Requirements And User Experience
DIT045
Assignment 2

01/12/2017

The Team Imagine Dragon

Team Members:
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3. Mohammed Dergham

Problem Domain:
IBike

Number of pages in the assignment:
16 pages

Part 1: Further Requirements Elicitation

1a: Elicitation Techniques:

We think that the best elicitation techniques are semi-structured Interviews and anonymous Surveys/Questionnaires.

In semi-structured Interviews, we will have ability to connect the stakeholders personally and ask them our set of questions, but in the same time semi-structured Interviews will allow us to ask them more questions and more explanation on their questions if needed so we will have better understanding on the stakeholder way of thinking and we will have better individual perspective.

However, since our problem domain is IBike and we are willing to get as much as different opinions possible , it will be really hard to analyze large amount of qualitative and it will be really hard to conduct and people usually don't tell the truth when they are in interviews.

In anonymous Surveys/Questionnaires. First, person will not be concern about his identity.Second, it will be much easier to find people that are interested on IBike base on internet searches and Google AdWords.

We can always encourage people to do our surveys by offering them special discounts and offers on our bikes.

However, since anonymous Surveys/Questionnaires are shallow and hard to get clear and long answers. We decided that we should use semi-structured Interviews for our investors, since the number are handleable and for our all stakeholders and users we decided to do well structured and designed and piloted anonymous Surveys/Questionnaires.

1b: Personas:

First person:

name: Oliver Walker

Job title/ major responsibilities: Architecture in Accent Design Group.

Demographics: 62 years old, Married.

has 2 children and 3 grandchildrens.lives and works in downtown.

Has a Master's in Architecture and Design from Balamand.

Goals and tasks: He is focused, hates losing time in traffic. The main reason he's interested in IBike is that he will be able to reach to his meetings , houses & building he's working on with avoiding messy traffic in downtown.

Spends his work time: He spends his workday between designing and meeting clients in the office and going to houses & building to check to work progress.

Environment: He has his own car but he hates traffic, He's comfortable to use any kind of transportation as long as it will be fast and reliable.

Quote: "Life doesn't stop so shouldn't we!!"

Suggested Requirements:

1.functional : the user should be able to locate the bike.

2.functional : the system should be available in appstore and google play.

Second person:

name: Eline Smith

Job title/ major responsibilities: University student.

Demographics: 21 years old, single.

Exchange student from Germany, second year in civil engineering

lives in student apartment near university.

Goals and tasks: She is social person likes to meet people, likes to explore the city and want to go back and forward to university without spending money on transportation.

<u>Spends his work time</u>: in the week days she spends her day in the university and after that she goes to nearest library to study.
on the weekends she goes to meet some friends and goes to sightseeing and exploring the city
<u>Environment</u>: She is usually broke and she tries to walk everywhere.
<u>Quote</u>: "live your life while you are young"

<u>Suggested Requirements:</u>
3.functional :the system shall provide multiple language support.
4.functional:the system should show the roads for bikes in the city.
5.constraint :the system should be available to download for free

1c: Scenarios:

Scenario 1:
Use Case: get status (real time navigation assistance)
CHARACTERISTIC INFORMATION
Goal in Context: to be able to get to your destination
Scope: E-bike system
Level : primary task
Preconditions: user has identified his destination to reach his point
Success End Condition: user has identified his destination successfully
Failed End Condition: user has not identified his destination ,user didn't log in
Primary Actor: bike owner (bike user)
Trigger: the user attempted to reach a destination
MAIN SUCCESS SCENARIO:
　　1.User open the system
　　2.user log in
　　3.user select GPS functionality
　　4.user identify his destination
　　5.user conform his destination
　　6.user get real time navigation
EXTENSIONS:
owner : can locate his bike
SUB-VARIATIONS:
1. User login failed , enter the incorrect password
2. User selected the wrong functionality
3. The destination does not exist
4. User does not provide an existed destination

Priority: high
Performance Target: 60 seconds
Frequency: every one attempt
primary actor: mobile phone , google map
Channel to Secondary Actors: database

ISSUES
1.what happens if there is no GPS.
2.what happens if there is no 3g/4g mobile signal
.SCHEDULE
Due Date: release 1.0

Scenario 2:
Use Case: #2 Login, (unlocking the bike)

CHARACTERISTIC INFORMATION
Goal in Context: To unlock the bike in order to use it.
Scope: For the bike security system, only registered users can use the bike.
Level: Primary task
Preconditions: User is registered as an user of the bike.
Success End Condition: System recognize the user, bike is unlock.
Failed End Condition: System can't recognize the user, bike in still locked.
Primary Actor: User of the bike.
Trigger: running the system and choosing to unlock the bike.

