

Assessment 4 Portfolio

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Introduction

Through investigation, we found that many pedestrians are unwilling to wait for traffic lights to be a very dangerous behaviour when there are few vehicles at night. They think that waiting for the traffic lights is very boring. so we designed an interactive game called "Press to boom!" to attract their attention. Reduce the boring when waiting for the red light and encourage them to wait for the red light.

"Press to boom!" This game is mainly for night pedestrians, using the buttons to pump up the balloon in the game until the balloon explodes. According to the survey, the button will attract the attention of the pedestrians and let them want to play the game. Pumping up the balloon will make the user look forward to the balloon explosion effect. The sound effects of the game can increase the user's gaming experience.



Team Structure

Group Charter



YAN JIANG

Leader and programmer, manage the think process



ZIQI BAI

Designer and programmer,focuses on creativity; the possibilities, alternatives, and new ideas.



CINDY

Designer and programmer, focuses on creativity; the possibilities, alternatives, and new ideas.



SHITING LI

Ideation and programmer, focuses on creativity; the possibilities, alternatives, and new ideas.

Team Structure

In this semester, I mainly played the role of leader and programmer in our group. In the group discussion, I was mainly responsible for guiding and summarizing the work. Assign the work of each team member, check the completion of each team member, and then summarize the shortcomings and the areas that need to be revised. In the production of the homework, I was responsible for the production of the final concept. I mainly made the button and then programmed the final concept. Product introduction and product Q&A on the final product display



Contributions



Visual report production:

Market Analysis - Yan

Offline Dino Jumper: Jump the Cars

Jump the Cars is a simple creative game of the Brazilian creative team. The creative team put a transparent plastic plate with a dinosaur pattern on the pillars of the traffic lights. Pedestrians crossing the road can shake the head up and down to let the dinosaurs jump over the cars on the road.

Advantage:

1. This idea can make pedestrians more fun when they wait for the traffic lights.
2. It can also reduce the probability of jaywalking.

Disadvantages:

1. This idea lacks interactivity because it requires pedestrians to shake the head to participate in the game.
2. The game has no result, which will make pedestrians feel tired and bored.

Summary

In summary, road traffic injuries are more likely to occur during nighttime due to drivers' ability to avoid collisions will be influenced by dim lighting. Pedestrians are unlikely to wait for traffic lights due to the waiting time exceeding their psychological expectation. Encourage pedestrians waiting for the traffic light to effectively reduce road traffic injuries. The research demonstrates that colors that are different from the environment or sudden changes can attract pedestrians' attention.

Through our market analysis, we found that these ideas have no actual interaction with pedestrians, so it can't increase the fun for pedestrians when they wait for the traffic light. So our products need to increase interaction with pedestrians so that pedestrians can feel fresh and make the waiting time more interesting.

TIMELINE

	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13
BAI	group meeting, learning code	Making an animation of the Mt. Fuji section	Refine requirements, what we need to buy and complete the project online, write assignment3	Write code and assignment3	group meeting, test the final group together and write the assignment3	Finish the final product and assignment3
CINDY	group meeting, learning code	Making an animation of the starry sky	Buy equipment and write assignment3	Write code and assignment3	group meeting, test the final group together and write the assignment3	Finish the final product and assignment3
SHIRLEY	group meeting, learning code	Making an animation of the ocean	Research how to use these requirements and write assignment3	Write code and assignment3	group meeting, test the final group together and write the assignment3	Finish the final product and assignment3
YAN	group meeting, learning code	Summarize all the requirements, modify and edit the final animation	Learn how to connect the projector with sensor and write assignment3	Write code and assignment3	group meeting, test the final group together and write the assignment3	Finish the final product and assignment3

PROBLEM STATEMENT

The main reason for pedestrians to illegally cross the road is that pedestrians feel waiting times beyond their threshold, long waiting time which far exceeds the psychologically acceptable time of pedestrians. In order to solve this problem and encourage pedestrians to wait for red lights, we've come up with three concepts to improve pedestrians' experience at waiting areas. For the purpose of developing a most effective solution, we are using different research and synthesis methods to test and iterate three distinct concepts and narrow down to a final solution.

