ShareIt

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67-317 MOBILE APP DEVELOPMENT & USABILITY TESTING
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Phase 1: Project Proposal and Requirements

I do not need a drill.
I need a hole in the wall

1. **Description of your project**
   a. **Title of the project:** Sharing used products & services
   b. **Background:**
   c. **Theme:** The project is focused on creating awareness theme which focuses on designing a mobile web experience for users to experience enhanced awareness on sustainable practices.
   d. **Organizations affiliated:** The project focuses on Ministry of Municipality & Environment as the disposal of used products are their responsibility.
   e. **General need(s) the project addresses**: The aim of the project is to mitigate consequences of product obsolesces caused by overconsumption and excess consumerism. The consequences affect in main three main aspects of sustainability which are environmental, economic and societal. Through this project, products will go through cradle-cradle approach rather than traditional cradle-grave approach. Due to the rise of excessive consumerism and low age, used products are becoming undesirable, outdated, irreparable after certain amount of time. The project specifically focuses on used electronics and other used products so that it doesn't end up in the landfill but gets used by another owner or becomes raw product of new products.
   f. **Specific needs the project addresses:** The project focuses on sharing of products and services between users by which people won't be requiring to purchase everything separately. It will also help people to view who are in need of some products nearby and let them help through sharing with them. As a result, every individual won't be required to purchase items separately but rather share with others who're living nearby.

2. **Problem Statement and solution (1.5 pages)**
   a. **Problem Statement & 'Mobile First' theme:**
   Every year more than 1.8 tons of e-waste is disposed in the landfills of which only less than 15% is recycled (Guiltinan, 2009). As a result of which it negatively affects many aspects of our life. From sustainability perspective, it directly affects the main three aspects which are environmental, economic and societal. The consequences are described below:

   I. **Environment**: Excess consumerism affects the environment through release of toxic materials in the atmosphere during production and disposal. These toxic materials are not only harmful to living beings but they also degrade the atmosphere by depleting the ozone layer and increasing the temperature. It also indirectly affects the environment by demanding more energy which is often generated by carbon sources. The carbon emission is one of the main contributing factor of global warming which has grave consequences to our planet.
   II. **Economic**: From economic point of view, the increase of consumerism is resulting in financially draining of the consumers (Bulow, 19860. Due to

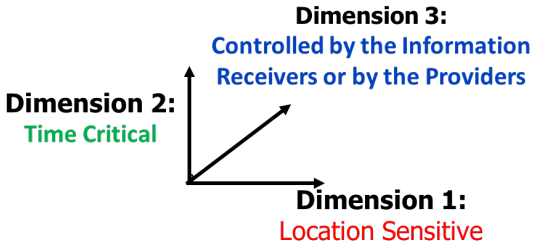
the rise of conglomerate and multinational corporation, the economies of scale is destroying the local economies and resulting the underdeveloped and developing countries to fall behind.

III. **Societal**: Overconsumption and consumerism is resulting in widening the gap between the high and lower class people. As a result of which the higher class is disposing used products in waste while lower class have accessibility to these needed products.

The problem requires creating a platform where everyone from all levels of income can access it conveniently as well as cheaply. Therefore, the project needs to be 'mobile first' focused because of the popularity of smartphones over desktop computers. The application will be putting more importance on content provider perspective while helping users to complete their most important tasks. As it requires innovation and use of tailored solutions like location so it requires mobile-first approach.

b. Proposed solution

I. **Innovation**: In order to solve this big issue, I propose a solution of designing and prototyping a mobile application which will help users to share a used product with other users nearby. So for example, an average use of drill machine in it's entire life is used somewhere between 10 to twenty minutes. This doesn't require every user to buy a drill machine, instead they could share with each other and that's the main goal of the application. The solution is because there doesn't exist many applications based on this sharing economy. The application will facilitate innovative applications of all 3 dimensions of mobility:



I. Location Sensitive: The app will use location service by the use of geolocation to track users using the service nearby.

II. Time critical: The app will also incorporate tome constraint to limit any service for 3 months after which the user will decide to extend the sharing or not.

III. Control of Information: The app will use both pull and push services in order to receive basic personal information and also notify them about people who're sharing nearby.

c. **Contexts**: Social: The app focuses on the sharing economy and promoting environmental sustainability through the culture of sharing. Although there exists few minor privacy concerns in the preliminary stage, it will be mitigated in the next steps.
User: The app is really aimed to meet the needs of users in literal sense and help them save on items they don't always need. It will also help others to earn from

sharing their used products. Example of these products range from drill, printers, lawn mower, carpooling etc.
Physical: It is of high importance that the app is clear and is based on simple flow. The lighting of the app needs to be set at optimum level for clear vision of all users during daytime and at night. To make the app more understandable for users from all knowledge levels, the app will incorporate more visuals than textual heavy elements.
Device: The input and output of the app will include geolocation of the users. The screen size of the app will be based on average iphone size.

Services:

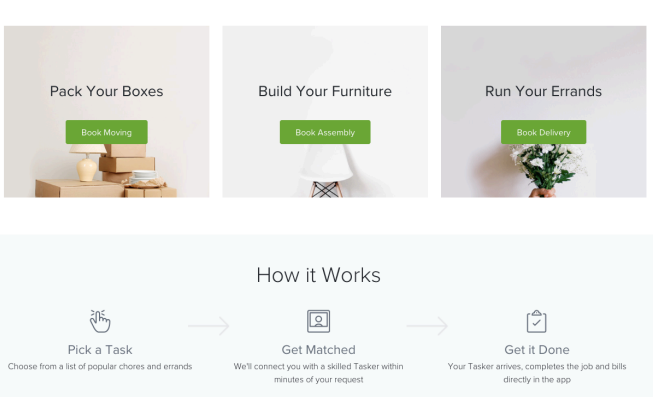
	Push-based	**Pull-based**
Enquiry based	Notification of who are using the app nearby, people sharing products, people sending messages	Basic personal information, location of the users, type of products sharing
Transaction based	Notification of peer contact details	Contact information, payment information

Device Capabilities:
*Location detection (GPS service): Location detection capabilities will help the application to track the location of the user and will help display all the other peers living near the user. It will also help when the user moves to a different place from their house location.
*Network provider with SMS & calling feature: The sms and calling feature will help users to call and validate the presence of their peers. It will also help the users communicate with each other.
*Data connection: The application requires data connection to the internet as it will be hosted in the internet. So, the user needs internet access to use the app.
*Multi-touch sensors: Due to the interactive and mobile-first design, the app requires using phones which have multi-touch sensors.

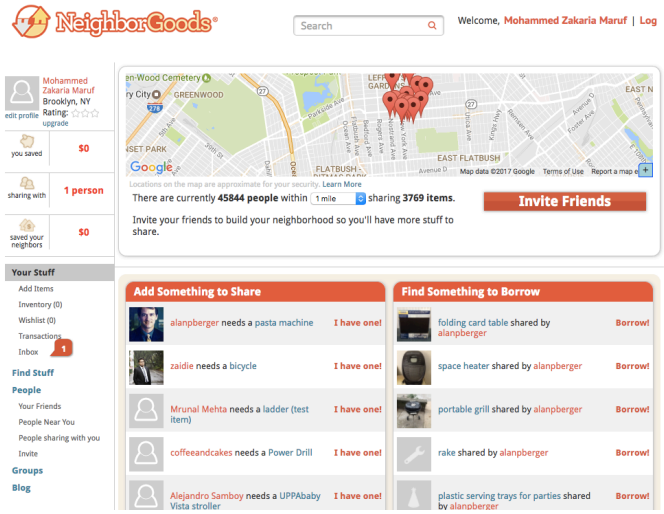
d. **Stakeholders**: The stakeholders of the project and their interest is described below:
Users (service provider): These are people who'll basically be owning the products and will create a post in the application about willingness to share a product to nearby users. They'll benefit from the app through earning money on renting their products to others.
Users (consumers): The consumers are the one who'll be looking for a particular product on the app and will view people who're sharing that product nearby. They'll choose the person who provides the best deal and will get their contact details to share their products. The consumers will benefit by not having to buy the product, but rather rent it when they need.
Government: The app will enhance the culture of sharing which will help the government improve environmental, economic and societal sustainability as mentioned above.
App developers: The app developers will benefit through generating revenue by advertising on the app and promoting certain products and their owners over others.

3. **Competitive Analysis:**

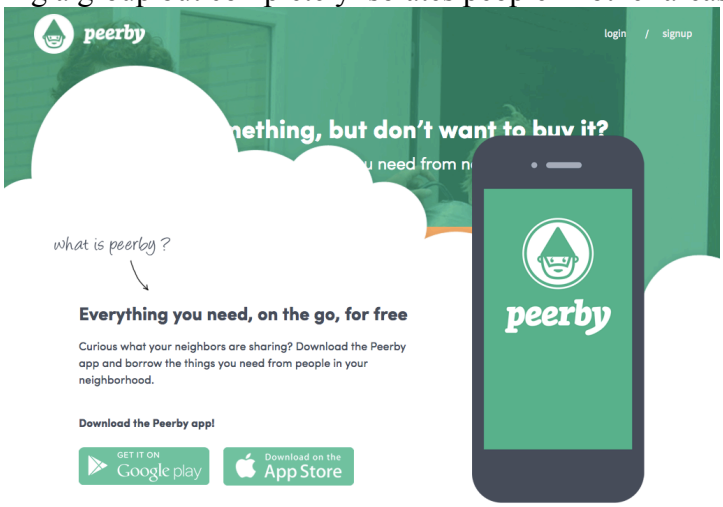
1. TaskRabbit.com (Website): A website which provides a platform for users to assign petty task to people/specialists around who are paid according to hours.



2. Neighborgood (app & website): A platform in order to share products with people living nearby.



3. Peerby (app & website): A platform in order to share products with people living nearby by forming a group but completely isolates people in other areas.



a. Domain analysis: Here are the five key criteria for analyzing the domain:
    I. Mobile-first: This is the first key criteria which focuses if the platform is based on mobile-first theme or not. So, it takes into consideration many elements including prioritizing elements and workflow, mobile responsiveness, design thinking etc.
    II. Convenience: This is to examine how easy the platform is to create an account, post and share a product.
    III. Enquiry or Transactional Service: To examine what sort service are the platforms providing. It is enquiry based service if it only shows the peer nearby while it's transactional if there's an opportunity to perform payment activities.
    IV. Text or visual oriented: Does the platform focuses on using visuals or textual elements?
    V. Usability: This is the final criteria which is subjective and is based on if I as a user will use the platform or not?

b. Results of comparing the three sites based on the five key criteria

	TaskRabbit	**QatarLiving**	**Peerby**
Mobile-First	No	No	Yes
Convenience	No	Yes	Yes
Type of Service	Enquiry based	Enquiry based	Transactional
Text/Visual oriented	Text based	Mixture of both	Visual-based
Usability	No	Partially	Yes

4. Context-of-use Characteristics:

a. **Stakeholder description and analysis:** The stakeholders for the app includes the description of the users who can or are affected by the app. There are two types of stakeholders; which are primary and secondary stakeholders. Some of the main stakeholders are described below:

I. Primary stakeholders:
- Users (consumers) who are in need of certain products or services. As the app makes their life convenient as well as helps them to save their money, these consumers are the primary stakeholders for who the app is made for.
- Users (product/service providers) who wants to rent out their products or provide service to people nearby. The app helps these users to earn some money as well as get to know the people nearby.
- Developers: As the designers, developers and programmers will directly design and develop the app, so they contribute a huge impact on the app.

II. Secondary stakeholders:
- Government: As the app focuses on promoting sharing culture, as a result of which the government gets closer to the sustainability needs and mitigates the risk of overconsumption and consumerism.

III. Stakeholder expectation:

- The stakeholders expect good number of peers/users living nearby in every area where the users can share or seek for help from each other.
- Stakeholders like consumers expect to find product/service they're looking for from people living nearby.
- Service providers want to get people who are in need of their product/service in short period of time.
- Government expects to have a safe and sustainable use of the application to promote a greener lifestyle

IV. Short-term expectation:

- One of the short-term goals for the app is to get a good number of users who're both providing products/services as well as seeking for it.
- To have variance in the products/services being offered and sought for.
- Safe and easy use of the app.

V. Long-term expectation:

- Use of the app in most of the locations besides the busy cities.
- Have diversity in the users' demographic.
- Promoting the culture of sharing.
- Mitigation of over-consumption and consumerism.

b. User groups and user characteristics: Below are few user groups with their characteristics described briefly:

I. **Age**: Age will play a huge role in the use of the app. The people with younger age will tend to be more intuitive and engaging to the app while the people with older age will find it a bit confusing and challenging. Therefore, the app needs to be designed in a simple manner for the elder audience to understand. The app also needs to have larger text in order to help the audience with sight problems.

II. **Gender**: The app is mainly focused on the male population due to their more use of sharing and collaborating households. However, female will also be able to share cosmetics and other products with other people. Therefore, the app requires to have more products for male compared to females.

III. **Education**: People who are more educated will be able to use the app more and promote the sharing culture than the people who are comparatively less educated. Therefore, the app needs to be focused on providing serious products to people with knowledge background.

IV. **Culture**: Culture will play a huge role on the use of the app as the people who're from a collectivism culture will tend to share more than the people from individualistic culture. Therefore, the app needs to be targeted to more on the people with collectivism background.

V. **Physical skills:** People who tend to be more physically active have higher chances of using the application for products, while the people who're a bit inactive will tend to go for services.

c. **Goals of the users**:

I. Normative need:

- Ability to provide basic information and type of product providing or seeking for.
- Ability to view all the users living by.
- Opportunity to advertise product/service one is renting to others.
- Seek for a product or service from people living nearby

II. Expressed Need:

- To find users who are providing the desired product one is looking for.
- Opportunity to earn money by sharing products or services.

III. Comparative Need:

- To have considerable number of the app users living nearby.
- To have a community of users providing and seeking for diverse range of products.

IV. Felt Need:

- To have an organized, simple and aesthetic app to use for.

d. Task inventory and task analysis:

Following is the list of most important task anlysis:

I. Post and seek for a product/service:
- Register with personal information & location
- Look for products in need
- Post the details of the product and time constraint
- Wait for a user to help

II. Find and contact user providing a product/service
- Register with personal information & location
- Search for desired product in neighborhood
- Look for all the people who're sharing the product
- Make selection
- Contact them through their bio

III. Post and share a product/service
- Register with personal information & location
- Look for products to share
- Post the details of the product and money for renting out
- Wait for a user in need of it

IV. Find and contact user seeking for a product/service
- Register with personal information & location

- Look for all the people in need of something in neighborhood
- Make selection of product the user have
- Contact the users through their bio

e. Environmental considerations:

I. Physical considerations:

- Lighting: The app needs to adapt to the lighting of the house and outside as the app will be used more during day due to sharing with others. So, anything with darker background will be easier to see.
- Noise: The app might be in use with loud background noise, so it requires to have more visuals than any hearing aids.
- Motion: The user might be on the go while using the app, therefore the button and the touch points for the app should be distinct, easy and big for the users to select conveniently.

