.

In a Busy world, users' productivity busy World, users' productivity is combined with games, and the two complement each other. The game design reward mechanism and cute 3D game scene style provide users with an engaging experience, thereby helping users improve their work efficiency. At the same time, completing work can help the characters in the game progress and obtain game rewards, which stimulates users to continuously burst out their passion for productivity. This fundamentally changes the nature of the traditional to-do list, transforming the to-do list from a passive nature that urges the user's productivity to a proactive nature that arouses the user's enthusiasm. Busy World is a beacon of productivity, offering users a dynamic platform to optimize their daily routines and embrace a more rewarding lifestyle.

Problem Statement

In contemporary society, individuals continually go from demanding work responsibilities to mundane chores, and the relentless onslaught of obligations can often feel overwhelming, plaguing those striving to navigate life diligently. Amidst the hustle and bustle, the absence of organized to-do lists would inevitably result in chaos, leaving individuals adrift in a sea of unmanaged tasks. Moreover, the lack of structured planning may exacerbate the propensity for procrastination, a phenomenon afflicting over 40% of adults (Jack Flynn, 2023). Procrastination, in turn, undermines efficiency and squanders precious time, perpetuating a cycle of inefficacy. A study by the University of Scranton found that only 8% of people achieve their New Year's resolutions due to a lack of specific planning and goal setting (Dan Diamond,2023). As the monotony of routine tasks looms, the imperative arises: how can we infuse vitality into our task lists, fostering timely completion and enhancing overall productivity? This question stands at the crux of research inquiry, propelling an exploration

into strategies to revitalize task management, optimize efficiency, and refine project completion timelines.

Design Opportunities

In fact, there are numerous to-do list software options available on the market, but their ratings could be better. Users often download and try these programs, only to abandon them shortly after. Through my research, I have discovered several reasons people may need help finding appealing to-do lists.

Firstly, the amalgamation of work and personal tasks can breed confusion. Many individuals habitually jot down future to-do items without categorizing them. Consequently, when they peruse their lists, they often need help to discern the most important tasks. Research has indicated that the human brain tends to become overwhelmed when confronted with a list containing 7 or 8 options, leading to a desire to disengage (Jeff Stibel, 2018), to combat this cognitive overload, it is advantageous to organize tasks into distinct categories and refrain from exceeding 7 or 8 items on each list.

The second issue arises when individuals encounter a task repeatedly, leading to boredom and diminished motivation. They develop a reluctance to tackle the project, eventually abandoning the idea of acting.

The final challenge is the perennially lengthy nature of to-do lists, which Anne Helen Petersen emphasized in discussions of burnout. Millennials often exhibit pronounced exhaustion (Joe Pinsker, 2020). This pervasive sense of fatigue and life-induced pressure frequently serves as a barrier to initiating action.

Solution Statement

I plan to design this app with a comprehensive strategy to tackle the challenges ahead. Firstly, I'll ensure the system is intuitive and user-friendly, allowing easy access anytime. My vision is to create a simple interface akin to a desktop layout. This design will enable users to look at task lists while working on their computers.

Secondly, the system will assist users in categorizing tasks effectively, distinguishing between urgent and non-urgent matters. By helping users organize their tasks in this manner, they can clearly understand their recent priorities.

The last step is to help users clarify the top tasks in the List. Social psychologist Roy Baumeister and journalist John Tierney, authors of "Willpower: Rediscovering the Greatest Human Strength," reveal in their book that individuals typically juggle a staggering 150 different tasks simultaneously (Roy Baumeister, 2012). Moreover, they highlight the daunting reality that an executive's to-do list for a single Monday could span more than a week's work. This situation appears to be a recipe for disappointment! Therefore, you only need to figure out the tasks that need to be done the most, and users will regularly request other unimportant tasks to read and clear them out to reduce psychological pressure.

