Assessment 3 Portfolio

Group name: Ayo everybody
Steam: B
Name: Ziqi BAI
Unikey: zbai2547

Introduction

Problem statement

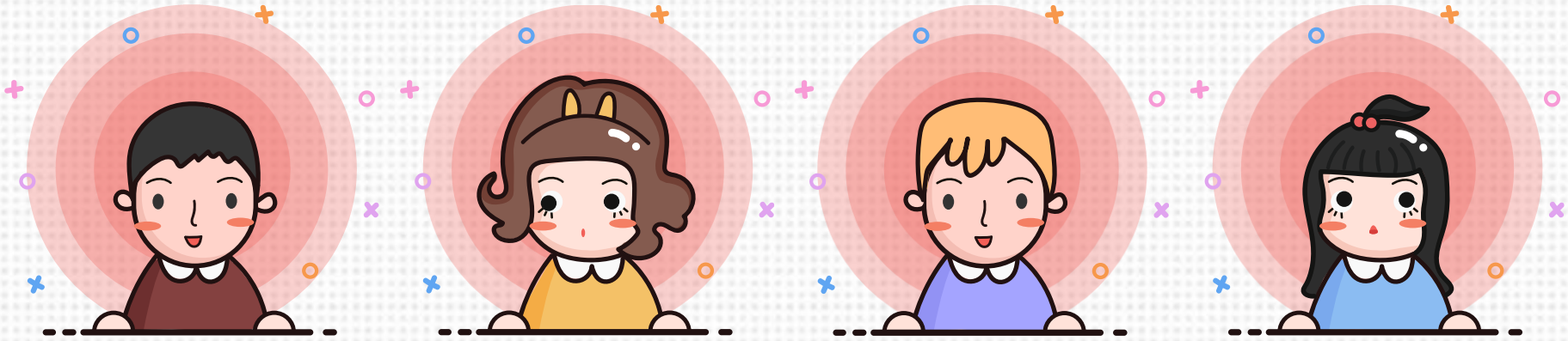
The problem we solved was that pedestrians crossed the road illegally at night. The main reason for pedestrians crossing the road illegally is that pedestrians feel that waiting time is beyond their threshold, and the long waiting time far exceeds the psychological capacity of pedestrians. To solve this problem and encourage pedestrians to wait for the red light, we use projection interaction technology to reduce the boredom of pedestrians waiting for the red light at night and increase their experience in the waiting area.

Description of the final concept

We designed a projection interactive game for pedestrians waiting for the red light at night. This game reduces the boredom of pedestrians waiting for a red light by encouraging pedestrians to press the button to explode the balloon in the projection. This game combines Arduino UNO r3, computer, buttons and projection to create a realistic interactive scene.

Team Structure

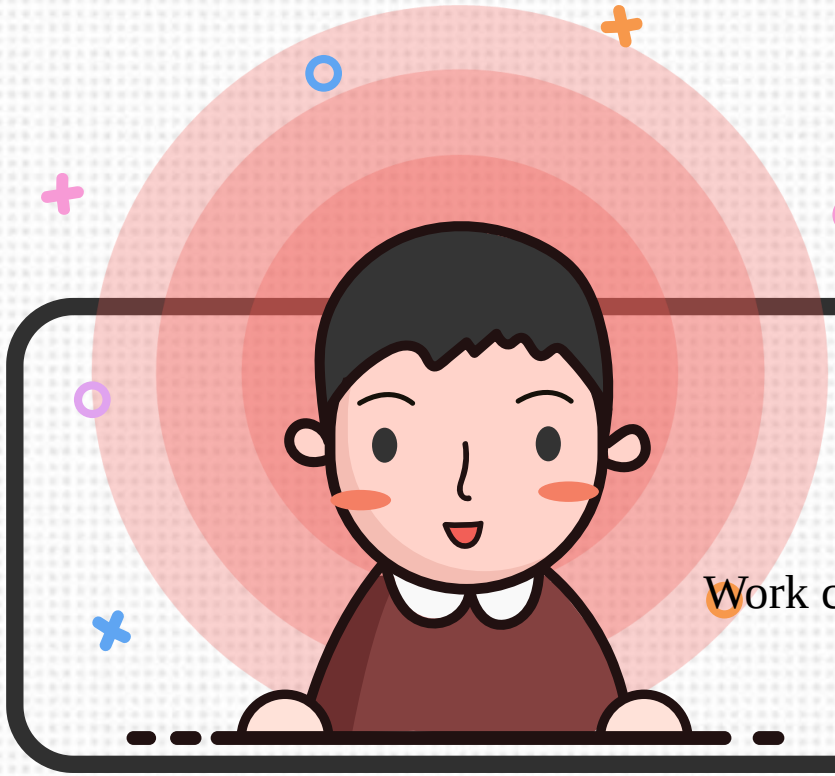
Team members



Name	Ziqi BAi	Shiting LI	Yan JIANG	Cindy
Role	Designer and programmer	Ideation and programmer	Leader and programmer	Designer and programmer
Work content	Focuses on creativity; the possibilities, alternatives, and new ideas.	Focuses on creativity; the possibilities, alternatives, and new ideas.	Manage the think process	Focuses on creativity; the possibilities, alternatives, and new ideas

Team Structure

My role



Name: Ziqi BAI

Role: Designer and programmer
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Work content: Focuses on creativity; the possibilities, alternatives, and new ideas.