II. Technical considerations:

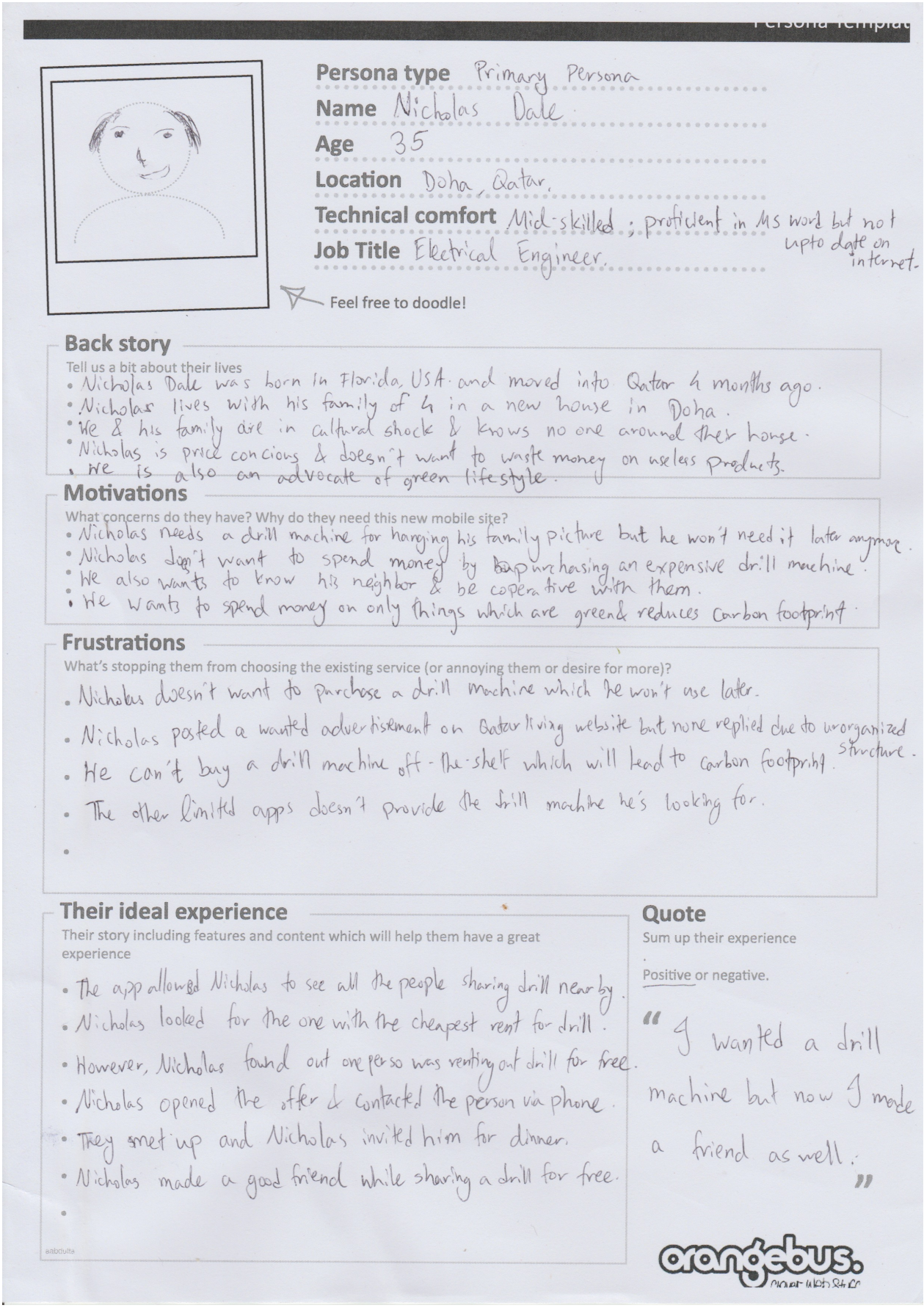
- Text-size: As the app will mainly be used by people who manage household, therefore it requires bigger text size for elder people. There can also be use of more visuals than text.
- Location: As there exists issue with the accuracy of the GPS location of the house, the user can validate and specifically point out the house number while registering.
- Passwords: Just in case user enters the wrong password, there needs to be password validation where user needs to type in the password twice.

III. Social considerations:

- Privacy: As the app requires user to put down important basic information, however only the important information will be only displayed. Other information will be provided to others only in permission of the users.
- Safety: As the location of the users are open to the people in the neighborhood, it's the responsibility of the users to validate their peers before providing other information
- Financial issues: As there exists monetary fees on renting out products or services, therefore it's the responsibility of both parties to make sure they clear out on the financial aspects.

5. Persona and User Stories (Ref: Lecture notes and additional posts under Readings)

a. Primary and Secondary:



Persona template

Persona type Primary Persona

Name Nicholas Dale

Age 35

Location Doha, Qatar.

Technical comfort Mid-skilled ; proficient in MS word but not upto date on internet.

Job Title Electrical Engineer.

Feel free to doodle!

Back story

Tell us a bit about their lives

- Nicholas Dale was born in Florida, USA and moved into Qatar 4 months ago.
- Nicholas lives with his family of 4 in a new house in Doha.
- He & his family are in cultural shock & knows no one around their house.
- Nicholas is price concious & doesn't want to waste money on useless products.
- He is also an advocate of green lifestyle.

Motivations

What concerns do they have? Why do they need this new mobile site?

- Nicholas needs a drill machine for hanging his family picture but he won't need it later anymore.
- Nicholas don't want to spend money by unnecessarily purchasing an expensive drill machine.
- He also wants to know his neighbor & be cooperative with them.
- He wants to spend money on only things which are green & reduces carbon footprint.

Frustrations

What's stopping them from choosing the existing service (or annoying them or desire for more)?

- Nicholas doesn't want to purchase a drill machine which he won't use later.
- Nicholas posted a wanted advertisement on Qatar living website but none replied due to unorganized structure.
- He can't buy a drill machine off-the-shelf which will lead to carbon footprint.
- The other limited apps doesn't provide the drill machine he's looking for.

Their ideal experience

Their story including features and content which will help them have a great experience

- The app allowed Nicholas to see all the people sharing drill near by.
- Nicholas looked for the one with the cheapest rent for drill.
- However, Nicholas found out one person was renting out drill for free.
- Nicholas opened the offer & contacted the person via phone.
- They met up and Nicholas invited him for dinner.
- Nicholas made a good friend while sharing a drill for free.

aabdulla

Quote

Sum up their experience

Positive or negative.

"I wanted a drill machine but now I made a friend as well."

orangebus.

Persona type Secondary Persona.

Name Jane Watson

Age 24

Location West bay, Qatar.

Technical comfort Tech-savy; addicted to social media.

Job Title Banker

Feel free to doodle!

Back story

Tell us a bit about their lives

- Jane has been living in Qatar for 5 years now after coming as an international student in QF.
- She recently graduated from Georgetown University and got hired immediately.
- As she lived in the dorms before, she never needed a car but now as she graduated she needs one.
- However, cars are really expensive to buy & maintain. So, she needs transport for her daily life.

Motivations

What concerns do they have? Why do they need this new mobile site?

- Jane lives a really busy lifestyle & needs car most of the time from office to ~~hell~~ parties.
- Due to inflation & busy crowded west bay roads, she is confused and scared of buying one.
- So, she looks for people nearby who wants to share a car or does carpooling
- She saves a lot of money as well as makes new friends

Frustrations

What's stopping them from choosing the existing service (or annoying them or desire for more)?

- She can order taxi for everytime she goes out but finding a taxi can be really hard and time consuming.
- Jane doesn't want to use Uber or Careem because it's really expensive to use them daily.
- She doesn't want to go with the hassle of booking cars & taxi everyday.
- She rather wants a set of drivers assigned and pay for the month.
-

Their ideal experience

Their story including features and content which will help them have a great experience

- Jane registers in the app & sets location to look for people sharing cars
- She finds the best deal for the month & contacts the person.
- She assigns the person with her schedule & pays her weekly.
- She also looks for people who're sharing rides for free
- She therefore carpools with people who're going to far places.
-
-

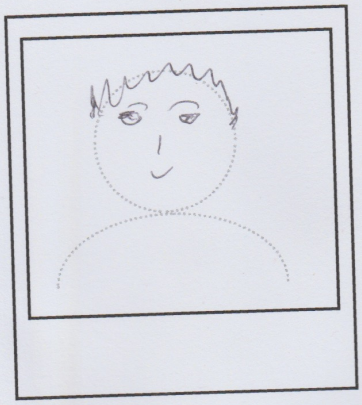
Quote

Sum up their experience

.

Positive or negative.

"Now I don't need to worry about the hassle of cars anymore... I just pay weekly & travel easily."



Persona type Primary Persona.

Name Ali Hussain

Age 21

Location Education City, Qatar.

Technical comfort Expert ; studies CS.

Job Title student.

Feel free to doodle!

Back story

Tell us a bit about their lives

- Ali hussain came to Doha 2 years back as an international student.
- Ali lives in the dorms & lives of with the money sent by his family from Iran.
- He didn't find Qatar as he thought and is feeling home sick.
-

Motivations

What concerns do they have? Why do they need this new mobile site?

- As he's living with tight budget, he often needs stuffs he can't easily buy & or find rare stuffs.
- Again buying something here is expensive, so he needs to wait while his family sends money.
- He didn't make any friends so he can't ask from anyone.
- He also doesn't know how to make friends, so he is feeling homesick.

Frustrations

What's stopping them from choosing the existing service (or annoying them or desire for more)?

- Ali tried using websites like Qatarliving but the stuffs are still expensive for him to buy.
- He wasn't satisfied with products sold at market & couldn't return back.
- He felt like cooking however he doesn't have the equipments, so he can't cook
-
-

Their ideal experience

Their story including features and content which will help them have a great experience

- Ali registered the app & sets his location
- He looked for people sharing cooking stuffs.
- He contacted the person & got the stuff for 2 days for only 100gr.
- He made good friendship & now he doesn't even have to pay.
- He liked the app & now he's renting out his cycle
- He found someone who needs it & now renting them
- for 100 gr/day.

aabdulla

Quote

Sum up their experience

.

Positive or negative.

" I just wanted some stuff for cheap price, now I'm making money & friends at the same time. "

orangebus.

b. User Stories:

#	As a ..	..I want..	..so that I can..
1	**Student who's living of tight budget**	Someone to share their bike with me for 3 days	Make it to the football practices far away before the match
2	**Student who's living of tight budget**	To share my printer with other students living nearby	Make some money easily along with new friends
3	**Family member of 4 who're new to the city**	Someone to help us with the plumbing of the house	Easily fix the drainage issue of the house conveniently and cheaply
4	**Family member of 4 who're new to the city**	To share my equipment with others in the neighborhood	Make family friends and feel less homesick
5	**Project manager who doesn't have a car**	Someone to carpool or share their car	Go to my workplace without the hassle of booking a taxi
6	**Tourist who wants to visit the city**	Someone to share their day and car	Visit the whole city while not getting lost
7	**Person who supports green lifestyle**	Someone to share their drill machine	Do household works without leaving carbon footprint by not purchasing a drill for a day

6. Finalized Set of Features

a. All features of your application and a description of each feature linking it to the user story in 5.b and the persona developed in 5.a. Please organize this as a table structured as follows:

Feature	Type (Mandatory, Alternative, Optional)	Brief feature description	Link to user story (maybe an index to 5.b)	Reference to the persona (his or her need, desire, or characteristic described)
Sharing location of other users nearby	Optional	This feature will help users to see all the users using the app nearby. As a result, users will be able to ask for any product or service to people who're available to public	6	In need of variety of product or services. Not something specific to ask for.

Posting about something in need of or want to share	Mandatory	This feature is the heart of the app which lets user specify what do they are in need of or what they want to share with others.	1-7	These are all the people of the app who are in need of sharing products for different reasons from economical side to sustainability.
Find people who're in need of something	Mandatory	This feature will help the users to find out what people in their neighborhood needs. As a result, the user can rent out or share those products with the users.	2,4	The person desires to make some easy money by lending their products or services to others. They can also make friendship and good relation with people living nearby.
Find people who're willing to share products or something	Alternative	This is the alternative feature of the previous, which will help people to explore what people in their neighborhoods are sharing. As a result, they can ask for borrowing their products or service.	3,6,7	This person is providing variety of products to others depending on the needs. As soon as the person contacts, they verify if they have those certain products or not.
Search for people who're sharing the particular product you're looking for	Mandatory	This search feature will help user to filter the users to only the people who're sharing the particular product one is looking for	1,5,7	This person is in need of products or service for which he's not willing to purchase the product but rather share with others. Therefore, the person might be in financial constraint or against consumerism.
Search for people who're in need of some product	Alternative	This search feature will help user to filter the users to only the people who're in need of the particular product one is willing to lend to others	2,4	This person is just willing to make friends with others and getting to know and help their neighbors.
Viewing contact information	Mandatory	Once anyone finds a person who's sharing or in need of something, they can view their contact information and location	1-7	This helps people to share their basic personal information and make them open to others through sharing.

Integrating user contact number, email and social media	Mandatory	Through this option, users can contact any user sharing products easily through phone number, email or social media.	1-7	The users want to connect and make sure that he deals with the product easily and connect with the users if there's any issue.

b. Final audit of the comprehensive set of features categorized and prioritized based on the four mobile behaviors (Lookup/Explore etc.) discussed in class.

- Sharing location of other users nearby: **Explore/play**
  As this feature is mainly of letting people see other users living around them and explore people they don't know about.

- Posting about something in need of or want to share: **Check in/Status**
  This feature helps the user to keep on updating the things they need or things they can share with others. It keeps on changing from time to time and people will respond to it.

- Find people who're in need of something: **Lookup/Find**
  This feature is for the people who want to earn some money by lending their stuff to others in terms of what others need. So, they can look up on the map of what people around them need.

- Find people who're willing to share something: **Explore/play**
  This feature is for looking around what others are sharing and is intended just for people to know who they need to contact to if they are ever in need of them.

- Search for people who're sharing the particular product you're looking for: **Lookup/Find**
  This is for people who requires something urgently and will help them to find neighbors who can share these items right at the time.

- Search for people who're in need of some product: **Lookup/Find**
  The search feature for people who require something is intended for people who want to make a quick cash by sharing their product

- Viewing contact information: **Lookup/Find**
  After they've decided the people they're going to share their products with, they can look into their contact details and ask for sharing directly.

- Payment of product/service: **Edit/Create**
  The payment method for sharing the product with others will require them to create a transaction which will be delivered only if they both validate it.