MAIN SUCCESS SCENARIO
1. User login in his account.
2. User unlocks the lock on the bike by his fingerprint.
3. Bike is unlocked and ready to use.

SUB-VARIATIONS
The system loose connection to the user, after 60 seconds system will prompt user to login again.
Users fingerprint is not recognised in the system, prompt user to try again.

RELATED INFORMATION (optional)
Priority: High
Performance Target: Less than 5 seconds
Frequency: every time bikes need to be unlocked.
Channel to primary actor: interactive

Secondary Actors: lock on the bike.

Channel to Secondary Actors: static

OPEN ISSUES (optional)

1.If the user don't have their connected phone on them to unlock the system fingerprint authorisation can be used, but only if the user has registered their fingerprint in advance.

Requirements based on scenarios:

scenario 1 :

6. Functional: the system shall provide online help "customer support".

7. Constrain: the system shall have FAQ's.

8. Functional: The system should alert the user if he/she are not on the special bike road.

scenario 2 :

9. Constrain: the system allow the user to retrieve his password by his/her email .

10. Constrain: the system shall allow the user to login using social media.

1d: Creativity Techniques:

Brainstorm

Brainstorm to generate some ideas about your model and the domain. Any idea is good, try to generate as many as possible. Write the ideas in the list below, if you run out of room, add ideas to the canvas and continue. When you are done, add ideas to the canvas and exit.

Idea: Connect to the bike without internet connection.

Idea: Share your workout progress and activities with friends and family.
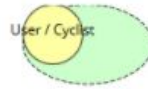
Idea: Connect to scoial media

Idea: Share location in social medial or to a friends.

Idea: Be able to change personal information if needed

| Add ideas to Model Canvas and continue | Add ideas to Model Canvas and exit |

User / Cyclist - Creativity Triggers

Use the i* model element with the creativity triggers. Can you come up with ideas relating User / Cyclist to the trigger?

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Participation
- ✓ People want to do more of the work themselves
- ✓ Amazon encourage site visitors to write their own book reviews
- ✓ Self-booking of flights
- ✓ Self-scanning at supermarkets
- ✓ How do your users participate in your business?

"Changes in business processes will emphasize self-service...Your costs will go down and the perceived level of service goes up because customers are conducting it themselves." - Raymond Lane, president Oracle.

| Connections |
| Convenience |
| Green |
| Information and Choices |
| Participation |
| Service |
| Trust |

Idea: Signup with social security number

Idea: Get notification if the read is close.

Idea: The system should attract users to take bicycle instead of car

Idea: Add aboutMe in system menu so the user can understand why the system was created

Idea: Allow users to five feedback the developers and stackholders

User / Cyclist - Bright Sparks

Imagine Harry Potter is playing the role of User / Cyclist, or imagine Harry Potter is a user or developer of the User / Cyclist. Looking at the characteristics and creative clues, can you derive new ideas for your model?

Creative Clues

Harry Potter (Literature)

Famous young wizard in coming of age series of books.

Characteristics

Learning that he was a wizard on his eleventh birthday he attends Hogwarts School of Witchcraft and Wizardry. Brave to a fault, he is humble and loyal with a keen feeling of what is right and wrong. He is a talented wizard with great power and successfully completes numerous quests against dangers and evil.

- Who else does Harry Potter make you think of? Someone similar or opposite? Imagine that person is your client. What would that person want from you?
- Imagine Harry Potter is your client. What extra features or qualities would the product or service need?
- Imagine you interview Harry Potter for your project. What do you predict that Harry Potter would want?
- Imagine that your new product or service is like Harry Potter. What qualities would it have?
- How did Harry Potter become famous or infamous? Can your project follow the same route to fame or infamy? If so what would you do?