In the group work, my role is designer and programmer, I mainly complete these parts of the assessment:

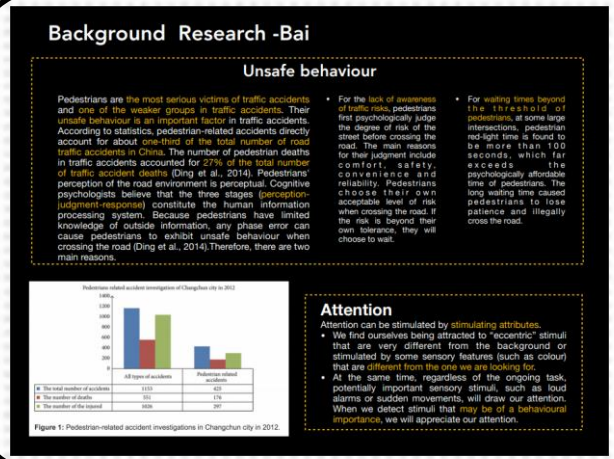
Assessment 1
1. Background Study
2. Design a complete concept (including principles, usage, and prototype)

Assessment 2
1. Making a prototype of myself
2. Collection of test data
3. Summary of each round of testing
4. Advice on the final concept

Assessment 3
1. Final product assembly
2. Scene layout
3. Introduction and setup instructions in the Reports
4. Participated in shooting video

Contributions

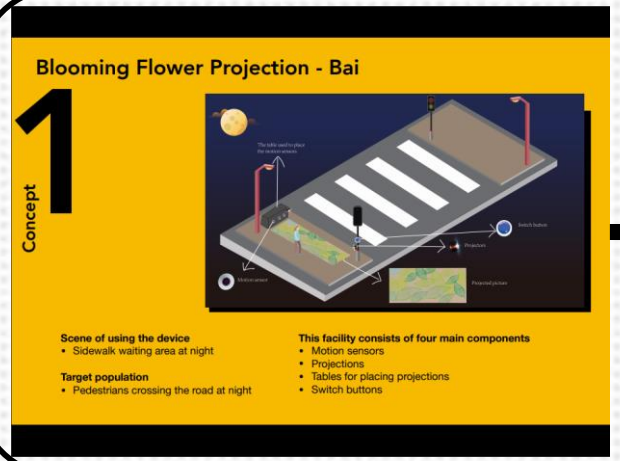
Assessment 1

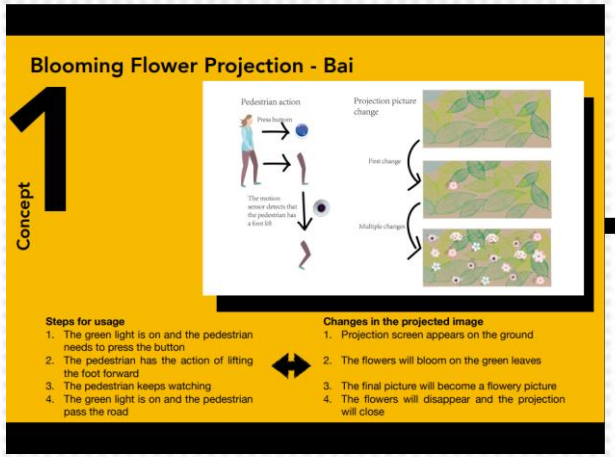


Background research

In Assessment 1, my main contribution has two aspects:

1. I did some background research and laid the foundation for our concept.
2. I made a complete concept (including principles, required equipment, usage and prototype) and analyzed the pros and cons of this concept.