Phase 2: Design Document

1. **Description of feature set**
   1. User Registration and Login: It is one of the mandatory feature that the application will have. User signup will help users to create their own account and personalize their account according to their area, products they require and willing to share. This feature will also help users to differentiate with other users according to their needs and help users to contact them.
   2. Viewing contact information: It is another mandatory feature. Once anyone finds a person who's sharing or in need of something, they can view their contact information and location. This helps people to share their basic personal information and make them open to others through sharing.
   3. Integrating location of all users nearby: It is another mandatory feature which will help users to see all the users using the app nearby. As a result, users will be able to ask for any product or service to people who're available to public. This feature mainly caters the users who are in need of variety of product or services. Not something specific to ask for.
   4. Posting about something in need/want to share: This is one of the mandatory feature of the application. This feature is the heart of the app which lets user specify what do they are in need of or what they want to share with others. This feature is for users who are in need of sharing products for different reasons from economical side to sustainability.
   5. Search for people who're sharing the product you're looking for: This mandatory search feature will help user to filter the users to only the people who're sharing the particular product one is looking for. The audience for this feature are the people who are in need of products or service for which he's not willing to purchase the product but rather share with others. Therefore, the person might be in financial constraint or against consumerism.
   6. Search for people who're in need of some product: It is a mandatory alternative feature of the previous one which will help users to filter the users who're in need of product that they are sharing. This feature is for users who just willing to make friends with others and getting to know and help their neighbors.

      Optional
   7. Find people who're in need of something: It is an optional feature which will help the users to find out what people in their neighborhood needs. As a result, the user can rent out or share those products with these neighbor. The feature is for users who desires to make some easy money by lending their products or services to others. They can also make friendship and good relation with people living nearby.
   8. Find people who're willing to share something: It is an optional alternative feature of the previous one which will help people to explore what people in their neighborhoods are sharing. As a result, they can ask for borrowing their products or service. This person is providing variety of products to others depending on the needs. As soon as the person contacts, they verify if they have those certain products or not.

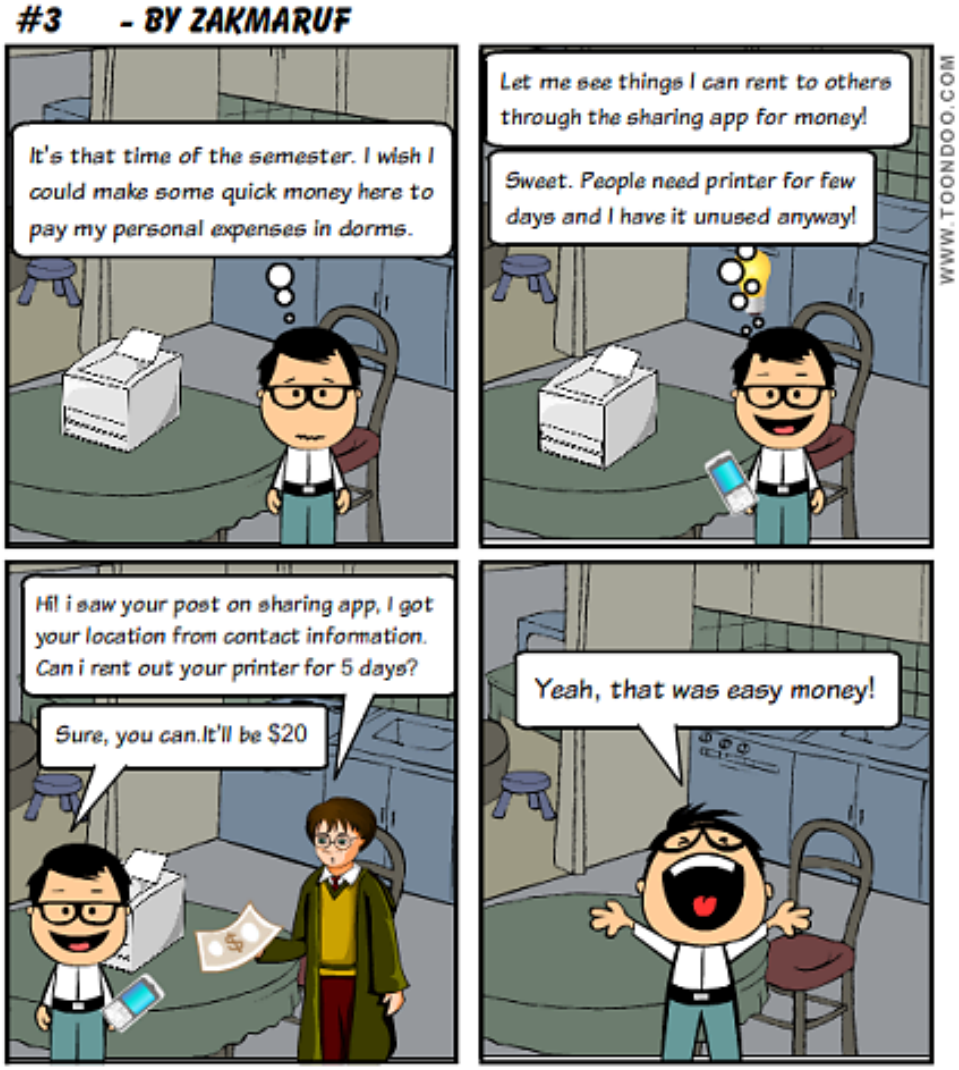
   9. Payment of product/service: This is an optional feature for the application. Through the payment feature, the users can pay for sharing the product or service through the app and doesn't need to pay in cash. As a result, payment goes safely

and properly. This feature is for users who feel unsure about the validity of the people and their product can now easily verify it through the secured payment facility.

2. **User stories linked to storyboards**

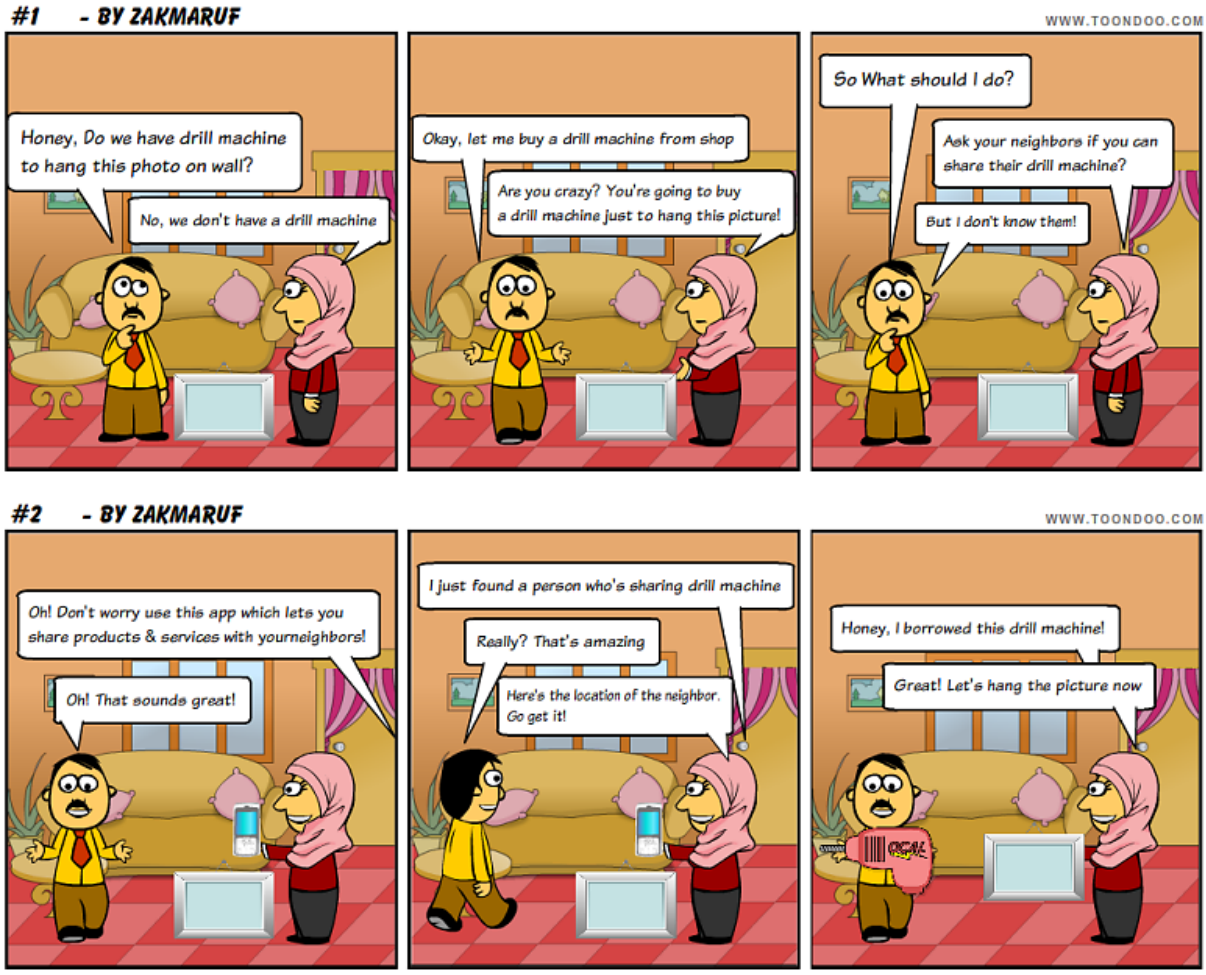
Scenario #1:
User Story #1: **As a** student who's living of tight budget, **I want someone** to share their printer with me for 5 days so that I can finish my document design project from dorms.

User Story #2: **As a student** who's living of tight budget**, I want someone** to share my printer with other students living nearby **so that I can** make some money easily.



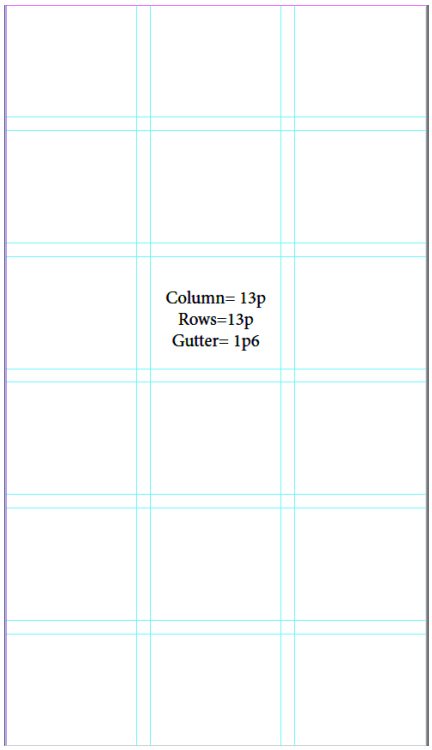
Features used: (6) Search for people who're in need of some product, (4) Posting about something in need/want to share, (5) Search for people who're sharing the product you're looking for, (2) Viewing contact information
Scenario #2:

User Story #3: **As a** family member who moved into new house, **I want someone** to share their drill machine **so that I can** hang pictures on my wall without spending lot of money on new drill.

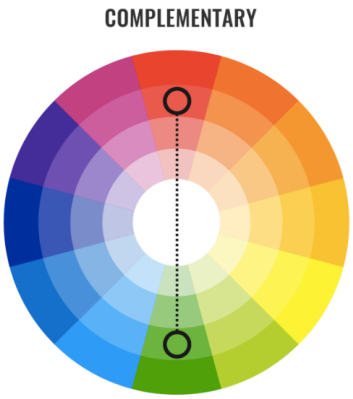


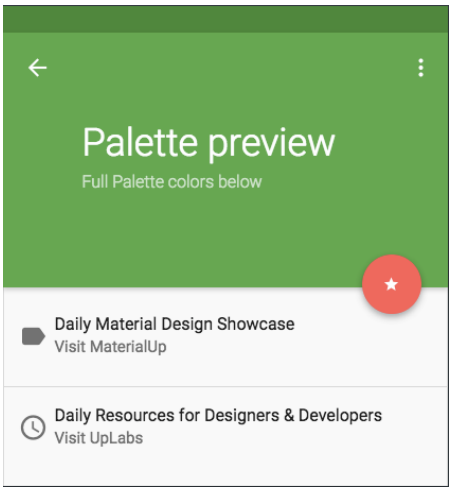
Features used: (1) User Registration and Login (3) Integrating location of all users nearby (5) Search for people who're sharing the product you're looking for, (2) Viewing contact information

3. **Visual recommendations**
   a. Grid: I prefer to have a modular grid with 6 rows and 3 columns. As shown in the figure of the iphone 6/7 screen on the side. Each column and rows takes up 13 picas with a 1.6 pica gutter in between.
   The reason behind this specific of grid is mainly due to it's flexibility which gives the designer a lot of space to work with. It also helps user go through a lot of information properly at the same time.

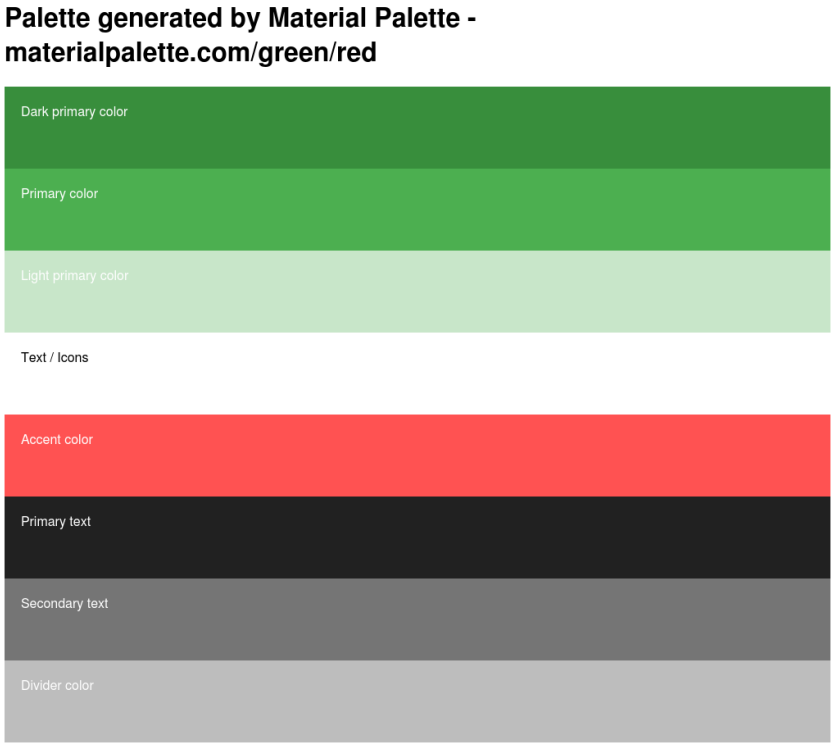


   b. Color: For the sharing app, I'd like to use a light background with high use of green color. The reason for this comes from the meaning of Green color which is derived from most of the culture as energy, money (USA), environment (India, Brazil) etc. The theme of the project is for sustainability which is highly present in green color. For notification and alert, red color will be used which is

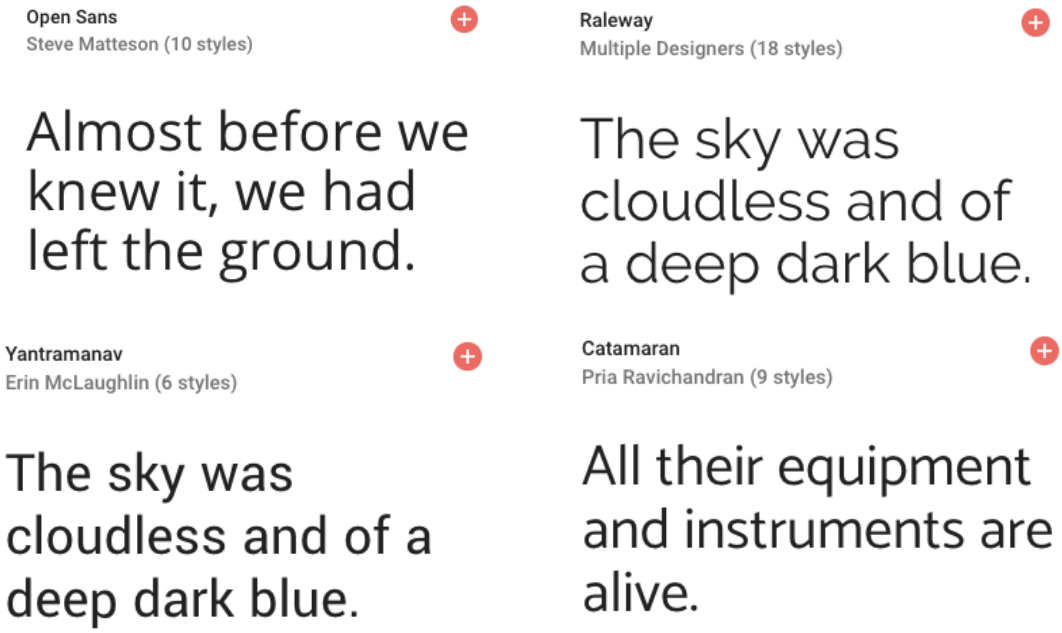




complementary color as shown below. Red color also goes back to the awareness theme of the project.