Target market:
Pedestrians crossing road at night time

Research methods:
Interviews
Focus group

Analyse methods:
Affinity diagram

Core functionality

What is it?

We designed an interactive game, which is mainly for pedestrians waiting for red lights at night. This game encourages them to wait for a red light by pressing a button to boost the balloon in the projection to reduce the boring feeling.

Core functionality

How it works?

1. When the red light is on, our projector will turn on and the game will be placed on the ground.
2. When the user presses the button, the game countdown screen will appear on the ground.
3. When the countdown is over, the user can press the button to make the balloon bigger.
4. When the balloon becomes larger and larger, the balloon will explode and the game is finished.

The computer uses the e-share screencast function so that the projector can put the screen on the ground, and the sound effect is emitted by the speaker that comes with the projector. The button is connected to the Arduino Uno R3. When the user presses the button, the Arduino Uno R3 will transfer the data to the computer, and the computer will automatically start the game after receiving the data.

Hardware/software requirements

Hardware:

1. Projector
2. Button
3. LED light
4. Arduino Uno R3
5. DuPont line
6. Power supply

Software:

1. Arduino
2. AI

Known issues

Although our products have been greatly improved and improved in the previous rounds of testing and modification, there are still many problems and shortcomings. The following are the main problems and shortcomings of our products:

Our products do not give users enough tips to use, which will cause users to not know how to use this product at the very beginning.

At the end of the game, there was a failure of the database connection. We didn't add the database to the final design. But in the future, we will add the player ranking.

The form of the game is relatively simple, which may make the user feel bored after many uses.

Although our products have many problems and shortcomings, we will continue to improve it in the future, so that they will gradually become a mature commercial product.

Contributions



Research Methods production:

8. Where do you think concept3 is the most attractive point for you?
Because it is more complicated and difficult to understand, he does not attract me.

9. Which part of concept3 do you think you don't like?
The picture projected on the ground is large and complex, requiring too many people to participate. If I am traveling alone, I have no way to participate in this game.

Concept1:
Interview mebing:
1. Do you think that concept1 can help you to wait for the time, why?
I have never seen such a thing like that, I am full of curiosity about this design, if the device is placed in the waiting area I will definitely stop to play it.

2. Where do you think concept1 is the most attractive point for you?
This design is very novel, I have never seen such a thing like this, it is very interactive, it will make people feel curious.

3. Which part of concept1 do you think you don't like?
The game is a bit boring, the change is not a lot, it will be boring to play more. The projected pattern is not very good. I didn't think it was leaves and flowers.

Concept2:
4. Do you think that concept2 can help you to wait for the time, why?
I won't go play, unless I am going to play alone, if I have more people, I don't want to wait for other people.

5. Where do you think concept2 is the most attractive point for you?
The first time I saw this kind of thing, I felt fresh and felt that this thing was very novel and brought me a sense of freshness.

6. Which part of concept2 do you think you don't like?
Concept1:

I feel that this kind of thing is not very involved, it is difficult to attract my attention. I will try it at most, and I won't play it later.

Concept3:
7. Do you think that concept3 can help you to wait for the time, why?
I don't think so. Waiting for the red light is too short. This game will waste a lot of time to match another person.

8. Where do you think concept3 is the most attractive point for you?
I think this game is more suitable for couples or friends to play together, can increase the relationship between couples or friends.

9. Which part of concept3 do you think you don't like?
I won't find a stranger playing games on the street, which makes me feel awkward. Even if I find someone playing the game, it will take me a long time to let two people understand the problem at the same time. The time for the red light has passed.

Concept1:
Interview1 allen:
1. Do you think that concept1 can help you to wait for the time, why?
I will stop to play this thing. This thing makes me feel very curious. I will definitely stand up and try. I would have liked to try something new. This new product can prevent me from red light.

2. Where do you think concept1 is the most attractive point for you?
If there are a lot of people standing up to play together, I might make friends with other people, because the game has strong interactivity and can bring happiness to many people at the same time.

3. Which part of concept1 do you think you don't like?
I think every change is the same. They all grow leaves and flowers. If you play alone, you may not feel fresh, and the pattern is not very attractive to me. If flowers and leaves can look better, it may look more attractive.