New Persona

New Spark

Idea: Harry potter wants to unlock the bike with his wand

Idea: Harry Potter wants the system to warn for mugglers

Idea: be gender freindly for all

Idea: Harry potter doesnt want the system to be non user friendly

Idea: The system should be able to present the user the best routes for excercise

Add ideas to Model Canvas and continue

Add ideas to Model Canvas and exit

Best five ideas:
1. Connect to the bike without internet connection.(the system should be usable without internet connection).
2. Allow the user to give feedback to developers and stakeholders.
3. ability to connect with social media and share your workout progress and training with friends and families.
4. ability of system to give suggestion from the best roads to workout.
5. be gender friendly for everybody.

Best five Requirements:
11. The customer should be able to get information about the system and the company before using it.We got inspired from creativity triggers, idea number 4.
12. The system should allow the user connect to developers to improve the system.We got inspired from creativity triggers, idea number 5.
13. The system should be able to share training progress directly.We got inspired from brainstorm, idea number 2,3,4.
14.The system shall allow the user to login by email .We got inspired from bright sparks, idea number 3.
15. The system should display to the user the best routes for exercise.
.We got inspired from bright sparks, idea number 5.

Activity did we liked most was: Brainstorm
Activity did we liked least was : Bright Sparks
   We liked Brainstorm because it gave us ability to free thinking based on our goal model and the problems that we were facing, and we came up with the best creative ideas from it.
   We also liked creativity trigger, because it gave us a new perspective to our problems and it had its own questions which triggered new ideas.
   We didn't like the Bright Sparks, because it felt ridiculous to write ideas based on famous person that we don't know them personally and it was really hard to come up with useful ideas.

1e: Prioritization:

New order of the requirements from must to least important base on value and cost:
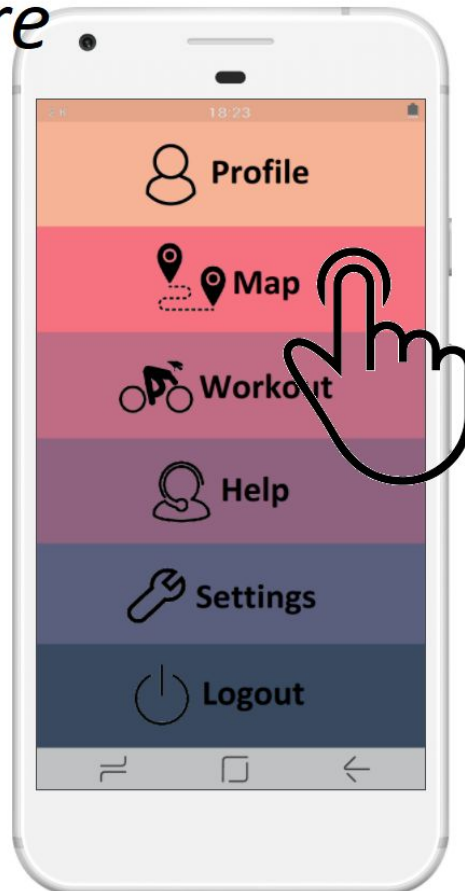
- 2.The system should be available in appstore and google play.
- 4.The system should show the roads for bikes in the city.
- 6.The system shall provide online help (aka. customer support).
- 1.The user should be able to locate the bike.
- 5.The system should be available to download for free.
- 7.The system shall have FAQ's.
- 11.The customer should be able to get information about the system and the company before using it.
- 10.The system shall allow the user to login using social media .
- 15.The system should display to the user the best routes for exercise.
- 13.The system should be able to share training progress.
- 14.The system shall allow the user to login by email.
- 3.The system shall provide multiple language support.
- 12.The system should be able to share training progress.
- 8.The system should alert the user if he/she are not on the special bike road.