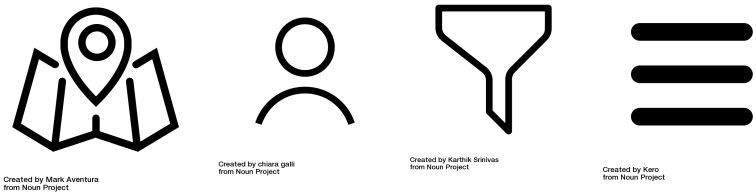


c. Typography: For the typography, the app will be based on simple Sans-serif font on black color with point size 9-11. The reason behind the choice of sans-serif is



the better legibility of the font and identifying each character easily. Some of the fonts that might be implemented are given above.

d. Iconography: The iconography for the website will be really universal and basic. They will be primarily implemented from thenounproject.com. It includes user login, map, filter, menu icon etc.



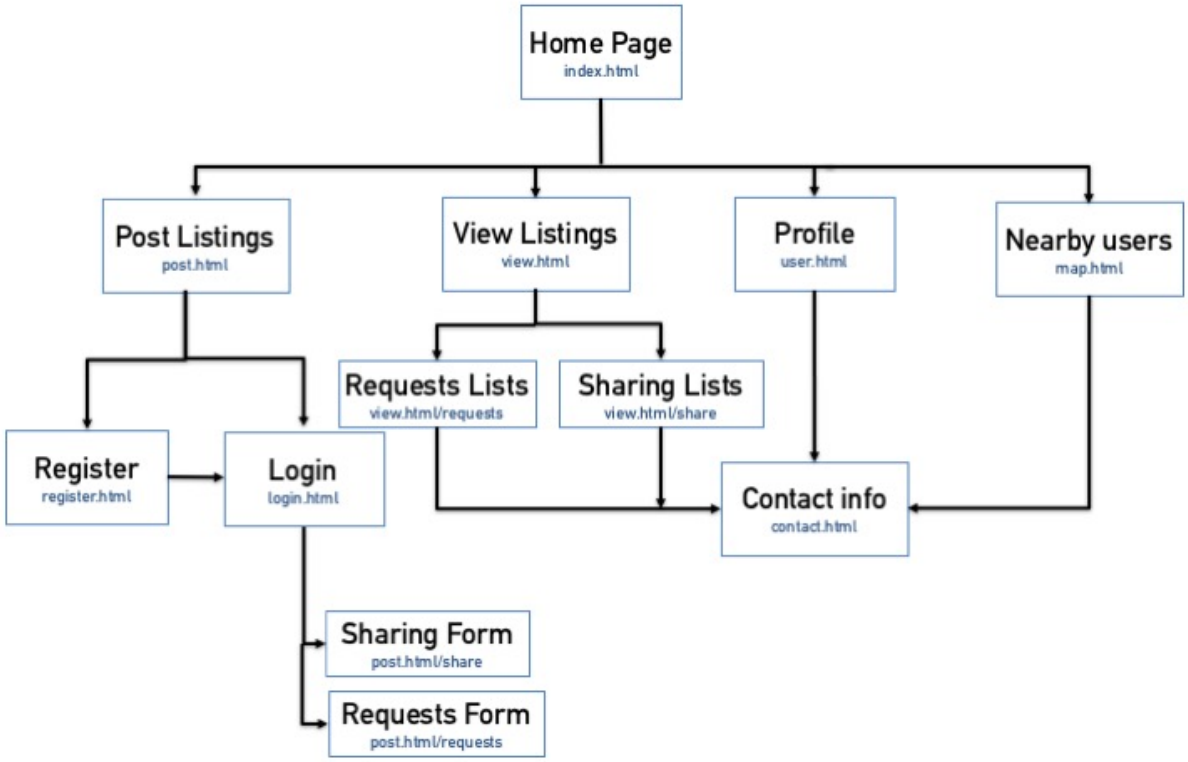
e. Images and logo.
The application will have its own logo which is provided:

For the images, it will be mainly comprised of products that the users are sharing. Therefore, a preview of the app will be similar to the picture shown below. It will help the users to know more about the product and the condition of the product before willing to borrow it. Therefore, the images will be mainly user provided.

4. **Information architecture**
   a. Include a sitemap that

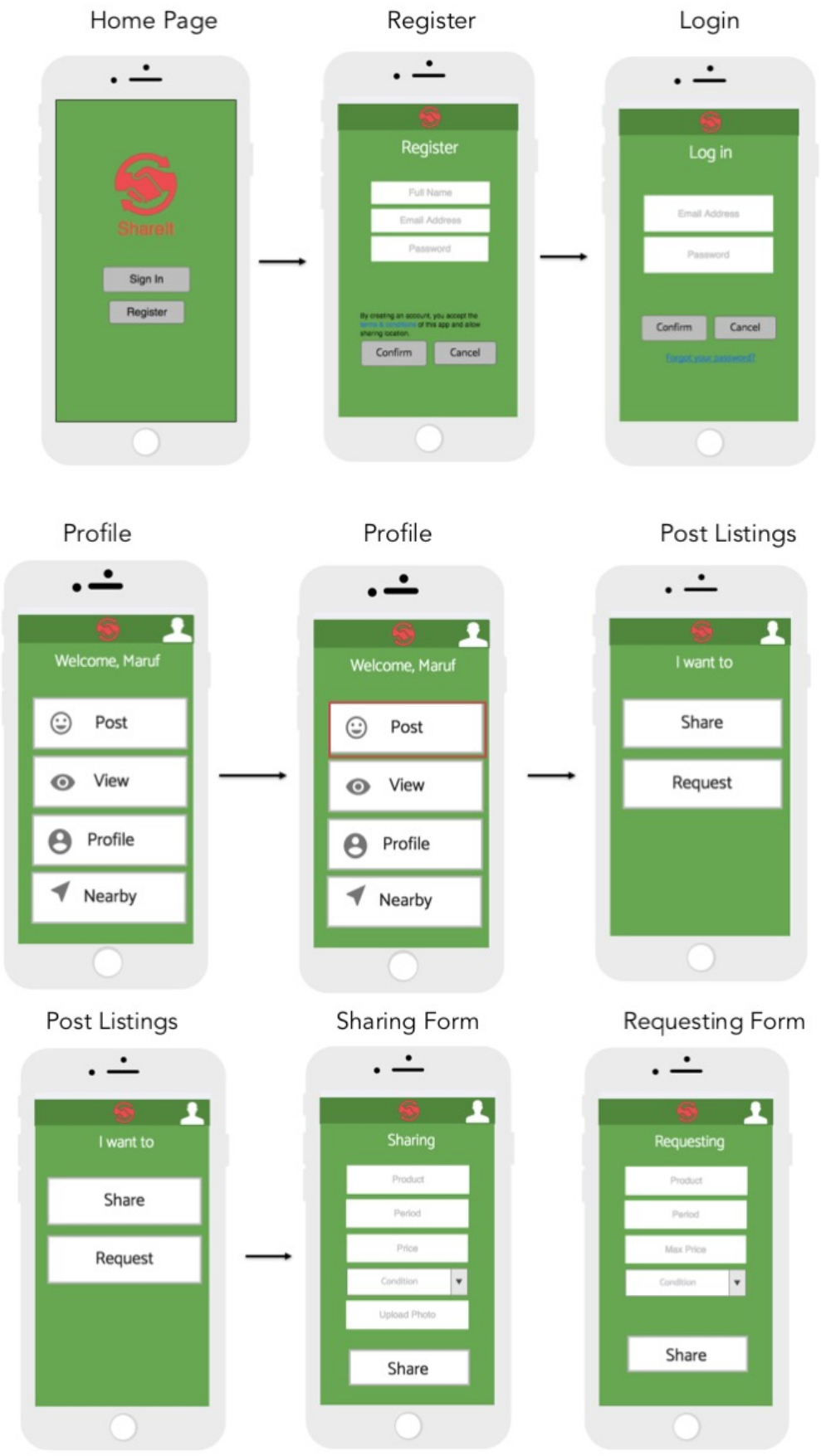
shows how the content and functionality

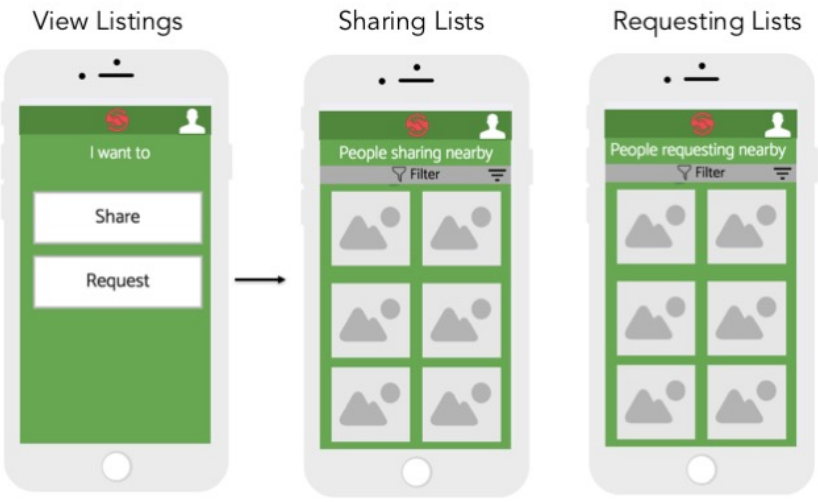
of the entire site is organized (the hierarchy).

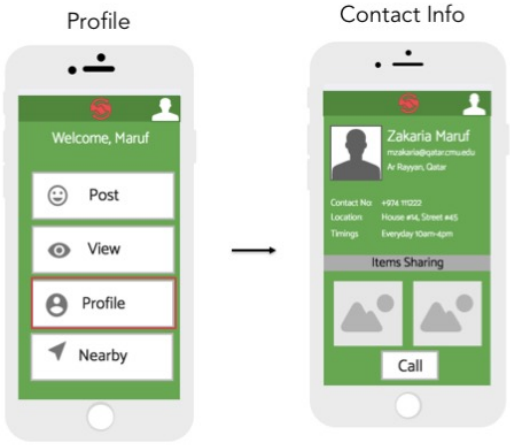


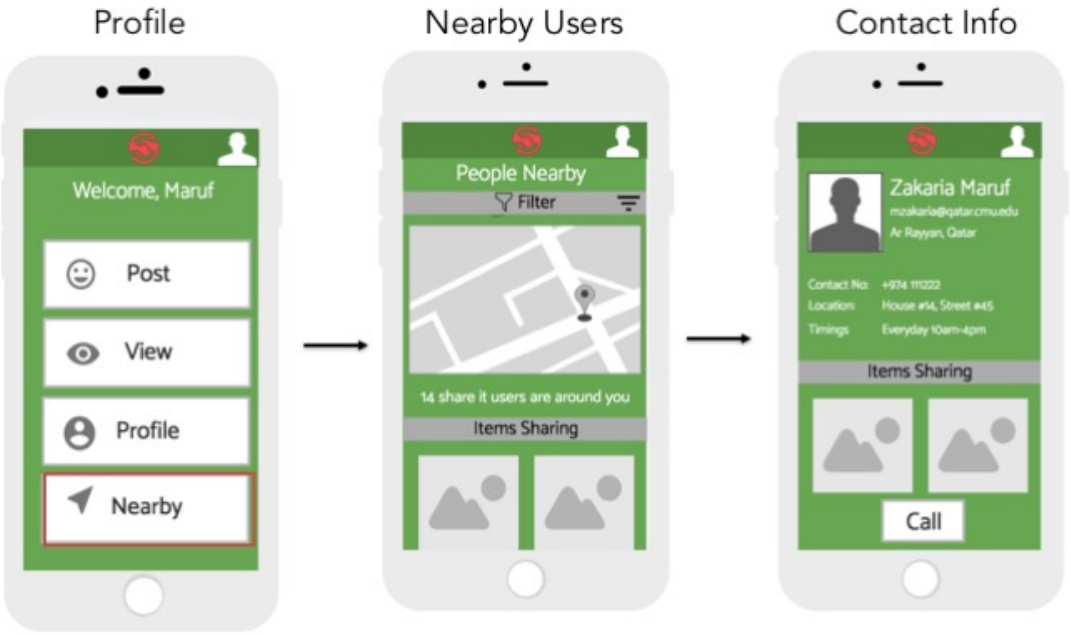
b. Choice of labels & navigation scheme:
The sitemap starts with the home page which provides the user with 2 options mainly which is either registration if they are new user or login if they exist. After they login, they'll have three options:
1) Check their profile and update contact information
2) Look at people living nearby and check their contact information
3) Have a look at the posts people shared in the app.
The third feature will primary have two sections where either they can see requests of users who need some product/service or they can see users who are willing to share certain products. In both of the pages, the user can filter out the products to find their products quicker and easier. After they find their required task, they contact the user who is sharing or requesting the product.