Concept2:
4. Do you think that concept2 can help you to wait for the time, why?
I think this will help me pass the time too much, because it looks complicated and it's not easy to figure out. It took me a lot of time to know how to play, so I won't finish it when I wait for the red light.

Test1:
Concept1:
Interview sherry:
1. Do you think that concept1 can help you to wait for the time, why?
Yes, because the time to wait for the red light is very boring, this game will make me more curious. Otherwise, if it is too boring to wait the red light so some people violation of traffic rules. The duration of this game is the same as the duration of the red light, so it will help me to wait for the time and also help me to obey the rule of transport.

2. Where do you think concept1 is the most attractive point for you?
When I put my feet up, it will grow leaves and flowers. I feel very interesting and can attract my attention.

3. Which part of concept1 do you think you don't like?
The projected pattern I feel a bit rough and not beautiful enough, the leaves and flowers are a bit awkward and not beautiful enough to attract my attention.

Concept2:
4. Do you think that concept2 can help you to wait for the time, why?
I think 3D technology makes the picture clear and beautiful. This game is easy to operate, and 3D technology makes the petals of flowers more realistic.

5. Where do you think concept2 is the most attractive point for you?
I think this device is clear and beautiful. 3D technology is more attractive than ordinary projection, I will fully invest in the game when I wait for the red light.

6. Which part of concept2 do you think you don't like?
This design can increase my fun when I wait for the red light, because this game looks very interesting, just like a gold miner.

7. Do you think that concept3 can help you to wait for the time, why?
I think that at night, the traffic situation is complicated and the line of sight is not clear. If I go to play this thing, the car may hit me and cause a traffic accident.

8. Where do you think concept3 is the most attractive point for you?
The form of this game is more attractive to me, I can interact with the two to complete the game, and this cartoon image is very cute.

9. Which part of concept3 do you think you don't like?
I think it would be awkward for two people who don't know to play this game, and this game is a bit complicated to operate. It is difficult to play this game in a short time. Maybe I haven't figured out how to play this game the traffic light will turn green.

Test2:
Interview sherry:
1. Do you think that concept1 can help you to wait for the time, why?
I think this design can help me to wait for the waiting time. This design is very conspicuous. I can see the existence of this projector from a long distance. I would like to go and try it.

2. Where do you think concept2 is the most attractive point for you?
I think this game is easy to operate. When I wait for the red light to press the button, the screen projected on the ground will appear, which will attract my attention. After many attempts, I will know how to play it, so it will kill my time.

3. Which part of concept1 do you think you don't like?
The picture projected on the ground is clear and beautiful. Beautiful flowers will attract my attention and the operation is simple and easy to understand. And the place of the projection is next to the button, it will be quickly found and it is very convenient to play it.

Concept2:
1. Do you think that concept2 can help you to wait for the time, why?
I think that at night, there are dangers of being followed and hurt by bad people at the intersections where pedestrians are less. When people play games, they will focus on it, so they will not pay attention to the surrounding environment, especially for women.

Concept3:
1. Do you think that concept2 can help you to wait for the time, why?
I think this will help me pass the time too much, because it looks complicated and it's not easy to figure out. It took me a lot of time to know how to play, so I won't finish it when I wait for the red light.

Focus1:
Yan: Do you think this game will reduce your irritability feeling when waiting for traffic light? Please explain your answer.
Steven: Yes I feel having this game at waiting area will reduce my irritability feeling, as I don't have to just stand there and waiting for the light turns green.
Mark: I also think having this game, I may waiting for the traffic light. The reason that I don't like wait for traffic light is I can do nothing when wait for traffic light.
Yumi: I think it definitely will. I love this game, I think is a very interesting game and looks pretty at night.
Judy: It will makes me feel less anxious when I waiting for traffic light, playing the game makes me feel less bored.
Nick: I think this product is very interesting, I will be very curious about how to did it, I will also play with it. I think this game can reduce my boredom very well.
Tom: The pattern projected by the projector is very beautiful and looks like the real One. The process of growing leaves and flowers is so novel that it will keep me from being bored when I wait for the red light.
Sherry: I really like Mount Fuji and the starry sky at night, and at night it will make the waiting area is very conspicuous and beautiful. I will go to play this game instead of running a red light.
NaNa: This thing is very novel, I have never seen such a things like that. I will stop to play this game. But if you play more, you will still feel bored.