Part 2: UX Design

2a: UI Prototypes
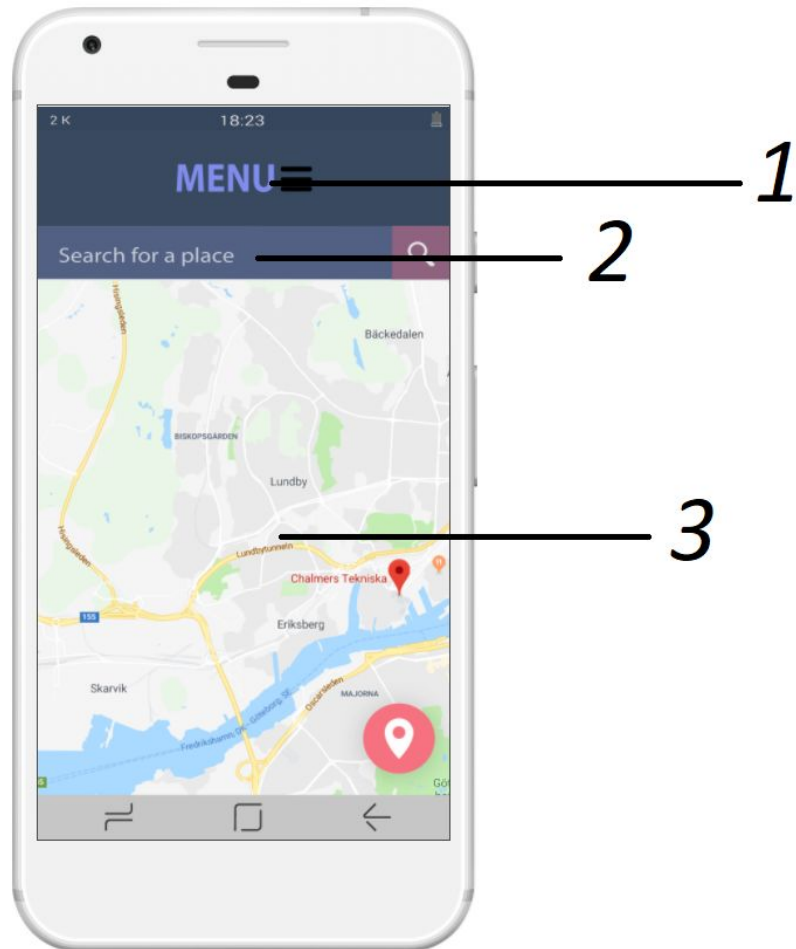You can see our app demon in: https://marvelapp.com/481d0id

First picture

In the first picture we have two patterns. First is one window drilldown pattern. We used this pattern because we had a constrained space and to show every option in menu with single line with image, and everytime user press on the image or the line the system will show full content of that option, in this way we kept the UI simple and clean.
Second is visual framework pattern. We have used this pattern in color and font in all of our prototypes because user will be able to navigate easily and they don't have to figure out every single time they change the page.
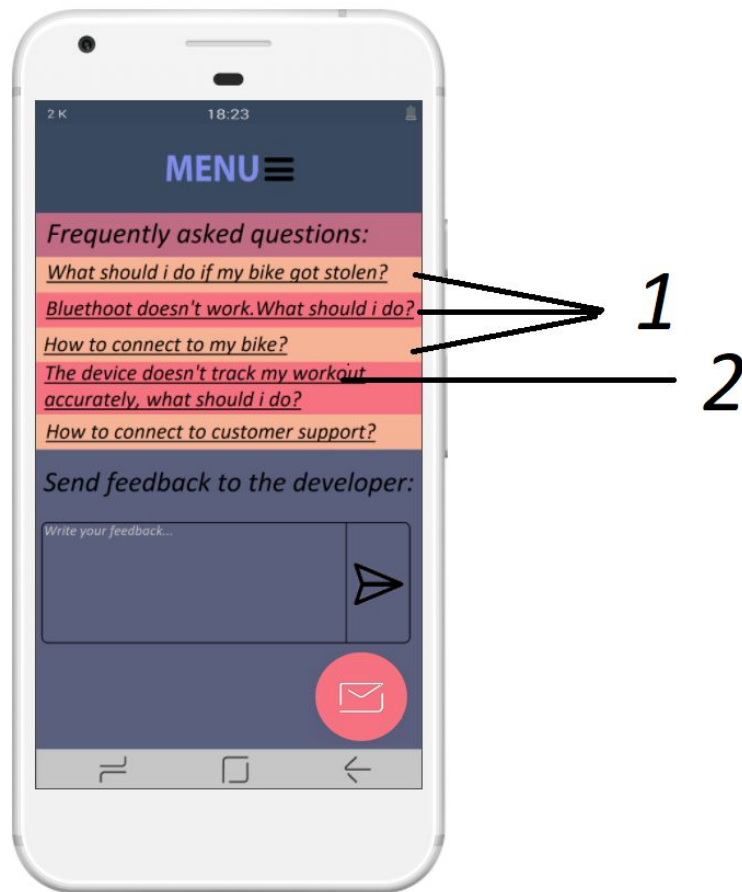
Second picture