5. **Page layouts and task flows**

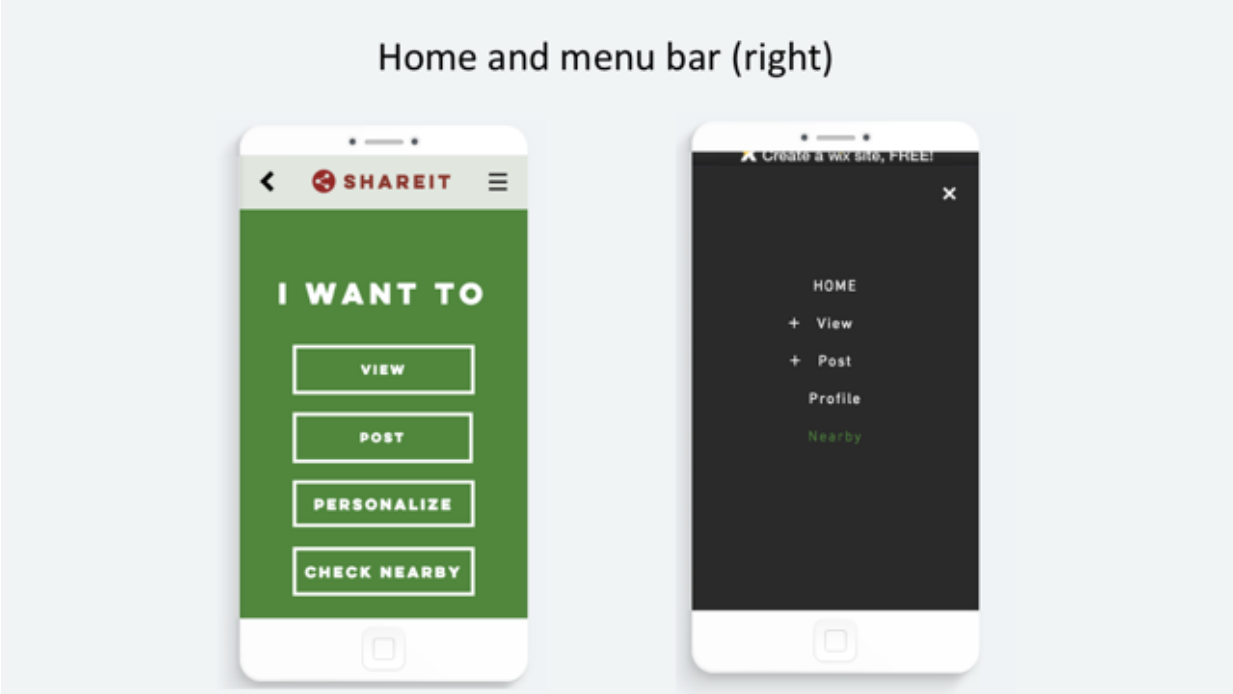


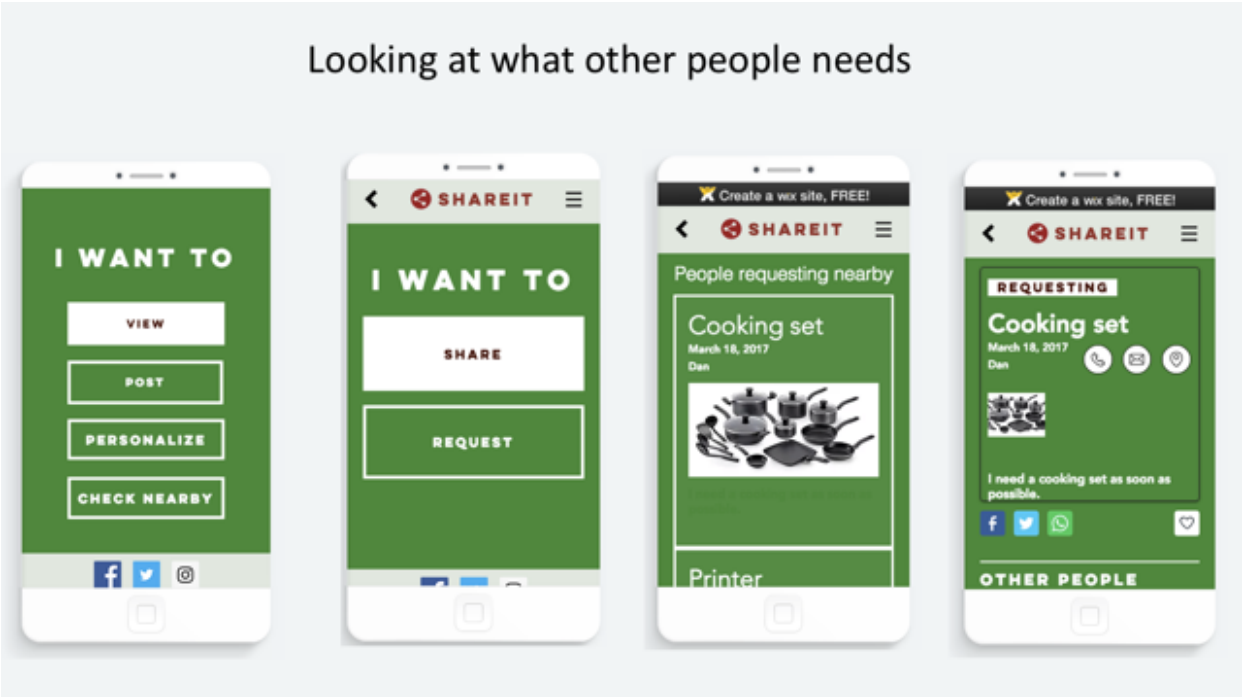

View Listings
Sharing Lists
Requesting Lists
I want to
Share
Request
People sharing nearby
Filter
People requesting nearby
Filter


Profile
Contact Info
Welcome, Maruf
Post
View
Profile
Nearby
Zakaria Maruf
Items Sharing
Call

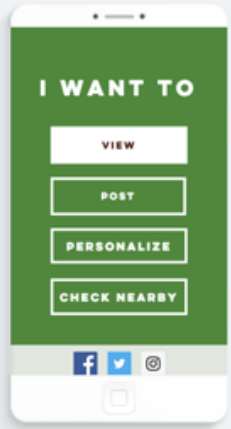

Profile
Nearby Users
Contact Info
Welcome, Maruf
Post
View
Profile
Nearby
People Nearby
Filter
14 share it users are around you
Items Sharing
Zakaria Maruf
Items Sharing
Call

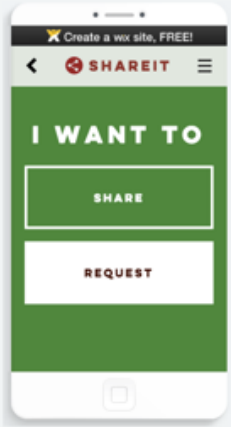
Phase 3: Prototype Development
Phase 1: Wix



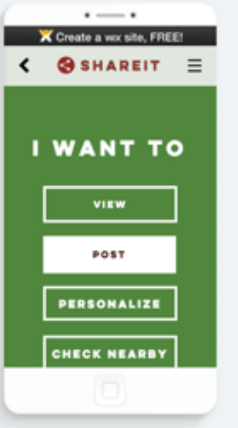


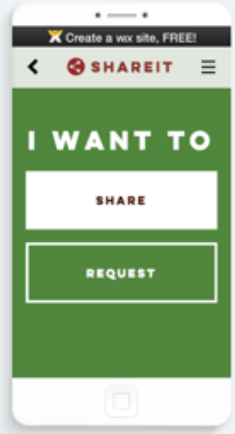
Looking at what other people are sharing

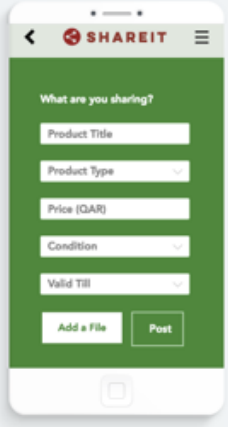




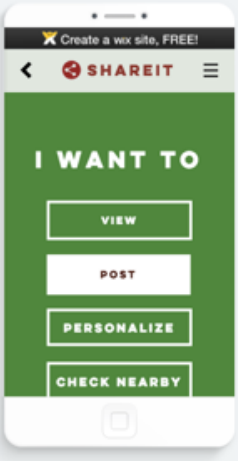
Posting about things user is sharing

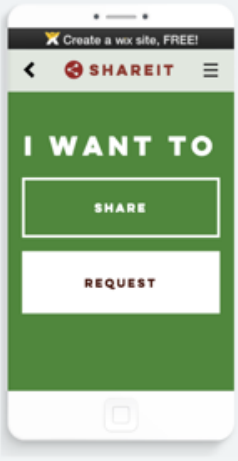


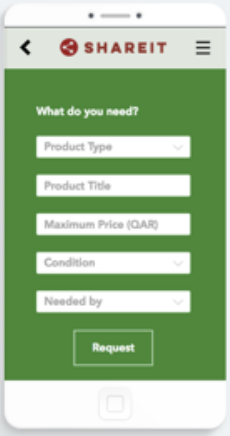




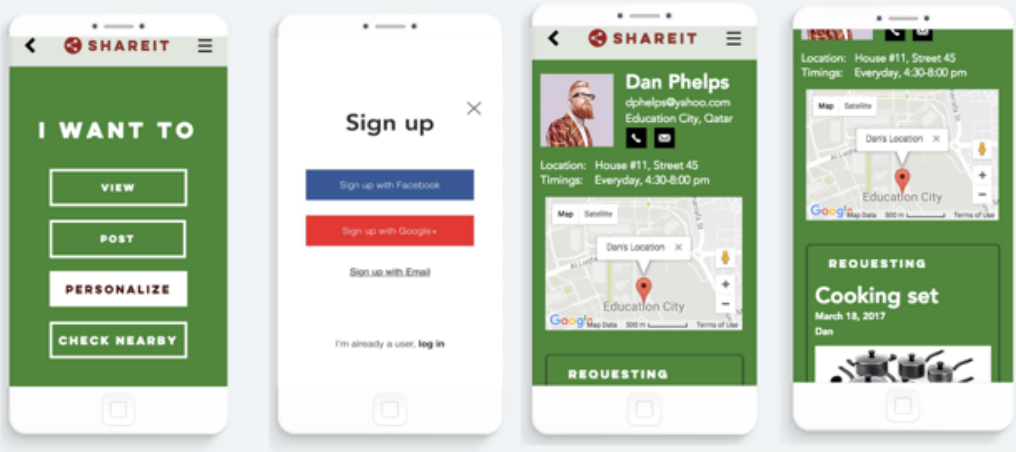
Posting about things user needs



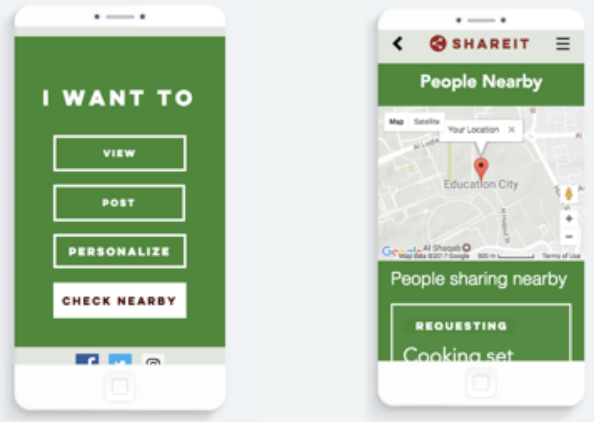




Looking at the user profile after log-in



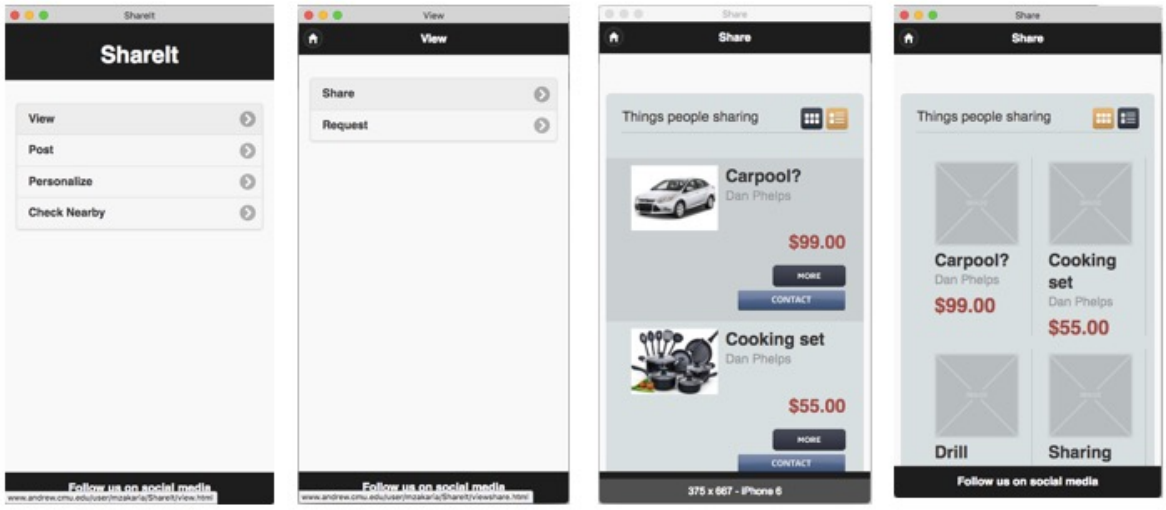
Exploring own neighborhood



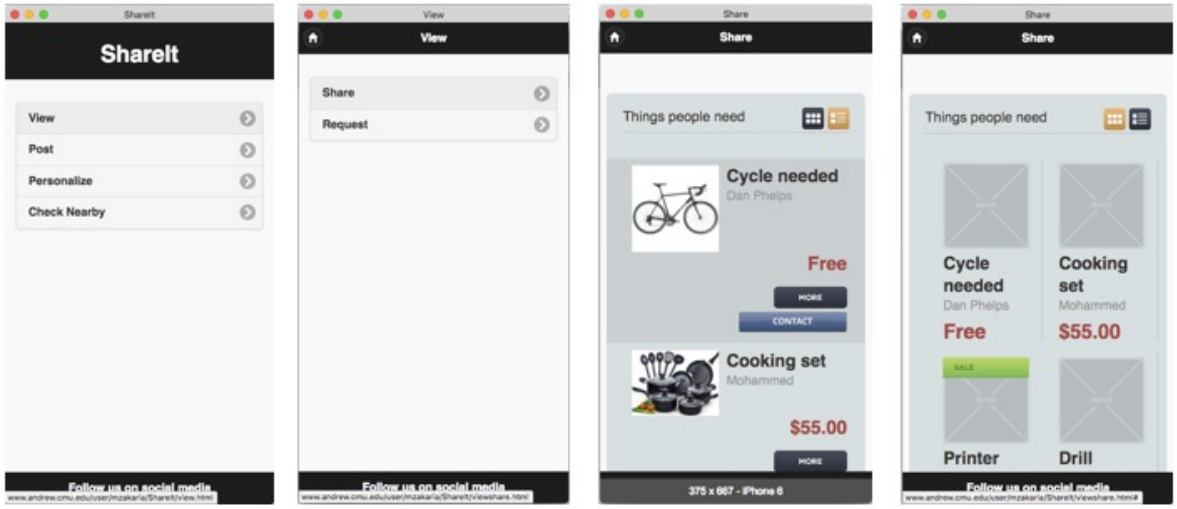
Phase 3: Prototype Development
Phase 2: Report and Prototype