When designing the entire interface style, I initially wanted to use a game-style color palette, mainly black and white, but after trying it for a while, I rejected this idea. I chose a 3D game that is more cartoon-style. Color: I always choose bright and highly saturated colors because, in color psychology, bright and highly saturated colors can make people feel physically and mentally happy (Kendra Cherry, 2024). Color can affect human emotions, which for busy world users can help them maintain physical and mental pleasure and increase productivity to a certain extent. Studies have shown colors don't just change our moods. They can impact productivity levels as well. (Jeffrey Steele, 2020) Bright, warm colors (reds, oranges, yellows) stimulate energy and happiness, while cool, subdued colors (blues, greens, purples) are soothing. Therefore, my overall initial tone selection for the entire system Favors pink; I hope it can help users continue to maintain a happy mood and productivity through color cues.

The cartoon image was chosen for the overall style because the public generally accepts cartoon characters. At the same time, cartoon characters can make users feel more peaceful and more likely to arouse people's positive emotions (Gustav Michalon, 2021). Many people think that the cartoon style is more suitable for children, and adults do not like 3D cartoon-style things. This view is very wrong. Research shows that during periods of anxiety or depression, watching light-hearted children's cartoons is a good way to cope with negative emotions. When watching cartoons, the human brain releases large amounts of Endorphins. "Endorphins are "feel-good" chemicals the body produces. They're released from the brain and sent throughout the nervous system to help relieve pain and reduce stress. After releasing endorphins, the brain releases dopamine, another "feel-good" chemical." (Adri Sahakian, 2024) Because of this, users who have been in high-pressure working environments and many tasks for a long time can watch 3D cartoons for a short time. The style of Busy World relieves stress, helps to adjust a good mentality for subsequent work, and ensures work efficiency.

Design Solution

Busy World attaches great importance to users' personalized design and personal experience. Busy World's artificial intelligence technology and game design principles are combined to customize different response mechanisms for each user to create a dynamic user experience, such as character design. Users can freely change race, skin color, hairstyle, etc., according to their own preferences and set their unique character image. Ultimately, users will get their unique animation in the game. On the task, difficulty setting. The system will recommend the number of days and difficulty level required for a project based on big data. However, users can adjust it according to their abilities to ensure that each guest can ultimately complete their tasks effectively. When the user enters a task, the system allocates work based on the task workload. Whenever a part of the work is completed, the system has a corresponding reward mechanism so that users can get very positive feedback. Of course, there will also be mechanisms in the system to deal with users' laziness and negative emotions. Whenever a user wants to quit before the task is completed for the day, the game character will adopt different tones according to the user's different personalities to retain the guests. At the same time, if the task is not completed on time more than five times a month, the system will take back some building decorations as a punishment measure. This system model, which varies from person to person, embodies a Chinese saying, "Teach students in accordance with their aptitude." A good to-do list should understand the user's personality, abilities, and needs and be able to provide different suggestions based on different people. The work planning program helps users maximize user productivity and increase user enthusiasm.

The entire system operates primarily on a reward mechanism, which plays a pivotal role in enhancing work efficiency and motivation (Karthik Iyer, 2023). Let us imagine a user named Gloria gearing up for her workday. As soon as she powers on her computer, Busy World springs into action, proactively reminding her of today's tasks and assisting in categorizing her day's agenda. For longer-term projects, Busy World calculates the required duration and daily workload based on Gloria's input regarding the project's duration and difficulty level. This eliminates Gloria's worries about task assignments. Busy World is not just a typical to-do list but a reward for the user. When Gloria adds a new task, its reward level is determined by its difficulty and duration. Projects completed daily earn ten gold coins, short-term projects (2-7 days) earn vegetation rewards, and long-term projects (over a week) earn new 3D buildings. For instance, if Gloria completes three tasks—45 minutes of exercise, designing a poster (2 days), and preparing a project (2 weeks)—she will earn ten gold coins, a small tree, and a Ferris wheel. In pursuit of rewards to adorn her virtual World, Gloria tackles her tasks with dedication and efficiency. Before starting a task, Gloria can choose where the reward building will be constructed. Once selected, her character will automatically head to the designated

location whenever she begins working on the task. This feature enhances Gloria's efficiency and minimizes distractions. As Gloria accumulates gold coins, she can use them to purchase clothing and other non-reward items to personalize her virtual World further, thereby boosting her motivation. The Small World also allows Gloria to visit friends and collaborate, fostering additional interactivity and engagement. With these features in place, Busy World not only transforms task management but also injects an element of fun and camaraderie into Gloria's workday, making productivity a rewarding experience.