In second picture we have few patterns,such as center stage, drop down menu, diagonal balance, escape hatch,visual framework , pyramid and text clear button but most abuse ones are: text clear button, center stage and pyramid.

We used pyramid pattern in number 1, because we wanted to simplify and improve user experience by giving him possibility to go to the menu wherever he was in one click.

We used text clear button pattern in number 2, because we didn't have space at the same time we wanted to allow the user to input the address to search.

We used center stage pattern in number 3, because we wanted to put most important content of the page in the middle to make it easy for the user.

Third picture

In third picture we have few patterns, such as list inlay, escape hatch, pyramid, visual framework , diagnose balance , row striping , drop down menu & text clear button patterns but most abuse once are row striping pattern and list inlay pattern.

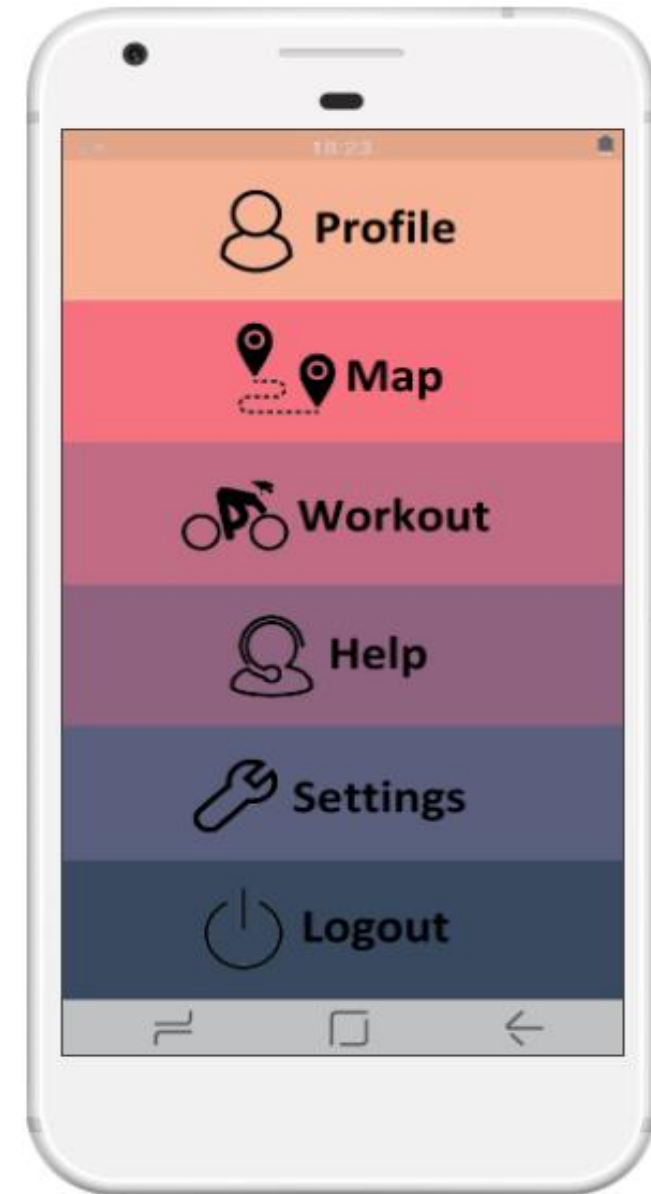we used row striping pattern in number 1, because we wanted to make it easy to the user to read every line.

We used list inlay pattern in number 2, because we wanted to show a list of questions in a single window and giving u these ability to choose the question he wants by clicking on it to show the answer.

To understand better and see the details please check our app demon:
https://marvelapp.com/481d0id .