1. Snapshots:

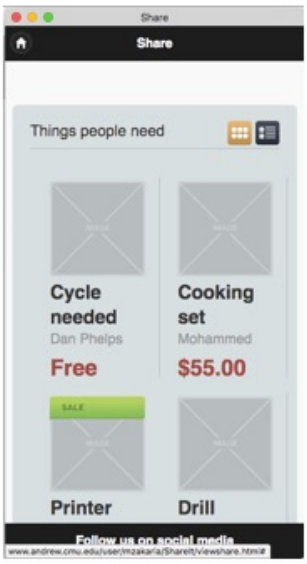
To view what people are sharing

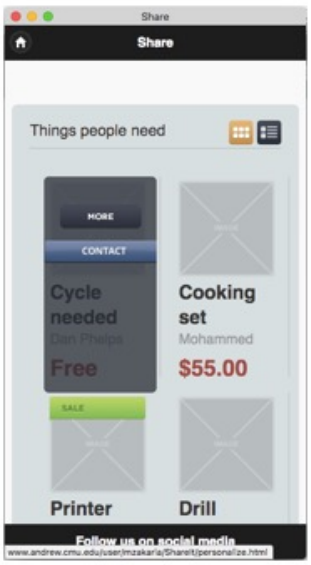


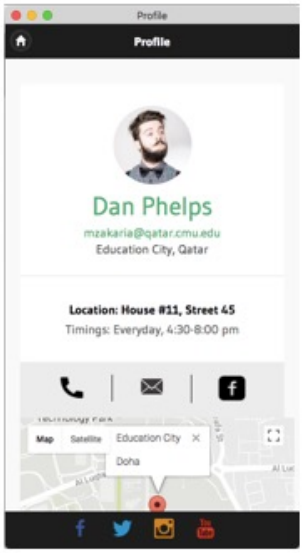
To view what people needs



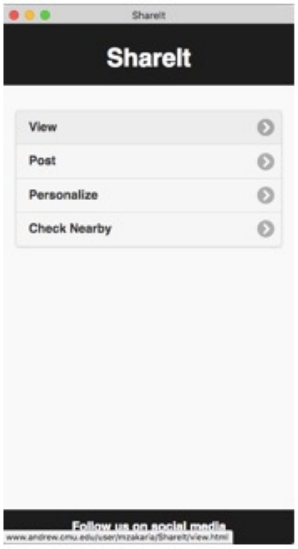
To contact users

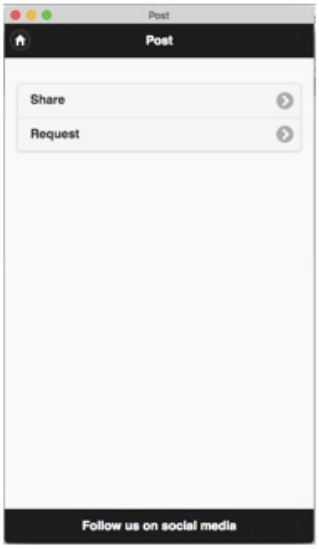


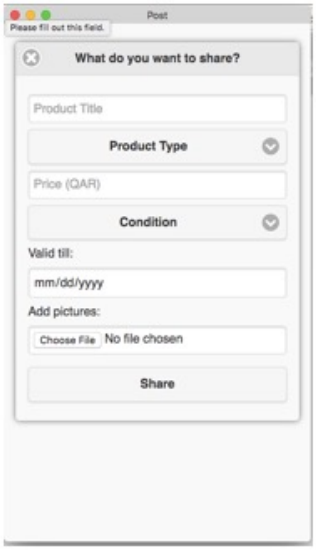




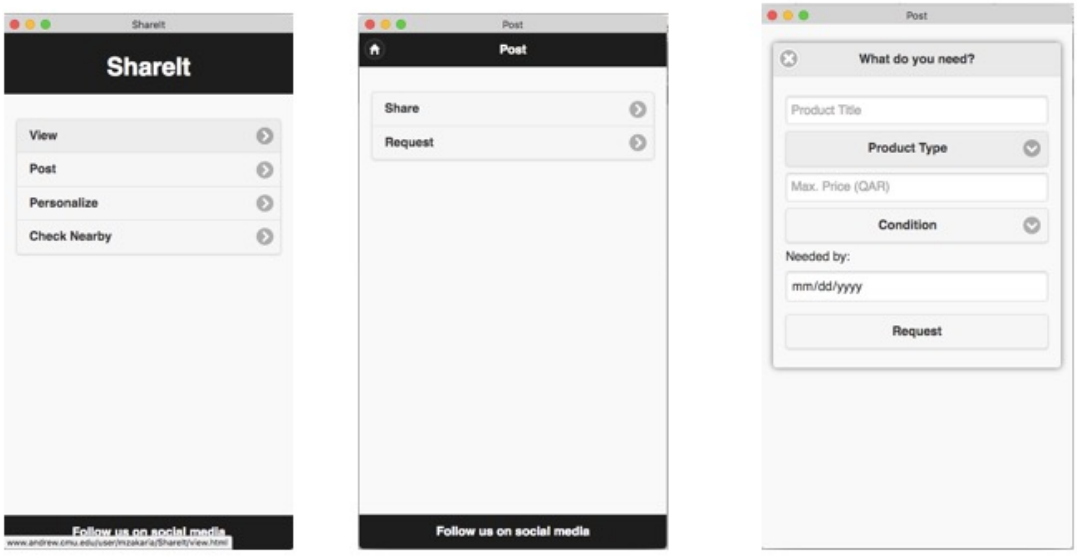
To post about sharing a product



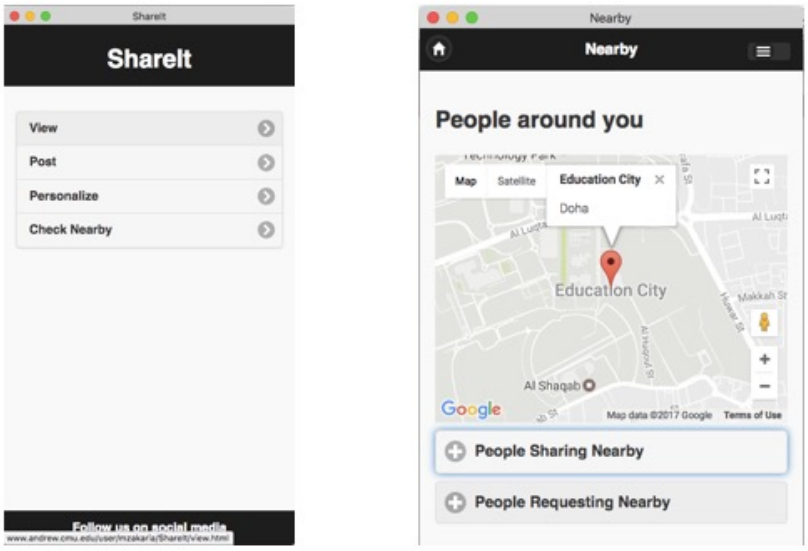




To post about requesting a product



To look what people are sharing nearby



2. **Design principles:** The prototype incorporates multiple design principles discussed in the class. These design principles are discussed below:

Simplicity: The website focuses on keeping the contents simple by providing content over navigation. Therefore, as soon as the users go to the website, they'll find the contents right in front. The website also uses minimum text to keep the important information straight up.

Header: The website lets the user know which page they're on by providing a header. The header also provides them with opportunity to easily go back to the home page by clicking on the home button.

Top down mobile layout: The website is structured in a single column layout fro it's simplicity nature. Each page is divided into mainly the header, content and footer to provide

consistent look and feel.

Form best practices: The forms included in this mobile website are simplified versions. They are equipped with proper labels and top aligned. The forms are squeezed to make sure only important and relevant forms are to be filled by the users, so the form takes up only one page. The form also has calendar widget to help users pick the date easily. The submit button at the end is large enough for the users to select.

Responsive Design: The mobile is also responsive to screen size so it changes its layout depending on the device being used. In the viewing page for all the products share, the grid changes from 3 columns to 2 columns for mobile platforms.

Font Legibility: Text used in the mobile website has been kept to minimum so that users can use the website while glancing. Sans-serif typeface has been used for the navigation and content as all the areas were compact and not dense.

Clear Iconography: The icons used in the website were made sure to be understandable, therefore all the universal icons were used and no innovative or local icons were designed.

Size and proximity of links: The size of the links for all the buttons and links were considerably large for the convenience for the users. The proximity for the links were all considerably close to the users fingers to select.

3**. Usability testing:** I plan to perform the usability testing by focusing on the 5E of the mobile website. The aspects that I'd like to test for the website are discussed below:

Effective: This is one of the most important usability testing for my website. Effective testing links to how accurate or complete the website is compared to task I want to accomplish. The reason behind doing an effective testing is due to getting to know if users are satisfied while using the application or not and if they're not satisfied then what are the ways the website can be enhanced. The testing for it can be performed by watching the results of each task they performed and the accuracy of these tasks.

Efficient: Efficient focuses on how quickly a task can be performed. It is important for my website because the users need to share or request for something soon and get their possible outcome really quick, if they don't receive so they'd be bound to not use the website anymore. Efficient testing can be performed by measuring how much time it takes them to complete a task.

Easy to learn: As it is fairly a new concept therefore, it is of high importance that the interface and use of the website is really easy for the user to master. This testing can be performed by controlling the amount of instruction or help provided to participants from different background.

Engaging: It is of fair importance to make sure the users are not lost in the interface and are willing to explore the application. This will help make sure there are active users for the website. It can be tested by asking participants what they liked and not liked about the website.

Error Tolerant: As there’s not much scope for error in the application, so it is of fair importance to make sure users can recover if they commit any mistake. Ways to do so is having them to go to previous or home screen.

Phase 4: Test Plan and Results
Part 1: Usability Testing Plan

1. **Scope**

a. Background

ShareIt (http://www.andrew.cmu.edu/user/mzakaria/ShareIt/) is a mobile application which provides a common platform among neighbors to share products and services in exchange of money, happiness or just social bonding. The app is mainly targeted for the users who have newly moved their house, students, expatriates and travelers. Some of the core feature of the app includes posting a request of a product or service to the neighbors, posting about what users can share to others and exploring what people nearby are willing to share. As the app is mainly based on sharing products and services to people nearby therefore the application is mainly intended to be used through mobile for convenience and flexibility. However, on later stages the application can be deployed as web-apps on computers for scaling. Technological constraints for the application mainly includes having proper data connection and GPS locator on mobile devices to locate all peers around a user.

b. Summary of test

The primary purpose of the usability evaluation is to test the platform by asking users to work on specified tasking using the system. The input and feedback provided by the users in regards to the design, performance and convenience of the service will be used to improve the system. The data that we mainly expect to collect will include qualitative data like logging in information, satisfaction etc. as well as quantitative data like time taken to complete task, number of errors etc. Analysis of the data will be mainly performed through qualitative and quantitative analysis of different measures.

2. **Purpose of the Test**

Objectives of the product design: One of the primary goals of the application is to provide a platform where users can share their products and services. Users can also request for specific products and services as well. It also provides users with the opportunity to contact with the users easily through their sharing products. Finally, they can also explore for different products and services being shared by their neighbors.

Concerns to address for evaluation: The application has few specific concerns that needs to be addressed for user evaluation. One of the most important concerns regarding the application is if the user can find specific information easily. Other important concerns include if the information displayed is mobile friendly and if the users can make a post of sharing or requesting easily.

Goals of the usability evaluation: According to the concerns, out of the five Es the most important one that needs to be addressed is **Effectiveness** which focuses on if the user can find specific information. The concerns also look at **Efficiency** due to finding the information easily as well as **Easy to learn** which focuses on that the user learns new environment conveniently.

User Stories: For the evaluation, the user story that has will be considered the most is supposing a student from CMU who lives at the dorms needs a cycle for 2 weeks in order to make it to the morning class on time. The student has been suggested to use the Shareit mobile app to look if anyone nearby is already sharing cycle. If not, he needs to request

for a cycle sharing from people nearby for 2 weeks. Therefore, the pages that will be primarily evaluated mainly are the *home page*, viewing the *sharing page* and posting in the *requesting page*.

3. **Target Users**

   As mentioned before, the users that are targeted for the application are mainly users who have newly moved their house, students, expatriates and travelers. One of the target users is Dave. Dave is an international student at Georgetown University in Qatar and he has moved to Qatar just few months back. He is from Sydney which has been ranked as one of the most sustainable cities in the world. Most likely due to this, Dave is really concerned about sustainability. In addition, cost of living in Qatar is really high and he doesn't save much after spending on housing and tuition. Occasionally, Dave feels the necessity to buy few items which he is most likely to use for a week. However, he doesn't buy them as he thinks they are waste of money even if he needed them.

   The reason behind choosing this specific groups of people is due to their more likeliness on sharing products rather than buying. Also, these people are more likely to be sustainable than other users. Dave is also a representation of most students in Education City which will help the application to be tested by few intended users. For the qualitative tests about 6 users will be tested while for quantitative testing around 20 users will be tested.

4. **Test Design**

   According to the goals, concerns and user stories, following are three scenarios that are designed to evaluate the Shareit application:

   1) Scenario 1: This is an exploratory based scenario which include qualitative methods like questionnaire and read aloud protocol. It will take about 15 minutes to complete. In this scenario you are a student in Qatar who lives in the dorms. You want to explore what are people around you are sharing or requesting about.
      Task Step1: From the Shareit home page, go to explore nearby.
      Task Step2: Inside the explore nearby look for products/services people are sharing or things people are requesting.
   2) Scenario 2: This is a transactional scenario which include quantitative methods like performance measurement and number of errors committed. It will take around 10 minutes as well. In this scenario you are an international student in Qatar who needs bicycle for going to classes for 2 weeks. Now post a request in the app for needing cicyke for 2 weeks.
      Task Step1: From the Shareit home page, go to post.
      Task Step2: Inside the post page, go for request page
      Task Step3: Inside the request page, post a request for about requiring cycle.

      Scenario 3: This is a goal-oriented scenario which includes qualitative methods like questionnaire and read aloud protocol. It will take about 15 minutes to complete. In this scenario you have found who is sharing bicycle that you are looking for. Now you have to go to his profile and contact him about it.

Task Step1: From the Shareit home page, go to view.
Task Step2: Inside the view page, go for sharing page.
Task Step3: Inside the sharing page, look for the person sharing cycle.
Task Step4: Press on call or email or message him through his profile.

5. **Test Methods**

The evaluation testing of the application will be performed in a formal environment where user can test the app with ease and conveniently. For testing the app in order to evaluate the usability of each tasks, the methods that will be used are described below:

Logging actual use: This is an inquiry based evaluation method which records the movement that the participants have performed while using the application. This method help provide both qualitative and quantitative measures. For the testing of the Shareit application, the users will be asked to perform the tasks in different scnerios. They will be recorded through Morae application which will enable to log their movement and how they used the application. It will also help to assess how much time they've used to complete a task, number of errors they've made and etc.