After completing this set of ideas, my ideas and the entire system will be perfect. To obtain the most authentic user feedback, I invited ten users to experience it and obtained some test data. User feedback was critical in refining the reward mechanism within 'Busy World.' Initial feedback indicated that users found the rewards unaligned with the effort required for tasks. Subsequent iterations introduced scaled rewards based on task complexity, significantly enhancing user satisfaction. Tester Alice said that she hopes that the entire system will have a more personalized design. For example, users can generate the 3D buildings they want based on their descriptions. Get rid of cookie-cutter architectural styles. Tester Gigi said that the reward mechanism standards need to be more subdivided. For example, the rewards for tasks that can be completed in 1 week should be different from the rewards for tasks completed in 2 weeks. Otherwise, some users will be lazy and will get 1 Weekly task delayed for two weeks. Tester Russell said that the input method could be simplified to a certain extent. Users can only partially type out the project requirements and content of the entire task. The system can call up tasks based on the keywords entered by the user, saving the user's input time, and improving work efficiency. Based on the feedback from these users, I continue to adjust the entire system and let these users conduct a second round of testing. The test results showed that after adopting the suggestions of previous testers, overall user satisfaction increased by 27%.

Of course, Busy World will have more developments in the future. The first is the birth of some real-life products. Surprise boxes are becoming increasingly popular among young people, and I plan to introduce blind boxes into my reward mechanism in the future. A surprise box is a product where the user does not know what is inside the package. The user may get a rare and collectible design after opening the box. The psychology of having a sparse collection and not knowing what you are going to get can spur user productivity. When a user checks and uses Busy World for a long time and obtains a certain number of gold coins, the user can exchange it for a chance to draw a natural blind grass. This uncertain experience can make the entire Busy World more interesting.
In the future, there will also be developments to improve the overall user visual enhancement of UIUX. With the advancement of VR, 'Busy World' could become the integration of virtual reality to create a more immersive task management environment. VR technology allows for a

more intuitive and natural interaction. Users can directly control the entire virtual environment with gestures, head movements, or controllers. The overall work efficiency of the 3D to-do list will become more convenient and efficient, helping users to increase productivity.
Users will eliminate fixed electronic product display platforms, further increasing their 3D immersive experience. VR can integrate users' lives more with the busy World, allow users to participate in the immersive World, deepen user participation, and allow users to experience more experiences and fun. This increase in engagement can help users manage their time and tasks. In virtual team collaboration, users can work remotely in a virtual environment as efficiently as face-to-face, and the immersive experience can also improve users' focus and efficiency.

Conclusion

Reflecting on this project affirms and embodies the timeless wisdom of the adage, "The better you plan, the more in tune you are with time, and the greater your sense of freedom will be" (Navigating Journeys 2019). Countless tasks need to be handled and completed every day. Constant responsibilities often make people feel mentally exhausted, and the monotonous, repetitive to-do list makes it even worse. However, the emergence of the "Busy World" promises to revolutionize this model, giving people full expectations for the future. 'Busy World' explores how gamification can redefine task management, suggesting a future where digital workspaces become more interactive and enjoyable. "Pleasure and intrinsic motivation can aid in habit formation by promoting greater increases in habit strength with each repetition of the behavior." (Gaby Judah, 2018)) Busy World happens to be a system that is tailored to the individual, increasing the personalization of the program By packaging daily repetitive tasks, it brings positive reward feedback. It improves the sense of achievement after completing these tasks, thereby training users to increase productivity, develop better living habits, and thus more effectively combat procrastination problems. It stands not merely as an app but as a testament to innovation, reshaping the contours of our daily routines and inviting us to embrace a more fulfilling way of living.

