PATH_Report_1

2018.04

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Part 1: Statement of Work & Requirement

1. Requirement analysis

1)Eliciting requirements:

YU YENCHIA, Zhao Yun, Zhao Binqi, three Grade 2 students from TJU in Jiading. They all like skateboarding but in Jiading it's hard to find a good path to skateboard. Once they found a good path, they have to lead others to there next time otherwise nobody else will know that place. They know that there are lots of students in the campus skateboard, but they don't know where exactly those students skateboard. So they are thinking to create a APP which can bring everyone loves the same sport together and share information to each other.

2)Analyzing requirements:

"have to lead others to there next time otherwise nobody else will know that place"

Why:

1. They are willing to share their experience to others
2. They don't have something that can record a track and lead others through it.

"hard to find a good path to skateboard"& "don't know where exactly those students skateboard"

Why:

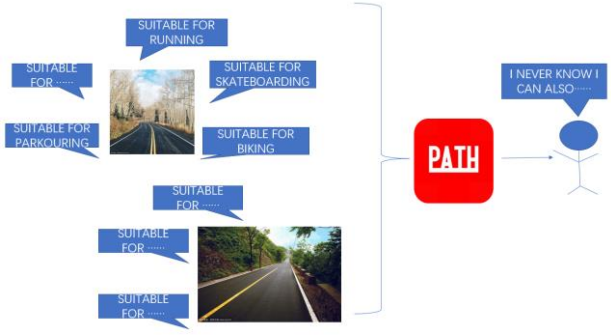
1. People with same hobby in the same place are not being connected
2. People are always trapped in thinking set, it's hard to find another function of the same place by ourselves.

3)Major ideas:

According to the analysis, we want to create an app in which the users can record a single path they have walked, skateboarded or parkoured by redefining the roads' name and function as they like and sharing it to anyone who is using PATH.

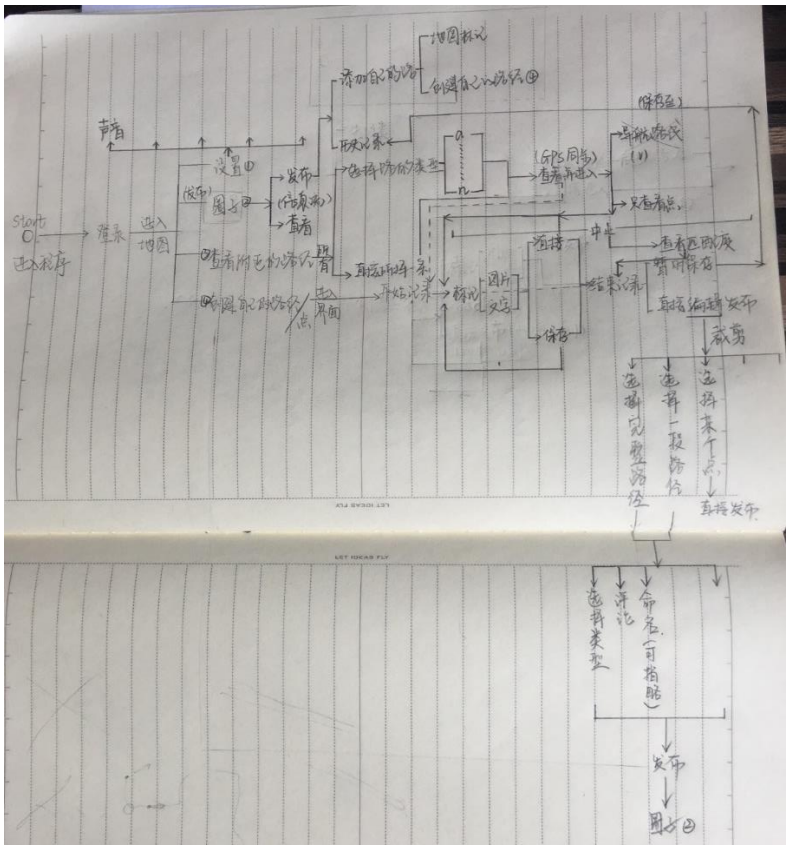
On the other hand, users can find those paths which have been redefined and go through it for themselves. When they are on this "redefined" path, they can see the spots the definer tagged and share their feelings after and while finishing this journey.