Questionnaires: Questionnaires are inquiry based evaluation method that helps assess the qualitative analysis mainly. Measures include background profile of the participant, how they've felt like while using the app as well as how much satisfied they were by the application. However, the qualitative results achieved by questionnaires can be used to convert into quantitative measures. For example, counting the number of people gave positive feedback compared to negative feedback etc.

Thinking aloud protocol: Thinking aloud protocol is a testing form of evaluation which requires participants to dictate whatever they're thinking on mind. This method will help to enhance the application basically by getting to know how the users feel about the application. The measures from this method is basically qualitative for example how they find the aesthetics of the page, getting to know if they're lost or not etc. The measures will be recorded through Morae application.

Performance measurement: Performance measurement is a testing based rigorous usability evaluation which requires participants to find out problems through completion rate, task time and other quantitative data. However, qualitative data can be integrated through asking question about how we can improve the application.

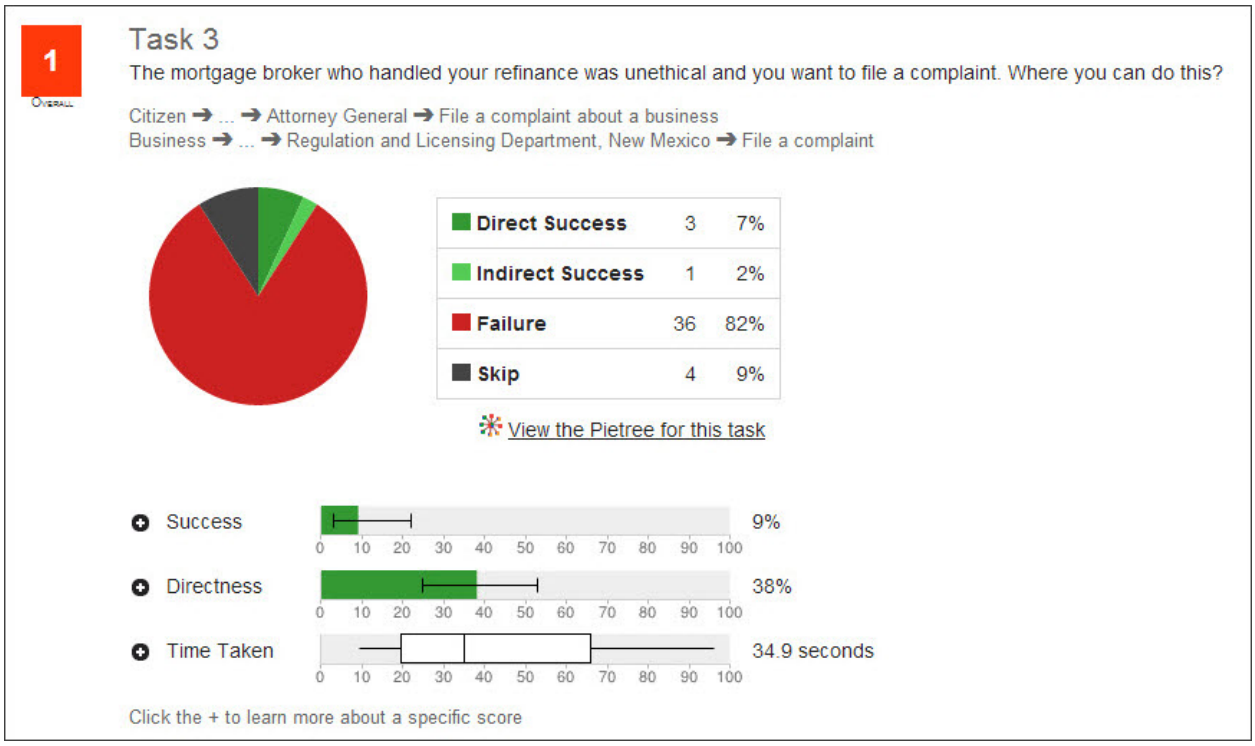
Measures: Effectiveness: To measure the effectiveness of the application some of the measures that will include both quantitative and qualitative data. Quantitative data includes the completion rate among the participants or the number of errors made by users. Also it can include number of times the participant needed assist with their tasks. Qualitative data on effectiveness mainly includes questionnaire about if they will use the application, satisfaction etc. **Efficiency:** In order to measure the efficiency of the users regarding the application, users required to be time for completing certain task or the time taken to find out certain information. Questionnaire about how convenient it was or Likert scale can help as well.

Addressing learning effects & fatigue: In order to implement the methods and have the accurate measurement it is required to provide break between long sessions. It is also

important to randomize scenarios and order they're done with the participants so that the results are free from any biased views.

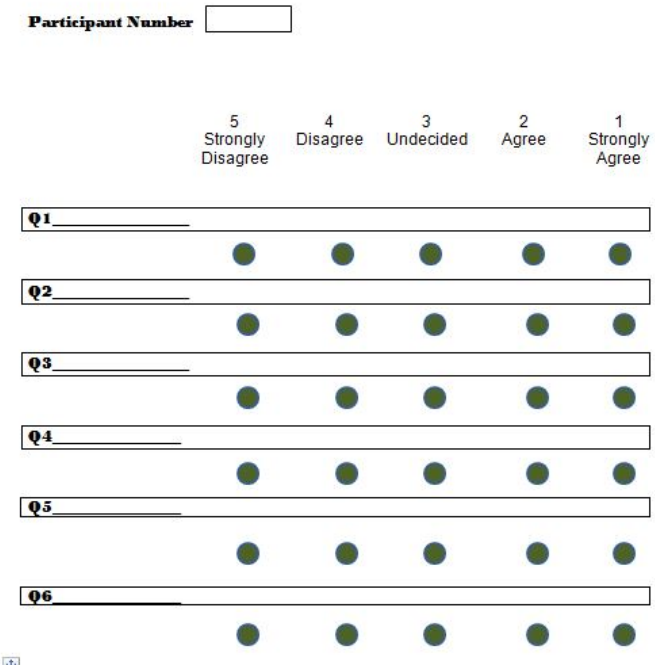
6. **Deliverables**

The analysis will mainly help to convert most of the qualitative data into quantitative data. The reason behind doing it is to make it convenient and effective to know where the strength and weakness of the app lies. However, the important qualitative data will remain on the analysis as notes. The results of the performance measurement and logging actual data will be basically reported through Treejack tree testing. It looks at how many participants were successful directly without any back and forth, how many users found it indirectly, time taken etc. All these information are later be displayed in pie and bar chart as show below:



Source: Tree Jack testing

Other qualitative data from questionnaire will be basically converted and reported through Likert scale while mentioning the comments on notes as shown below:



Source: Likert Scale

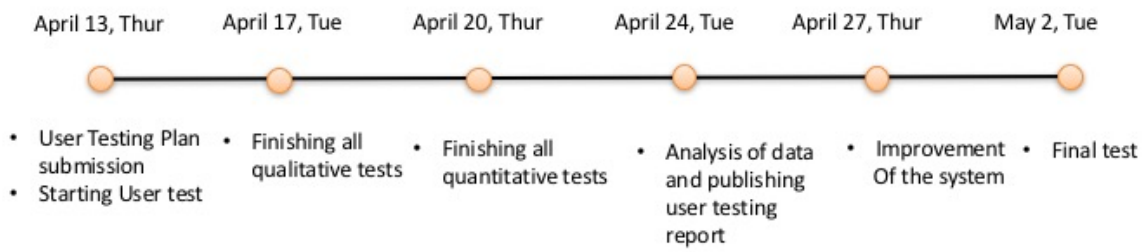
7. **Resources**

The testing will be conducted in isolated place preferably in the lab or any place which doesn't distract the participants from anything else. The evaluator and the participant will be in the same room or space. The room or space will have the following equipment and environment:

1) It will be isolated with minimal noise which doesn't distract the participant
2) The lighting of the room will be optimal to lighting at house.
3) Equal number of tests will be performed during day and night to eliminate any impact of daylight on the visibility and use of application
4) Participants will be using the provided mobile which will be connected to the steady wifi from CMUQ-Secure.
5) Participants will primarily use iphone device, however if required will be provided android at later stage.
6) Participants will be directed to webcam or other camera feature to record their use through Morae software.
7) Audio will be recorded from the participants for real aloud protocol.

Roles: Test administrator: Here for the usability testing the test administrator will coordinate the user testing, present the scenarios orally, provide the devices required as well as work as debriefer. The same test administrator will also log the detailed records from the user and perform any other logistics. **Participants:** Participants will basically use the application without any bias on the assigned tasks and provide information to the testing as the test administrator is asked. Participants have the right to leave the test when they like.

8. **Schedule**



Each test will take about 20-30 minutes to complete which include the pre-test and post-test time. Therefore, about 4-6 tests can be performed daily. Therefore, the final study of quantitative study will include 25 users for meaningful results. Whereas for qualitative tests the number of user will be tasted around 6 after which the changes in results are marginal.

9. **Conclusion**

Few of the key concerns regarding the development of the testing includes making sure the participants are free of any bias and no other external influence is present for testing. As the testing is more likely to be taken place at a diverse environment, it is really important to make sure the test is free of any cultural influence. The scope of the test is to make sure that users can share their products/services easily while can also explore what people are sharing nearby. Data will be primarily collected through Morae through video, audio and time. Other collection method will include form, questionnaire paper etc. The test will be performed in isolated place in both day and night throughout the next week. The collected data will be primarily converted into quantitative data as well as kept note for qualitative data through Treejack testing as well as Likert test.

Phase 4: Test Plan and Results
Part 2: Usability Test Results

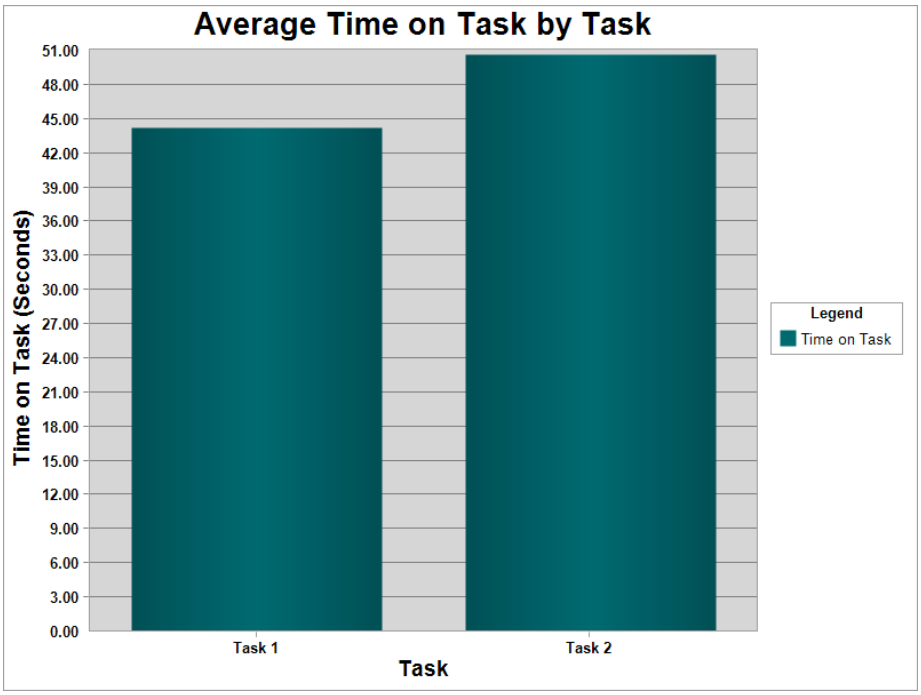
1. **Executive summary:**
   The main concern for the application is to make sure that the users find specific information easily. It also includes if information displayed is mobile friendly and users can make a post of sharing or requesting easily. The methods used to determine the usability included logging actual use which gave us the mean time to complete task, where questionnaire gave us the usability score as well as suggestions and finally attention analysis gave insightful information about what the users view on first few seconds. All these methods helped change the website for better through fixing the header, making forms user friendly and displaying content better.

2. **Test Methods:**
   For this project, the test methods that were chosen were to find if the application is effective, efficient and easy to learn. Effectiveness focuses on the success of user to find specific information, while efficiency looks at finding important information easily and easy to learn focuses on user learning new environment conveniently.

   a. **Logging actual use:** This is an inquiry based evaluation method which records the movement that the participants have performed while using the application. This method helps provide both qualitative and quantitative measures. For the testing of the Shareit application, the users will be asked to perform the tasks in different scnerios. They will be recorded through Morae application which will enable to log their movement and how they used the application. It will also help to assess how much time they've used to complete a task, number of errors they've made and etc.
   b. **Questionnaires:** Questionnaires are inquiry based evaluation method that helps assess the qualitative analysis mainly. Measures include background profile of the participant, how they've felt like while using the app as well as how much satisfied they were by the application. However, the qualitative results achieved by questionnaires can be used to convert into quantitative measures. For example, counting the number of people gave positive feedback compared to negative feedback etc.
   c. **Attention analysis:** Attention analysis is a testing method which predicts how users see websites in their first few seconds. It doesn't require users to perform usability evaluation. The measures used for it are more qualitative, it includes perception map where it shows what the users will see in their first few seconds, attention map shows how much attention the users will pay and finally hot spots which shows the most eye-catching elements in a website.