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Appendix B: Screen Capture of Semplice Case

RIT College of Art and Design Visual Communication Design

Busy World

INTRODUCTION

Designer: Zhixiao Shen

Committee: Mike Strobert, Adam Smith

Year: 2023

PROMPT

RIT College of Art and Design Visual Communication Design

PROBLEM

Life is busy and there are many things to do every day. Without to-do lists to help us organize the tasks we need to get done each day, our lives would be a mess. Not only that, unplanned tasks can trigger procrastination. According to a survey, more than 40% of people suffer from procrastination. Procrastination affects the lives of many people, causing many people to be inefficient and waste a lot of time.

Main Issues

The main problem is:

1. There are too many items to be completed every day, and I forgot to organize the item list and write them down. Items are often missed.

2. Most of the task lists and schedules on the market are boring, and there is no positive feedback after completing the tasks, which leads us to lack the motivation and sense of accomplishment to complete the tasks in many cases.

3. I don't know how to reasonably arrange the completion time of the project, which is not conducive to long-term persistence and the development of good living habits.

Solution

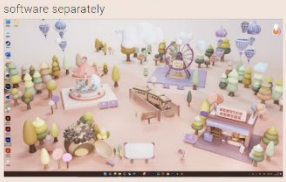
Taking advantage of the fact that people need to turn on the computer for work, design a system that automatically runs at startup similar to computer wallpaper. When the computer is turned on, the program automatically starts, reminding people of the tasks that need to be completed to avoid missing tasks.

In addition, this system is also designed to collect 3D cartoon buildings and cartoon characters as a reward mechanism for users. Make the entire platform more interesting and attractive to users, increase user enthusiasm, and allow users to complete daily tasks and have a pleasant gaming experience.

habits.

Highlight

It runs automatically after booting, and the user can directly use the mouse to operate on the wallpaper, without the need for the user to start other task software separately



Clearly divide tasks, no longer do not know how to plan time reasonably because of heavy tasks

Interesting interactive pages, increasing user experience and fun

Features

Automatically start at boot

In order to prevent users from forgetting to use this platform, I designed the software to automatically start the program when booting. When the user turns on, the computer will automatically run it to replace the computer wallpaper。

Features

Automatically start at boot

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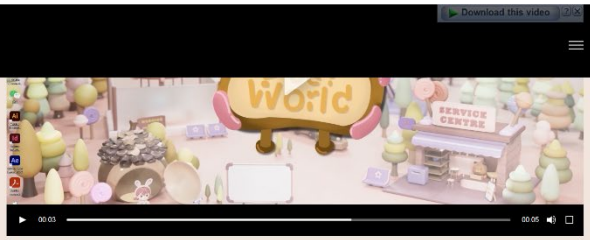
Remind

The doll will greet and remind the user again if a new task needs to be recorded while showing a list of previous tasks. You can clearly see whether there are tasks that are not completed

the computer wallpaper.

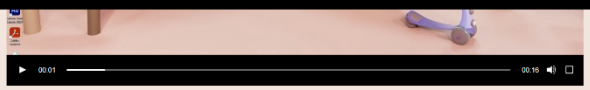


Remind

The doll will greet and remind the user again if a new task needs to be recorded while showing a list of previous tasks. You can clearly see whether there are tasks that are not completed.

To-do List

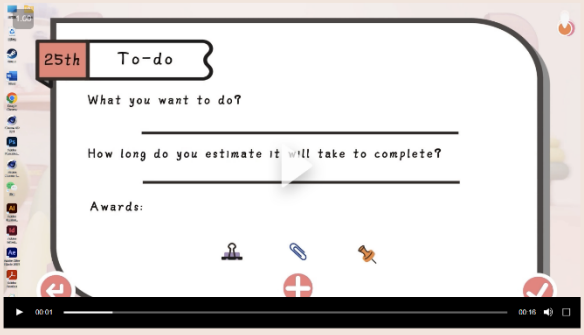
Add new tasks that need to be created. Different reward levels are assigned according to the time required for new tasks.