2b.Mapping to requirement :

1. The system shall provide online help "customer support".(We have provided the system interface with a clear pattern for the customer support (help), so the user have help to get in to the customer support .

2. The system should have an GPS .(system interface has a clear and unique pattern for the GPS , the user can access to real time navigation by clicking Map.

3.Using the functions in the system should not be complicated.(we have provided the system with clear easy pattern , every icon present an option and it has a name describe more about the option)

1. the system shall have FAQ's. (we have provided the system interface with underline sentences , every sentence is one of the frequently asked question.)

2. The Owner should be able to alert the customer service if the bike gets stolen.(we have provided the system interface with a clear float button so the user can easy access to it and send any alert to the customer service .)

 3.The system should allow the user connect to developers to improve the system.(we have provided the system interface with a box to write feedback and send it to the customer service .)
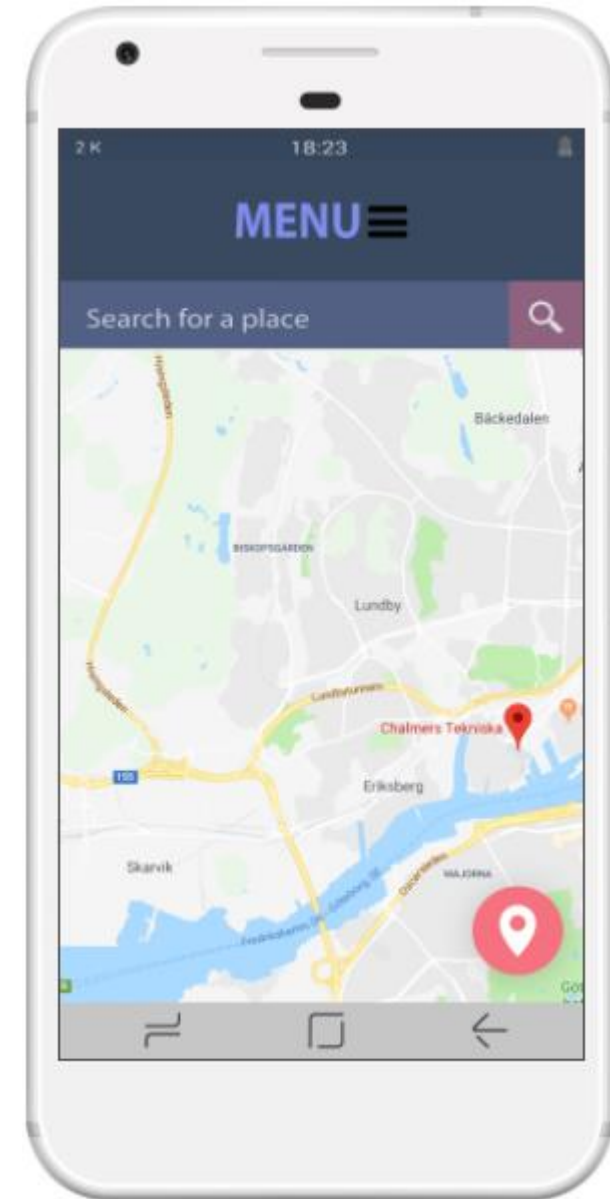
1. The system should have a GPS system .(we have provided the system interface with a clear map , the map display routes and its has a search bar so the user enter his/her destination .)

2.The system should display to the user the best routes for exercise . (we have provided the system interface with sample and easy maps ,display the best routs for exercise .)

3. The system shall allow the user to locate his/her bike . (we have provided the system interface with map ,the map display route and locate the bike.)

Best Regards
Team Imagine Dragon

UNIVERSITY OF GOTHENBURG

DIT045 User Requirements

Second Assignment

The Imagine Dragons

Group Contribution Form

Each group member is asked to print and sign their name and state their contribution to the overall work.

Individual Name	Contribution	Signature
Sarkis George Sarkisian	**Elicitation Techniques – Personas – Creativity Techniques – UX Design**	
Mohammed Dergham	**Personas – Scenarios – Creativity Techniques – Mapping to Requirements**	
Daniel Jansson	**Scenarios – Creativity Techniques – Prioritization – UX Design**	