Our target users are young people, tourists, or someone love outdoor sports . What we want to do is making going outdoor more intriguing and offer people a brand-new perspective to look at the city.

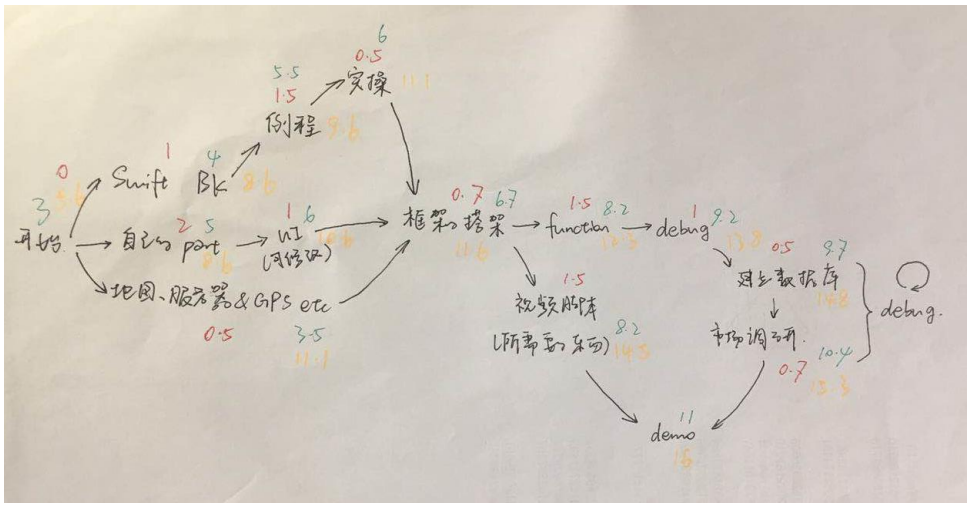


2.Deliverables:

Our major deliverable is an iOS app. To log in this app, you can use a PATH account, wechat, qq account or your phone number. After logging in, you have 4 options: “setting”, “select a path”, “create a path” and “moments”. In the “setting section”, you change some basic setting up including account, sound, display, etc. “Select a path” section is the background of main interface. You can see all the “redefined” path around you and select one to fallow the track and make some comments to the creator. In the “create a path” section you can record you track and “redefine” its name, function, add some interesting spots on it and share it to everyone using PATH. “Moments” is an additional function and it will not appear in the demo. The main idea of “moments” is that people can share their instant moment like weibo or facebook.



3.Planning



Our project is divided into four parts, of which are as follow, earlier stage knowledge acquirement, the formation of logic of the app, launching of the beta version and the last part, market investigation and the making of the demo.

Why do we divide our work in such a way? Obviously the learning part is a must, and when we gain enough perceptual understanding of the making of an app, we can move on to the next part, which is the formation of the skeleton of the app, aka, its logic frame, this step is consistent with the prior step, without which it can't be realized. The next is the construction of the beta version of the app, of which it'll need mass programming, at the meantime, we shall establish the database, we estimate this process will be faced with a great deal of debugging, thus we allocate five weeks of time for this process.

The first part is earlier stage knowledge acquirement, of which

1) acquiring relevant knowledge, we divide this into two parts according to our teammates. The common part is about language Swift, platform iOS and programming software Xcode, we allocate about three weeks for this part,

meanwhile, we shall each learn about our parts, including the construction the servers, GPS and location, the realization of the map and the design of UI/UX.

2) The study of concrete examples offered online (one and half weeks), aka, finding and studying the realization of the apps that are map-based and are on iOS platform. We expect our team members to read the most basic iOS software and know their algorithms.
3) The actual programming (half a week), requires a summarizing of all the knowledge we gathered from earlier.

The second part is the construction of the logic frame of the app (one week), in which phase we shall understand the app more deeply.

The third part is the beta version of our app (four weeks), which includes the confirmation of the functions (a week and a half), debugging (a week), the construction of the database, and through this process, we shall continuously debugging. As the pouring in of our users, we expect more and more bugs.

The fourth part is the market investigation and the making of the demo (two weeks). Collecting the materials our demo needs, making the questionnaire and analyzing the mass data.

Throughout the management, we apply activity-on-node method, and in general the whole process will take approximately thirteen weeks.