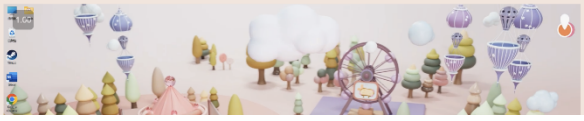
To-do List

Add new tasks that need to be created. Different reward levels are assigned according to the time required for new tasks.
After completing all tasks, you can get gold coins, which can be exchanged for new skins at the service center.
Different 3D models are rewarded according to the time required for different tasks. Projects that take a long time get new buildings.

Projects that require a shorter number of days get vegetation bonuses. such as ferris wheels, carousels, small trains, etc.
Short-term projects (within 1-2 days) correspond to small vegetation, such as trees in a small world.
Daily single items correspond to gold coins. Need to go to the service center to find the little panda to complete.



Choose reward location



Before starting a new project, choose a location to

Projects that require a shorter number of days get vegetation bonuses. such as ferris wheels, carousels, small trains, etc.
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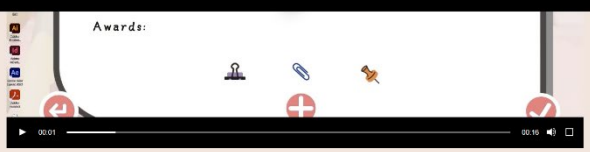
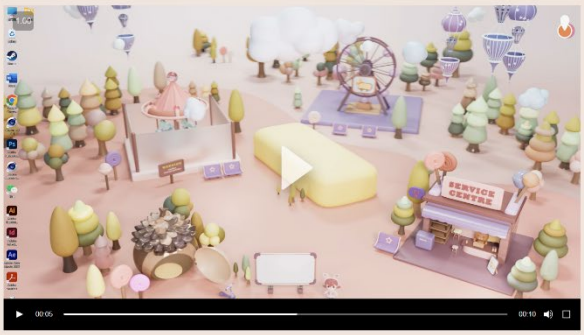


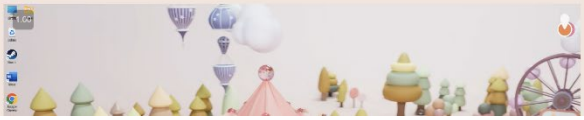
Choose reward location

Before starting a new project, choose a location to reward visits when the project is complete. Users can visit locations at will according to their own preferences.



Start Task

When a user decides to start working on a project. The corresponding buildings in the small world have also started construction. When the user project is



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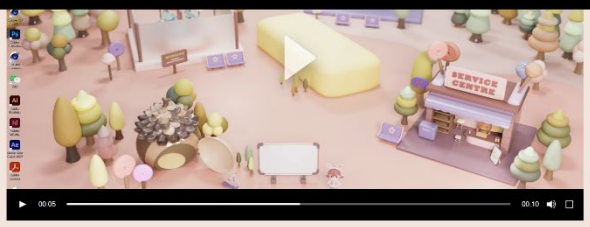
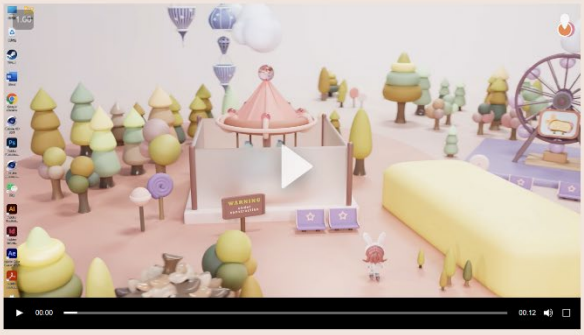


Start Task

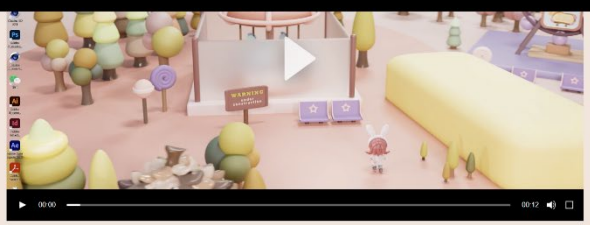
When a user decides to start working on a project. The corresponding buildings in the small world have also started construction. When the user project is completed, the construction in the small world ends.