Focus2:
Yan: After you played this game, what were the best parts of the experience?
Steven: Yes, I like that as well. I feel it very interesting.
Yumi: I also like the pattern changes, especially it has both day and night version.
Mark: Similar to what Judy said, I also like the pattern itself. It is very pretty and vivid.
Nick: I really like the projected pattern, the leaves and flowers are very beautiful.
Tom: I have very interesting, I have never seen such a things like that, I am very curious.
Sherry: The background is very beautiful. Mount Fuji and the night sky is also beautiful.
NaNa: This game is very interesting, and the tree that grow leaves and flowers are very beautiful. With the background image is more beautiful.

Focus3:
Yan: What would you like to change about the experience?
Steven: Yes, I agree with Mark. I think it will be better to have more themes, instead of just growing leaves and flowers.
Judy: I also think it will be more interesting to have more themes showing randomly. This will make pedestrians curious what theme will showing next time and wanna to wait for traffic light.
Yumi: For me the answer will be the same.
Nick: I think it is a bit simple with leaves and flowers, and it would be more interesting if you could have a few different themes.
Tom: I agree with Nick, it is too simple for leaves and flowers. You can add other content.
Sherry: You don't need to change anything, the design is nice very good.
NaNa: I think adding other topics will make the game more rich and the effect will be more perfect.

Interview3 jameis:
Concept1:
1. Do you think that concept1 can help you to wait for the time, why?
I think this design can very well eliminate the boring feeling when I wait for the red light. This design is very creative, I have not seen it in other places, so I will stop and try to play this game.

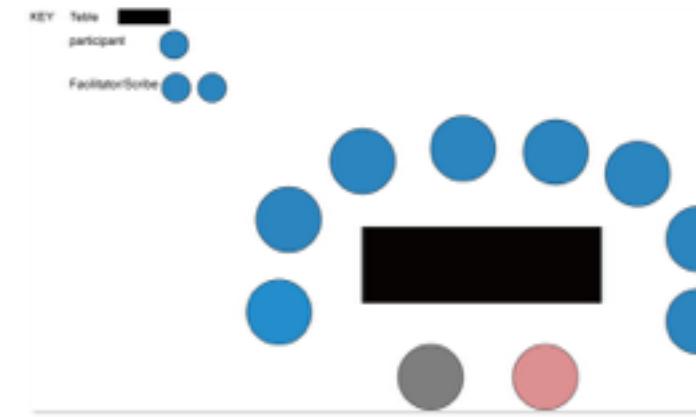
2. Where do you think concept1 is the most attractive point for you?
I think the most attractive thing about this design is that the pattern is very beautiful, and the game is very interactive and very simple, I can easily understand how to play it.

3. Which part of concept1 do you think you don't like?
If there are many people standing on top of it at the same time, there may not be a good projection effect, and the change of the petals may not be seen.

Concept2:
1. Do you think that concept2 can help you to wait for the time, why?
I think this thing will attract my attention at first time, because I have never seen such a thing like that, but I will not play it once I play it. There are not many changes, and it can't bring a lot of freshness to me.

2. Where do you think concept2 is the most attractive point for you?
I think this design is very interactive, and I was the first time to see this technology, it feels very magical, 3d graphics are also very good.

3. Which part of concept2 do you think you don't like?
This design is too singular, there are not many changes, and you won't play any more when you play more. And only one person can use it at a time. If there are too many people, it will cause congestion.

Test 3
Project name: Blooming flower projection test 3
Facilitator: Yan Jiang
Time: 2:00pm
Borber: Yi Ye Cindy He
Date: 20/09/2019
Draw your focus group here:

KEY:
- participant
- Facilitator/Borber

Moderator question or topic
Introduction and warm up
YAN: Hello everyone, I am a university student and I am doing my honours research at the University of Sydney now. Today we want to show you a device that helps people reduce boredom when waiting for the red light at night. thereby reducing the chance of pedestrians smashing red lights at night.
Our project is a projection game. When the light turns red, the projector will project the branching pattern. When you step into the pattern area and move your hands, the projector will project the corresponding flowers and leaves as the number of steps moves. Next, please introduce your name, career and whether you will wait for the red light at night.