Schedule-on-Time

Earlier Stage Knowledge Acquirement Mar.13-Apr.13	acquiring relevant knowledge
	The study of concrete examples
	The actual programming

Construction of the Logic Frame of the App Apr.13-Apr.24	understand the app more deeply

Launching Beta Version of the App Apr.24-May.22	confirmation of the functions
	debugging
	the construction of the database

Market Investigation and the Making of the Demo May.22-June.6	collecting the materials
	making the questionnaire
	analyzing the mass data

Part 2: Functional Requirement Spec. &UI

1.logo design

Launching PATH, where you will find more interesting things and get to know more interesting souls... In PATH, we let you have a taste of something different in the bland life by allowing the users give new names and classify the roads based on interest, and furthermore, experience the new fun of each different road, fall in love with a new world full of fun and challenges!

Logo design concept: The logo body is composed of red and white. The red and white colors represent the vitality of life. In the report of the 19th National Congress, President Xi Jinping pointed out: "The major contradictions in our society have been transformed into a conflict between the people's ever-growing needs for a better life and unbalanced development." This is one of the inspirations of our app development. With the ever-increasing need for a better life, we must also follow the times and create an app that encourages everyone to go out and discover and experience the better life. The theme of the logo is the name of the app. The last one of the four letters of the app is a symbol of

our joint efforts. The members of the group have a single heart and can be seen as a path, which corresponds to the original connotation of the path.

2.Main function UI design and Use Case

Table 1

ACTOR	GOAL	USE CASE NAME
Creator & User	Log in app	Log in(UC-1)
Creator	Create a path	Create(UC-2)
Creator	Publish the path	Publish(UC-3)
User	Select one path and start trip	Select(UC-4)
User	End trip and see result and make comment	End trip(UC-5)

Table 2

REQ1	Show log in page
REQ2	Show map
REQ3	Jump page when press specific button
REQ4	Show specific functional button
REQ5	Display a pop-up window
REQ6	Record track
REQ7	Trace existing path
REQ8	Add new path to map

Table 3

Req't	UC1	UC2	UC3	UC4	UC5
REQ1	X				
REQ2		X		X	
REQ3	X	X	X	X	X
REQ4	X	X	X	X	X
REQ5	X			X	
REQ6		X		X	
REQ7				X	
REQ8			X		

1) Log in page

PATH basically consist of red, black and white three colors. In the log in page, you can log in with normal PATH account as well as qq, wechat or weibo account, which is convenient for everyone to use.

Use Case UC-1:	Log in
Related Requirements:	REQ1, REQ3, REQ4, and REQ5 stated in Table 2
Initiating Actor:	Any of PATH user
Actor's Goal:	To log in the app.
Participating Actors:	Account input box, log in button, wechat, qq & weibo log in button
Preconditions:	• The set of valid account stored in the system database is non-empty • Log in button has been press
Postconditions:	Account and password are correct.
Flow of Events for Main Success Scenario:	
→ 1.	Users (a)enter account and password (b)press wechat, qq or weibo log in button, then pop-up a window and enter their account and password
2.	Press log in button
← 3.	System verify account and password, if correct jump to the main page, else stay in log in page

2)Main interface

After logging in, the main interface appears. The background of main interface is a map with many spots in different colors. Each color representing different kind of function of this path, such as running, skateboarding, bicycling, and etc.

When we were designing the main interface, we have considered whether we should use spots or lines to represent these “redefined” paths. And last we decided to use spots since they can help users find those interesting paths close to them more clearly and will not make the screen a mess.

And the rectangle on the left hand side with several lines in it is the setting button. “+” is a button to create a new path. And the red heart is to select your interested kind of paths. There will be more specific description in the passage below.

3)Create a path

In the main interface there is a button with "+" on the right hand side. Press this button you will enter the page beside, it is "create" page.

PATH can obtain your location with the GPS sensor inside you phone and mark one the map, which is also the background of this page.

At the bottom of this page there are three buttons, which are "end", "start/pause" and "tagged".