Congratulations and continue next task

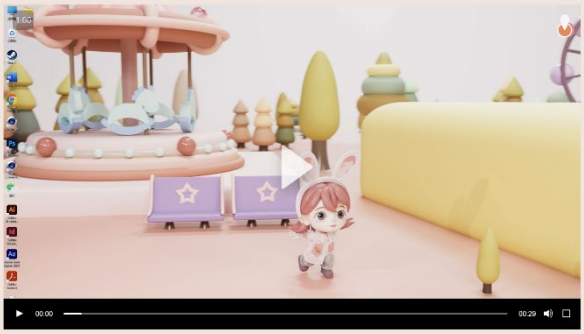
Did not complete a task. The villain will have a celebratory gesture.
After completing one project, the system will ask

completed, the construction in the small world ends.



Congratulations and continue next task

Did not complete a task. The villain will have a celebratory gesture.
After completing one project, the system will ask whether to move on to the next project. Every time a project is completed, the user will get a 5-10 minute rest period. During this rest period, the user can control the doll to play in this small world.
When the project is completed, the reward building corresponding to the project will appear in the small world.



Exchange gold coin

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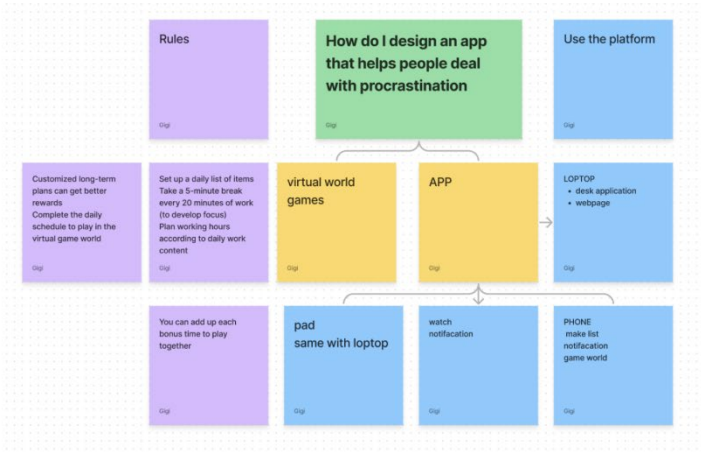
When the project is completed, the reward building corresponding to the project will appear in the small world.

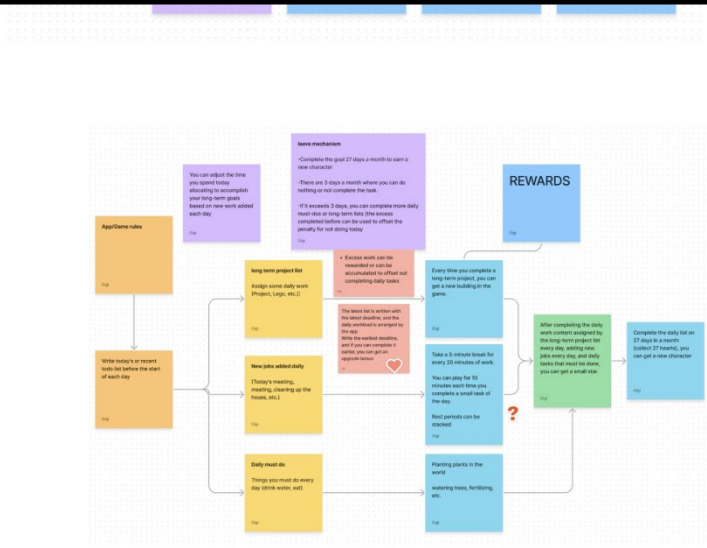
Exchange gold coin

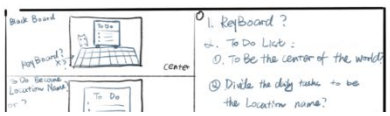
You can get a certain amount of gold coins if you don't complete a project. When the gold coins are collected to a certain extent, you can go to the service center to find bears to exchange for new doll skins.