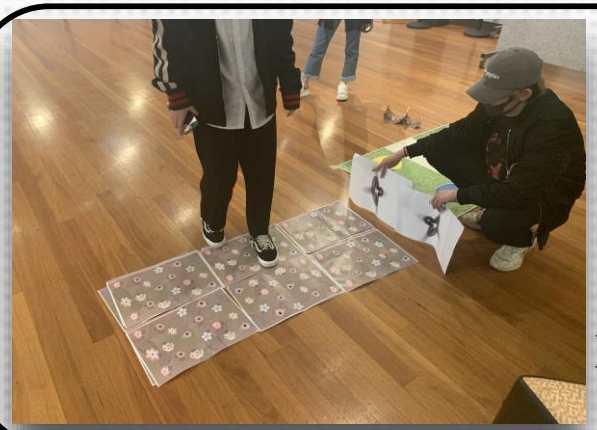




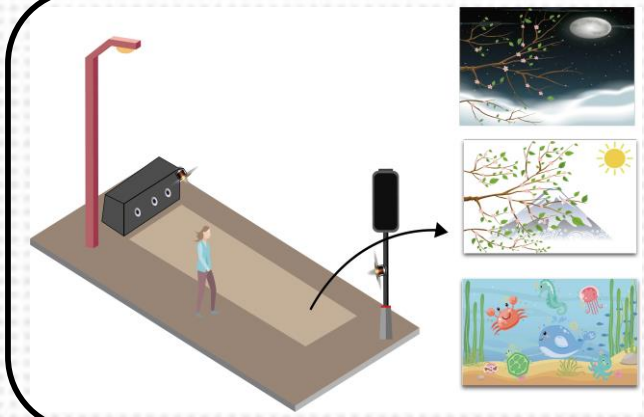
The process of my concept

Contributions

Assessment 2



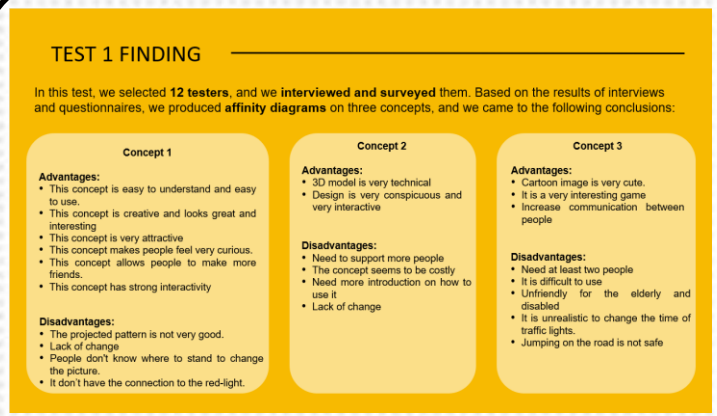
Test data collection and prototype production

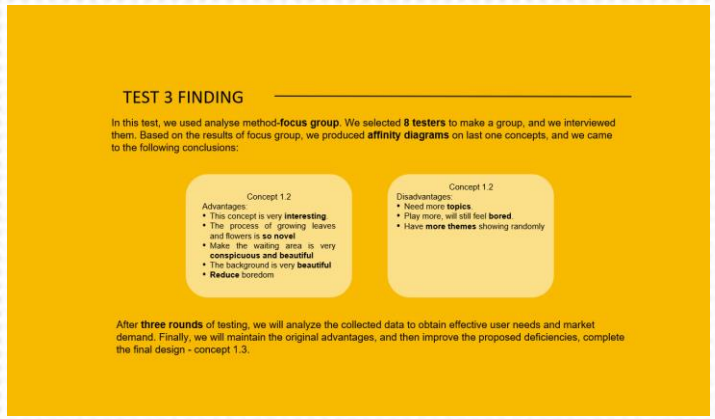


Final proposal for prototype

In Assessment 2, my main contributions have four aspects:

1. I made prototypes for each version of my own program.
2. I collected a portion of the data for each test.
3. I have summarized and analyzed each of the data and provided support for their improvement.
4. Through testing, I provided suggestions for the final plan.