Participant responses
Steven: Hi, everyone. My name is Steven Lin, I am a third year university student study at University of Sydney. I sometimes feel bored when waiting traffic light at night where there are no cars coming through.
Yumi: Hello, my name is Yumi Chen, I am a interior designer. My life is quite busy I am often work overtime sometimes. I will wait for the red light at night even though there is no car coming through.
Judy: Hey everyone. My name is Judy Qin, I am an university tutor and a master student study at Macquarie University. It makes me feel anxious when waiting for traffic light at night.
Mark: Hi, everybody. My name is Mark Zhu, I am a cashier working at Starbucks. I normally finished my work around 10 pm, I normally come down the waiting for the traffic light I am not in a mood of fun. Because in the late night there are no car coming through I will cross the road.
Tom: Hello everyone, my name is Tom, I am a waiter in a Chinese restaurant. Because our restaurant was closed when the night comes, so I will wait for the red light when the road to that I can go home early to rest.
Sherry: Hello everyone, my name is Sherry, I am a high school student. I never run a red light, I am a waiter to wait for the red light.
NaNa: Hello everyone, my name is NaNa, I am a teacher. I won't run a red light, I need to give the students a role model.

Focus1:
Steven: Yes I feel having this game at waiting area will reduce my irritability feeling, as I don't have to just stand there and waiting for the light turns green.