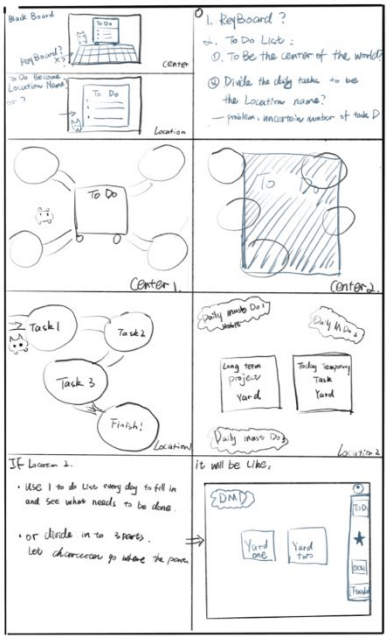
Initial Idea

How Might We



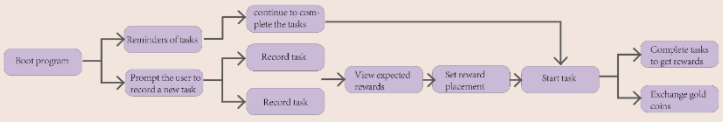






Design

User Flow



color challenge

Plan 1

Plan 2

color challenge

Plan 1

Plan 2

Doll Design

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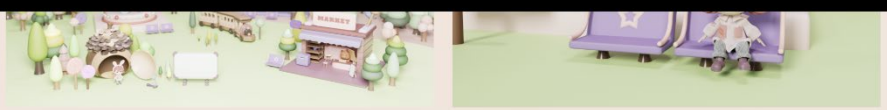
Visual Communication Design



Doll Design

Icon Design

Because the style of my whole work tends to be cute. So when designing the interface, I used cartoon illustration style to make the them. When designing related graphics, I considered that the image should be related to the todo list or task list. So I designed a lot of office elements. Such as clips, thumbtacks, paper clips, etc.!

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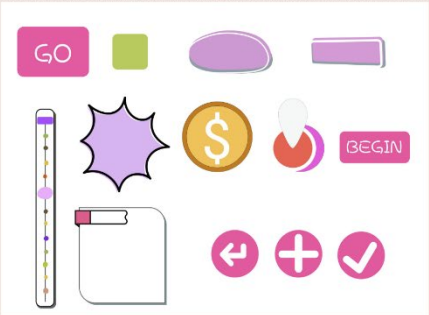
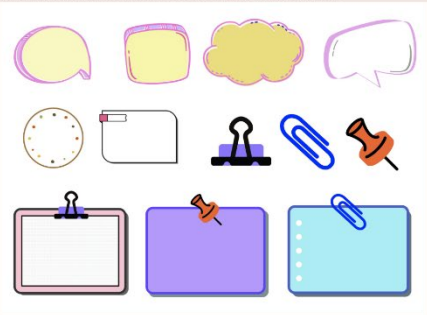
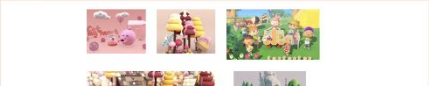
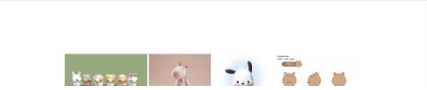


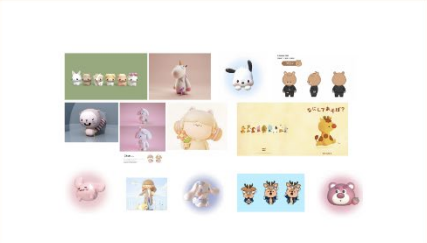


Inspiration





Inspiration



LOGO

Image RIT

Image RIT

I presented my Thesis at the Image RIT show. The guests who came to visit also gave me some suggestions. Some tourists are particularly interested in the dolls and 3D buildings in my small world, and they suggest that I can print these models out through 3D printing technology. So I came up with the idea of the blind box. In the future, my users can receive random blind box models.

Other Branding Design

RIT College of Art and Design Visual Communication Design

Other Branding Design

Appendix C: Website

https://designed.cad.rit.edu/vcdthesis/project/template-2023-duplicate-8