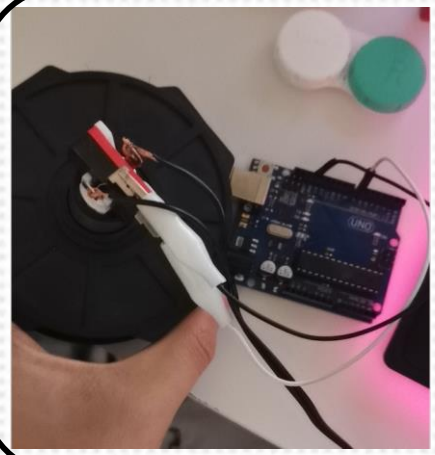




Three rounds of testing's findings

Contributions

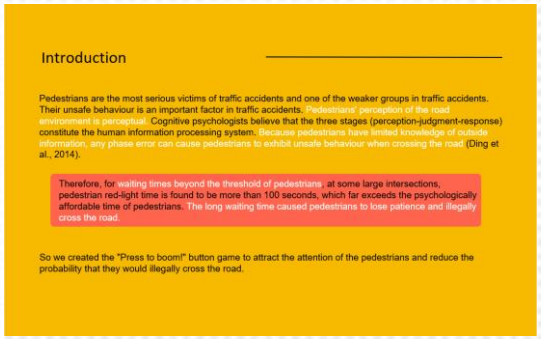
Assessment 3

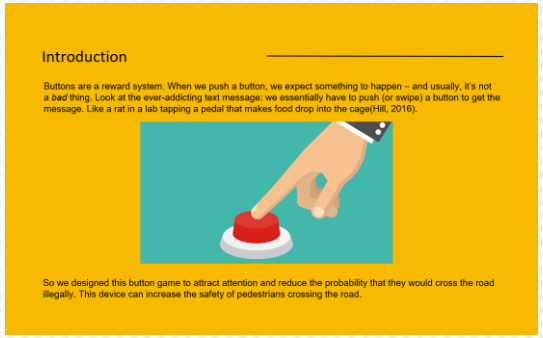


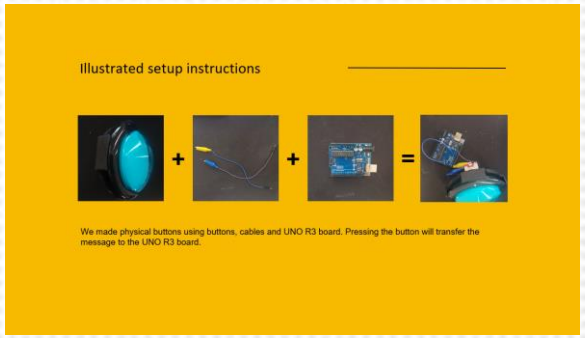
Final product assembly and scene layout

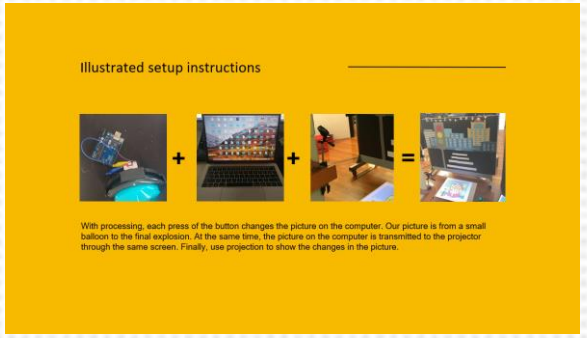
In Assessment 3, my main contributions have four aspects:

1. I made a part of the High fidelity prototype and assembled them.
2. I was involved in making the scene simulation, we simulated the waiting area at night.
3. I completed the Introduction and setup instructions in the final report.
4. Participated in shooting video









The parts of report

Challenges

Assessment 1

Problems

In background research, we cannot find enough theory to support the problems we are studying

In market analysis, we can't find similar products to compare

In the concepts, the concept we originally thought of is not good enough.

Solutions

For background research, we looked for more information and thought about it from multiple perspectives. (like the reason for illegal crossing the road and what attracts attention)

For market analysis, we choose not to focus on the waiting area, but to choose products with the same principle. (like interactive projection)

For concepts, each of us has produced multiple original concepts, and then through fusion and selection to determine the final concept of each person.

Challenges

Assessment 2

Problems	Selection of research methods and analytical methods	The degree of prototype production	Production of Final concept
Solutions	We finally chose Interviews and Focus group as the research methods and Affinity diagram as the analysis method.	We chose to create a prototype that can be projected in the third round of testing. This prototype has the scene we envisioned, but uses animation instead of programming. Create the best test experience for users.	For concepts, each of us has produced multiple original concepts, and then through fusion and selection to determine the final concept of each person.

Challenges

Assessment 3

Problems	Because our concept has no clear purpose, we temporarily changed the contents of the concept.	We have a lot of difficulties in programming.	The lights make our projections not clear enough
Solutions	We improved the content of the concept at the teacher's suggestion, and we spent some time testing it. We have made sure it is feasible. We spent more time on preparation.	We looked at a lot of tutorials and asked friends who learned programming. Finally, we lowered some of the difficulty and removed the ranking of the game by button time. The programming was finally completed.	We chose to use black cloth to block the sun and the lights, and we adjusted the projector. Then we arranged the scene of the night waiting area in the black cloth to give the tester a more realistic experience.

Final Reflection

How well did you work in your team?

I think my performance on the team is not good enough. Although I completed my own part as required, the completion was not perfect. At the same time, I have not played a big role in both creativity and programming. I can do better.

What could you have done differently?

I am very confident in analyzing the data. I can analyze the data obtained in a structured way to support the improvement of the later works. At the same time, I provided support to the team in terms of hands-on operation. I hope that I can try more programming and provide more good ideas.

Will your team continue to work on the prototype further?

Our team will continue to improve this prototype. The goal is to increase the ranking of the game by button number and enhance the competition between pedestrians. Also, link the device to the traffic light. Make sure the projection and traffic lights are turned on and off at the same time.

END