Mark: I also think having this game, I may waiting for the traffic light. The reason that I don't like wait for traffic light is I can do nothing when wait for traffic light.
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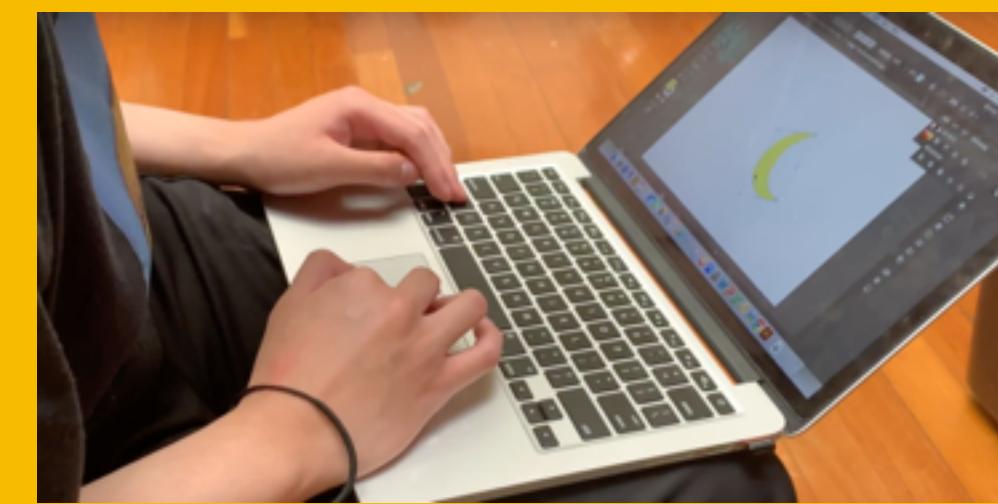
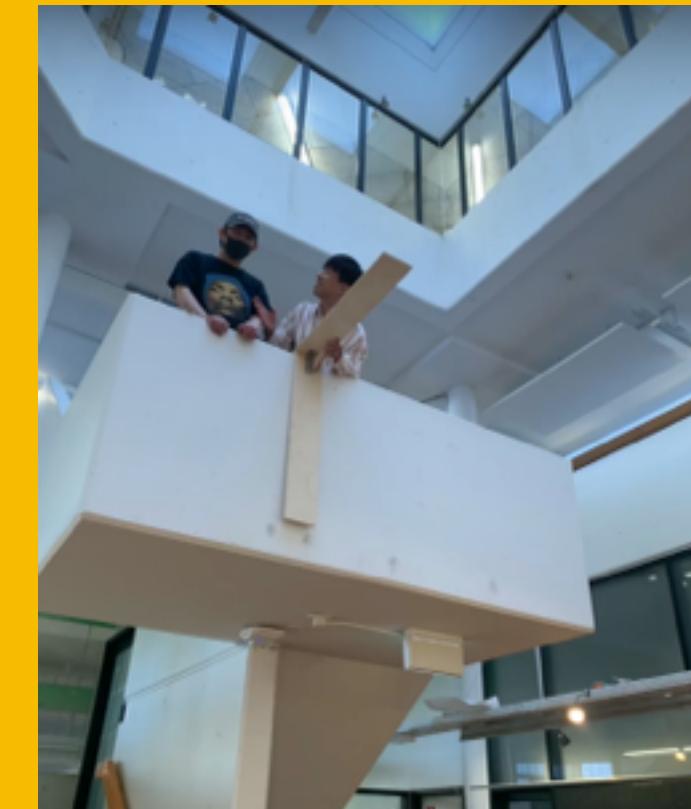
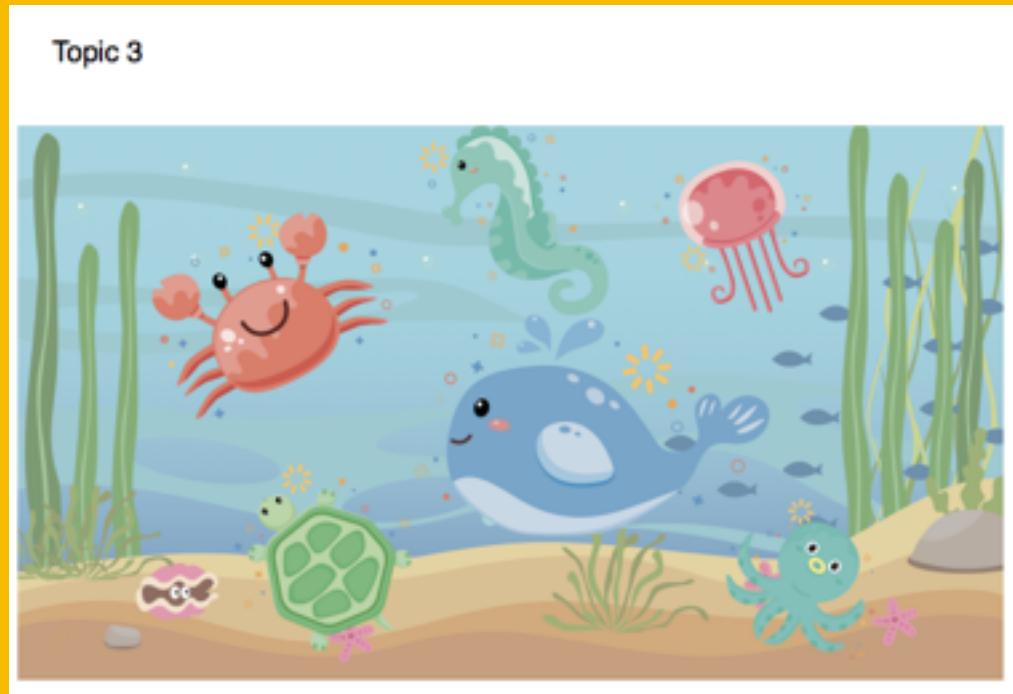
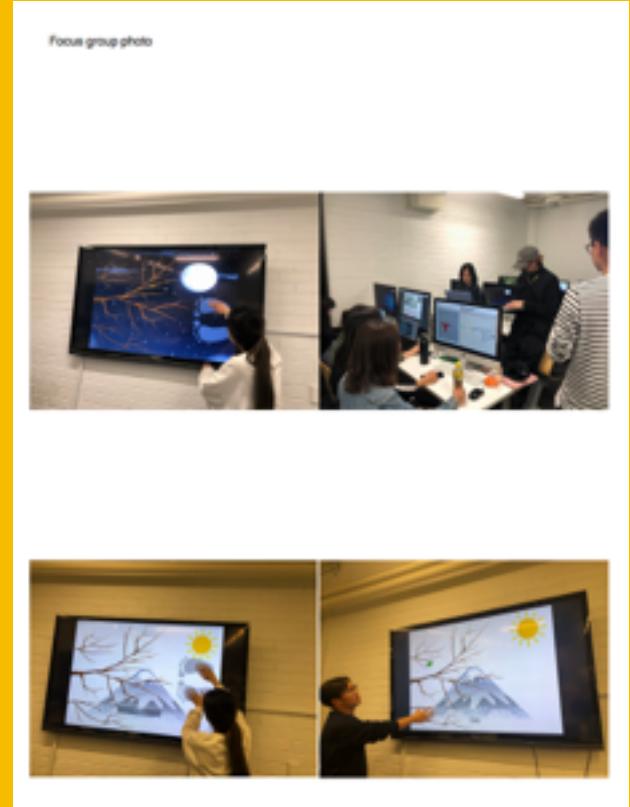
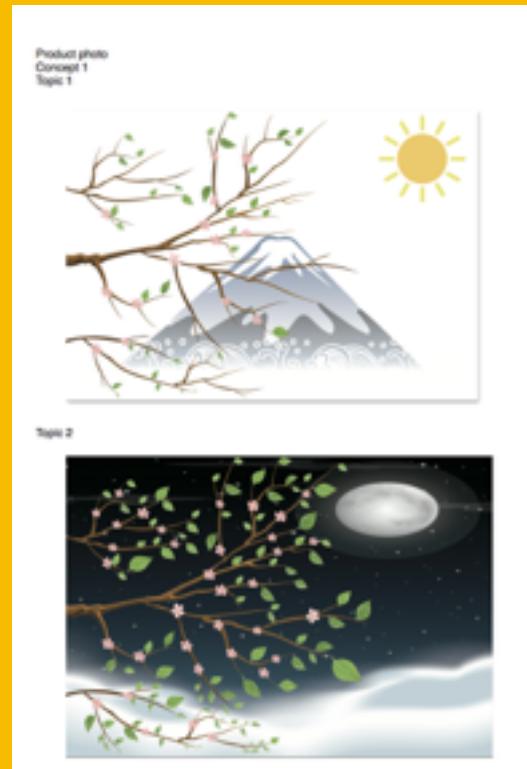
Focus2:
Yan: After you played this game, what were the best parts of the experience?
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Focus3:
Yan: What would you like to change about the experience?
Steven: Yes, I agree with Mark. I think it will be better to have more themes, instead of just growing leaves and flowers.
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Contributions