Use Case UC-2	Create a path
Related Requirements:	REQ12 REQ3, REQ4, and REQ6 stated in Table 2
Initiating Actor:	Path creator
Actor's Goal:	Create a new path
Participating Actors:	Map, pause button, end button flag button, edit page
Preconditions:	• have GPS signal and internet connection
Postconditions:	User press start record button
Flow of Events for Main Success Scenario:	
→ 1.	Users press "+"button in the main page
← 2.	Jump into "create" page
→ 3.	Press the "start" button
← 4	System start to record the track you have been through
→ 5	Press the "tagged" button,
← 6	Pop-up window appear, user can write down their feelings or upload photos of this position

→	7	User press the “start/pause” button
←	8	System start/pause recording the track
→	9	User press “end” button
←	10	Path record stop, a pop-window appear. And there are two button: “save” and “publish”
→	11	User press（a）save （b）publish
←	12	（a）return to the main interface（b）jump into publishing page

4)Publishing page

In this page, user can see some data about their trip, including time, distance, photos, written words and etc. User can also edit the name, the function of this path and add some interesting things here. After finishing editing, user can publish this path.

Use Case UC-3:	Publish
Related Requirements:	REQ3, REQ4, and REQ8 stated in Table 2
Initiating Actor:	Path creator
Actor’s Goal:	To publish the recorded path
Participating Actors:	Path name, path function and feeling input box, publish and save botton
Preconditions:	• A path was recorded but has not been published yet
Postconditions:	The “publish” button was pressed

Flow of Events for Main Success Scenario:

→	1.	Users edit the name, the function of this path and add some interesting things in

		this page
	2.	User press （a）"publish" button（b）"save" button
←	3.	（a）System upload this path and show this path on the map (b) save this path to the history

5) Go through a path

When user press a spot on the map of main interface, a new page pop-up. In this page, it show what the creator recorded, including the brief information of the creator, basic information of the path, pictures of this path and etc. Base on the words and pictures, user can have a brief idea of this path and decide whether to go through it or not.

Use Case UC-4:	Select	
Related Requirements:	REQ2, REQ3, REQ4， REQ5， REQ5and REQ7 stated in Table 2	
Initiating Actor:	User(using the defined path)	
Actor's Goal:	Go through the defined path and experience what the creator did	
Participating Actors:	Path name, path function and feeling input box, publish and save botton	
Preconditions:	• user select a path	
Postconditions:		
Flow of Events for Main Success Scenario:		
→	1.	User press on a path spot on the main interface
→	2.	Pop-up the introduction of the path, and there are two button on the screen, "enter" and "leave"
←	3.	User press the （a）leave button（b）enter button
←	4	（a）return to the main interface （b）enter the map of the path
←	5	After entering the map, system begin navigate automatically. When arriving a spot the

		creator tagged, system sent message to the user and pop-up the recorded information.
→	6	User press the “end” button
←	7	Trip over, jump into analysis interface

6)Analysis interface

When the user clicks the "End" button, the user will enter the next analysis interface. After entering, the system will compare and analyze the data according to the original namer's route and the user's actual route. The analysis results include: matching degree, total distance, time spent, energy consumption, etc., the user can intuitively see the data in the experience process,

through the data, users can learn more about this experience. In the "Review", communicate with the namer of this road and share the fun or new feelings that they experienced on the way. Users can also get acquainted with the naming of the road and make friends with like-minded people in this way.

Use Case UC-4:	End trip
Related Requirem'ts:	REQ3 and REQ4 stated in Table 2
Initiating Actor:	User(using the defined path)
Actor's Goal:	Read his/her analysis and comment on the creator
Participating Actors:	Info and comment section
Preconditions:	The user has introduced of route follow
Postconditions:	
Flow of Events for Main Success Scenario:	
→ 2.	Pops out the info of this journey, like matching degree, comment section and buttons, etc.
← 3.	(a) input comment and hit send (b) hit back button
← 4	(a) publish a comment and return to the main user interface (b) back to the main user interface

3. Other function UI design

1)preferences

After clicking "End", the user will return to the main interface and click the ♥ button to open the preference interface. In the preference interface, the user can choose the type of road that he likes according to his needs. For example, Jack is a skateboarding enthusiast. In this interface, Jack can select the option of skateboarding, after he clicks the back button, on Jack's map only the routes of the skateboard will be displayed. The existence of this interface provides convenience for the users to find preferred routes. Through the setting of the preference interface, the user can find the route that suits himself/herself faster and more accurately.

Return button: When the user clicks "Back", it returns to the main interface.

2)settings

When the user clicks the button in the upper left corner of the main interface, the setting interface will be activated. The contents of the setting interface include: personal information of the user, account information, system settings, history records, and else.

History records: By clicking the "History" button, the user can view all route information that he has stored but has not yet posted.