concept make and others:



Challenges

We encountered a lot of difficulties in this semester study. We didn't have an idea at all when we first thought about concepts. In the first three programs, there are two programs that we have never touched before, and the later production will be very difficult. After deciding on the final concept, we found that our concept can not give the user a sense of expectation, it will be very simple, so we have revised the concept three times. At the time of making the final concepts, our projectors could not be installed smoothly due to our site, and there was a problem with the connection between our database and the game. In the production of the button, the initial button can not be used normally, and the button with the button can not normally put the button into the box.



Challenges

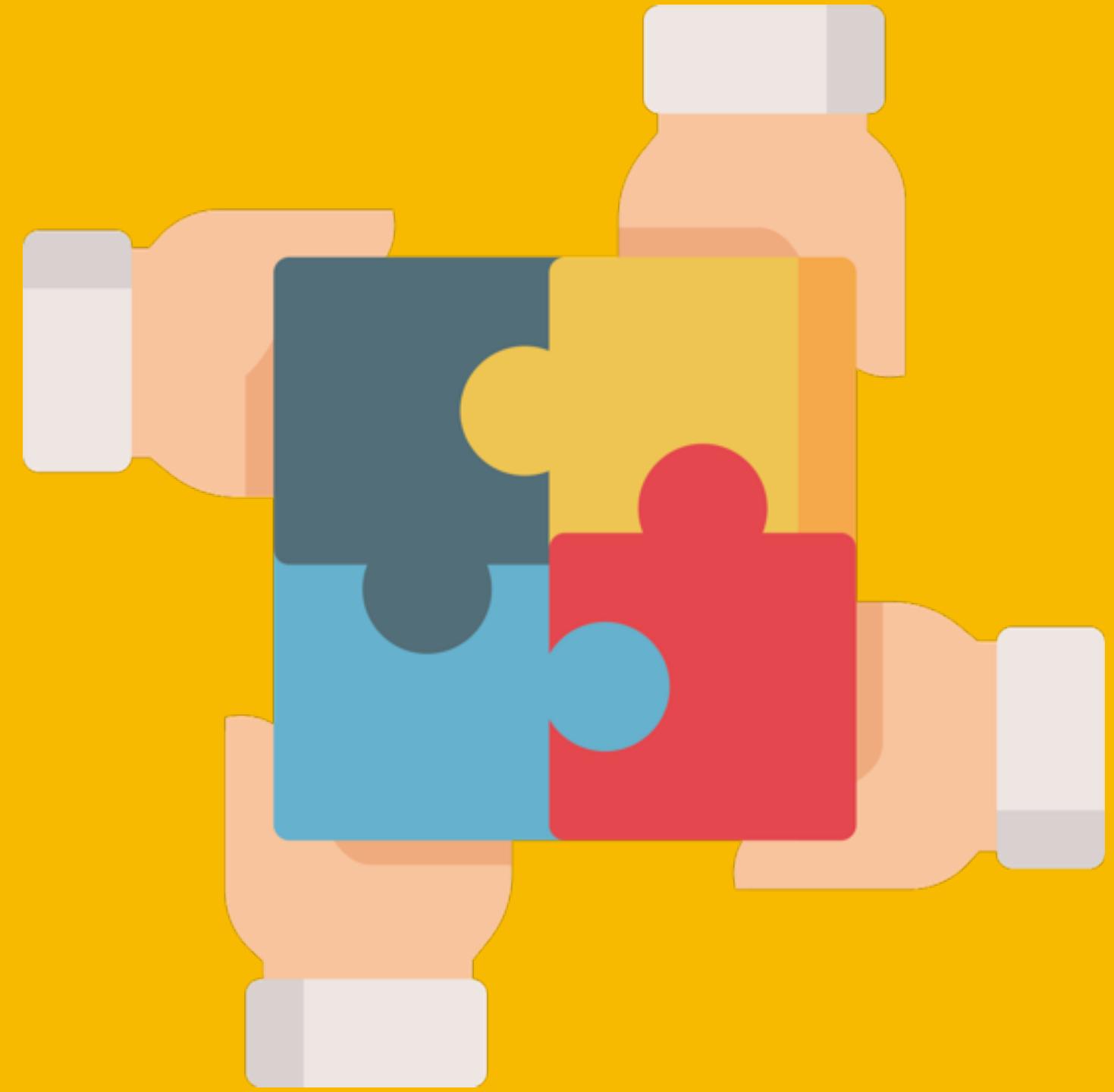
When there was a problem, each of our team members did not give up. Everyone is proposing their own ideas and opinions for solving the problem. When we didn't have an idea at first, we had many online surveys and interviews, and we asked the teachers and others for their opinions. Finally, we got three plans. When there was a problem with the final concept, we promptly consulted the teacher's opinion, then conducted a group discussion, conducted inquiries and revisions of the information in our inadequacies, and then tested and interviewed the user community. When the projector was not safely placed, we replaced the large projector with a small projector and fixed the small projector to the wall with tape.



Challenges

The creation and connection of the database is the biggest problem we encountered. We consulted a lot of materials and videos and asked the relevant personnel to solve the problem still did not solve the problem, so we eliminated the user ranking in the final product. In the production of the button, because the size of the hole on the board and the button did not match, we cut and punched the wood several times, and finally completed the production of the box.

When we encountered problems, every member of the group actively participated in the discussion and problem solving. Everyone actively participated in the cooperation of the group, cooperated with each other and helped each other. All the production and assignment work clearly and tacitly agreed, so it is a good way to overcome all the difficulties.



Final Reflection

During this semester, I actively participated in every activity and discussion in the group. In the group discussion, I was mainly responsible for guiding and summarizing the work. Assign the work of each team member, check the completion of each team member, and then summarize the deficiencies and areas that need to be revised in time. I completed the tasks I should have completed on time. Everyone in the group was very happy to cooperate. Everyone did a good job in their tasks. Finally, everyone worked together to complete the final design.

Through this semester study, I found that I still have a lot of deficiencies. I hope that in the future study, I can increase my ability to write code, improve my ability to speak and write, and Better allocation and utilization of time.

Our team will continue to improve our design in the future, we will continue to try to connect the database to the game, so the game will become more challenging. We will also connect our games to traffic lights so that the game is synchronized with the traffic lights to make the game more perfect.