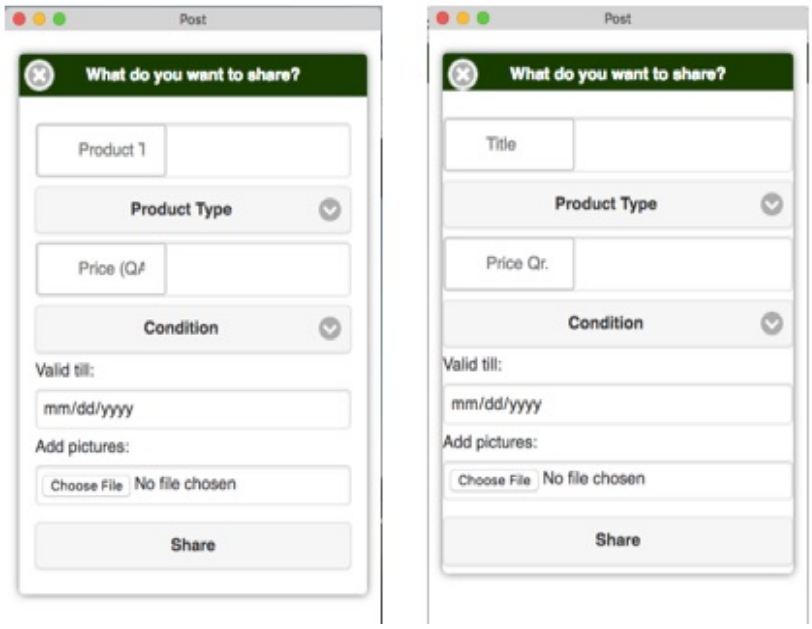
3. **Findings and recommendations:**
   a. **Logging actual use:** This method helped provide both qualitative and quantitative measures through using the Morae application. I've tested the application on 5 users who has provided meaningful information from logging actual use. They were provided with 2 scenarios, one was to contact a person sharing cycle and the other is for them to share a cycle. To analyze the

quantitative measurement, I've used time taken to complete the task. The average time taken to complete **task 1 was 44 seconds** with range 21-70 seconds, while completing **task 2 took 50 seconds** with range 40-70 seconds. The average time graph is provided below:



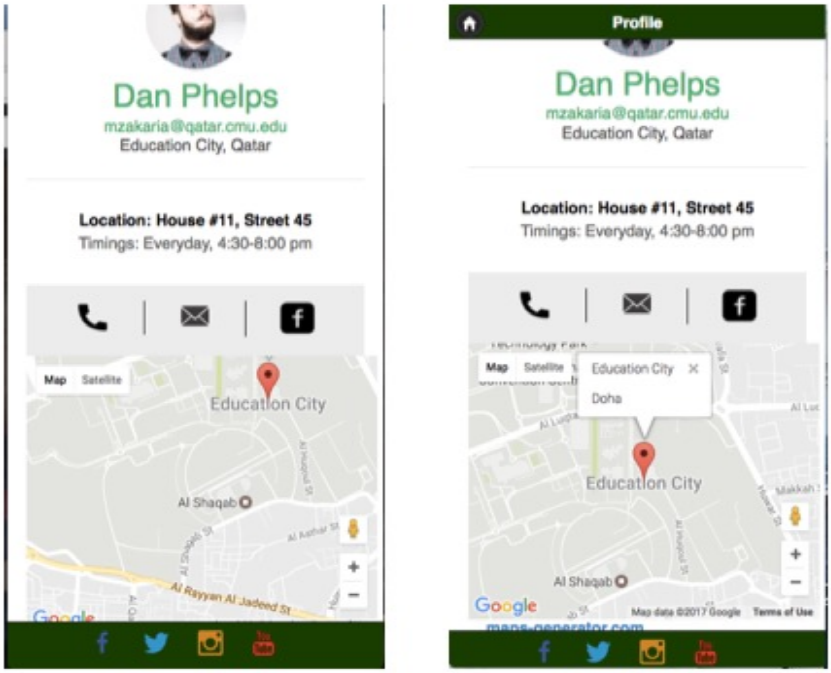
For the qualitative measurement, none of the users made any mistake on their process to complete the task. Users took a bit more of time to complete task 2, due to bit complicated form option for task2, therefore the form has been made more user friendly to make it easier for users to use.

Modifying the form

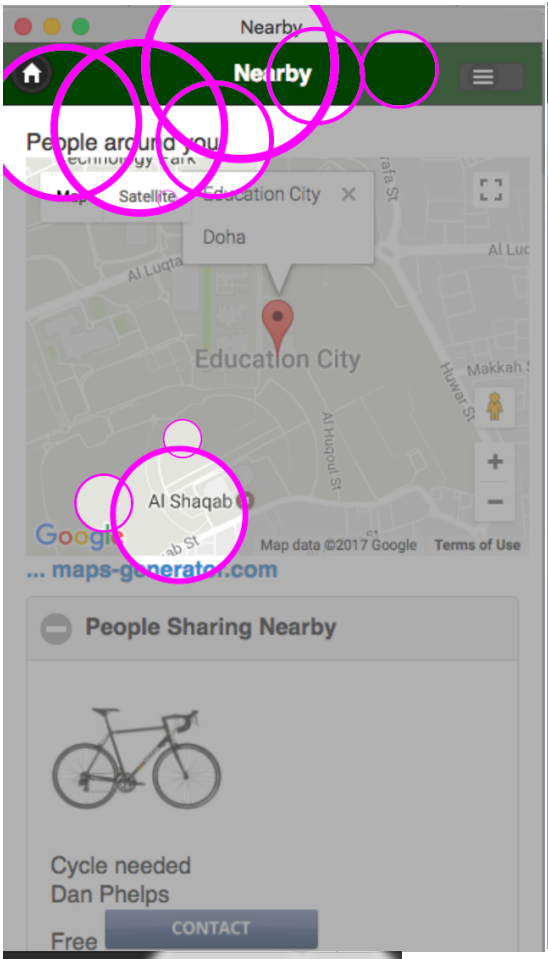


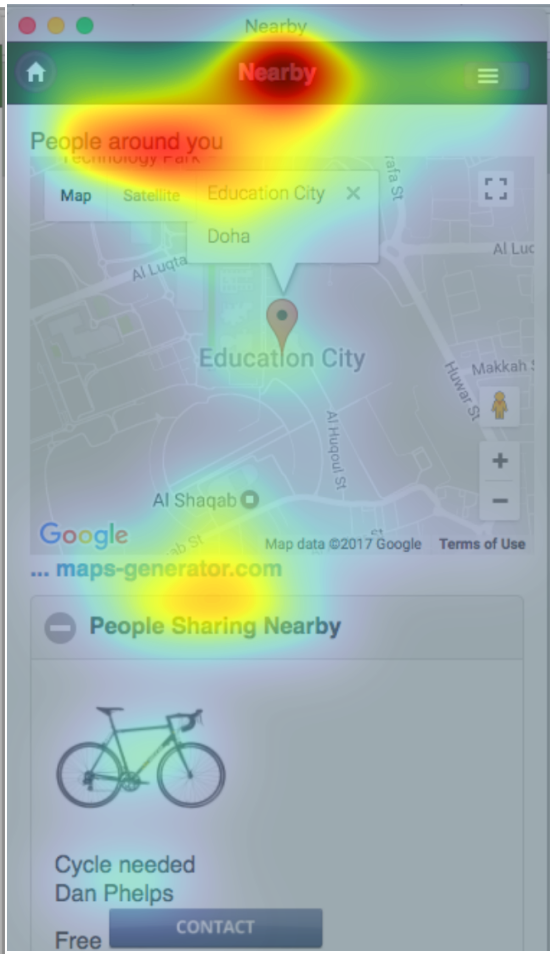
b. **Questionnaire:** For the Questionnaire, predefined questionnaires from Software Usability Scale were used to do the usability testing. It contained both qualitative and quantitative measures for the users to provide. The quantitative measure was to provide the usability score of the system. From 5 users, the average **usability score was 88.5** which ranges from 75 to 95. While, qualitative measure included providing any suggestion for the system to improve. One of the common suggestion was to fix the header to the top of the screen as well as make the website zoomed in a bit.

Fixing the header to the top of the page



c. **Attention Analysis:** The attention analysis has been done through Eyequant which provided with some insightful both qualitative and quantitative information. It provided the users with perception map where it shows what the users will see in their first few seconds which was more at the header and bottom of the map than products, attention map shows how much attention the users will pay and it was again at the header and the map and few bit on the products and finally hot spots which shows the most eye-catching elements in a website shows the same as perception map.


Nearby
Nearby
People around you
Map
Satellite
Education City
Doha
Education City
Al Shaqab
Google
Map data ©2017 Google
Terms of Use
... maps-generator.com
People Sharing Nearby
Cycle needed
Dan Phelps
Free
CONTACT


Nearby
Nearby
People around you
Map
Satellite
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Doha
Education City
Al Shaqab
Google
Map data ©2017 Google
Terms of Use
... maps-generator.com
People Sharing Nearby
Cycle needed
Dan Phelps
Free
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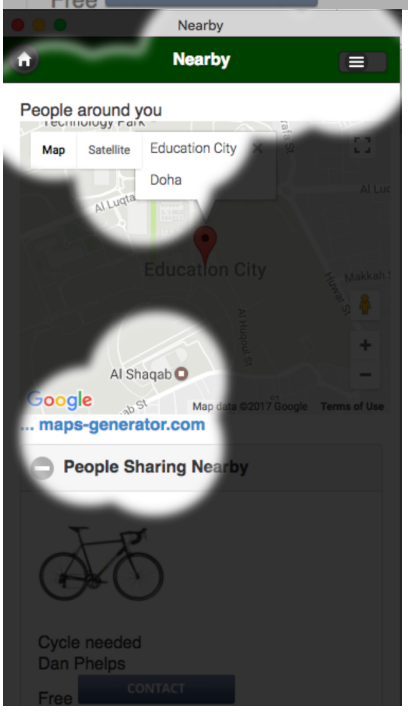
Nearby
Nearby
People around you
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Satellite
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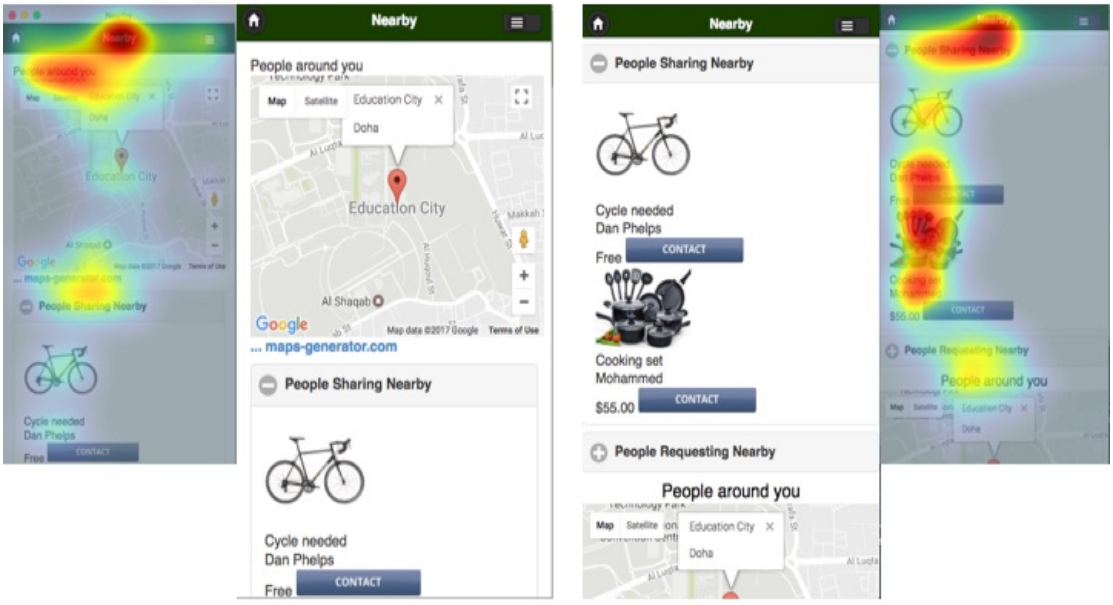
Doha
Education City
Al Shaqab
Google
Map data ©2017 Google
Terms of Use
... maps-generator.com
People Sharing Nearby
Cycle needed
Dan Phelps
Free
CONTACT

From the attention analysis, I've decided to make the page focus more on the product than the map and header.

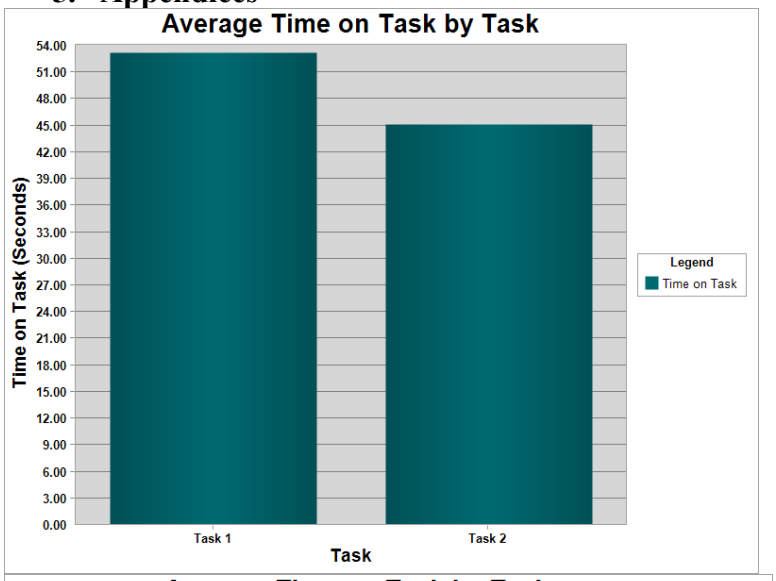
Redesigning the nearby to show content

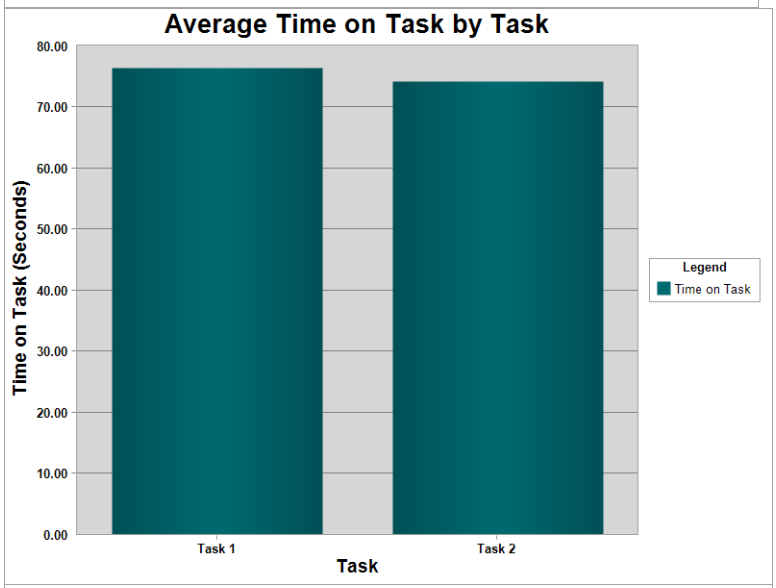


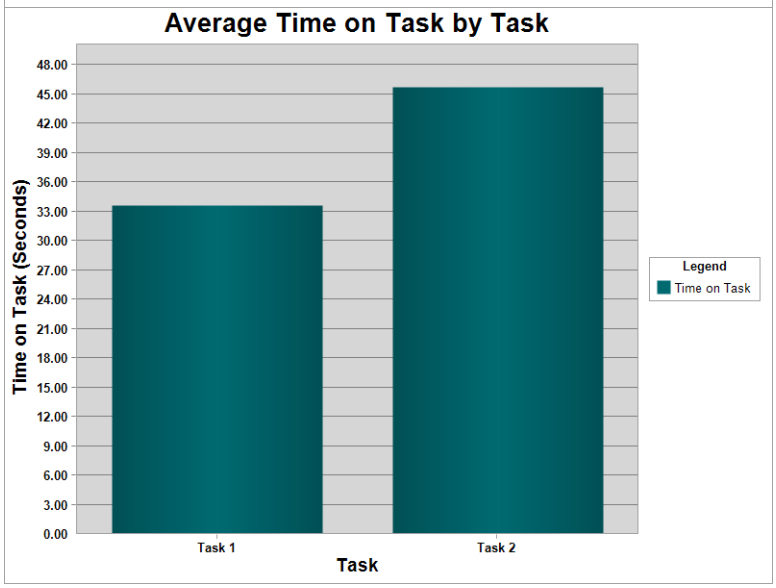
4. Conclusion:

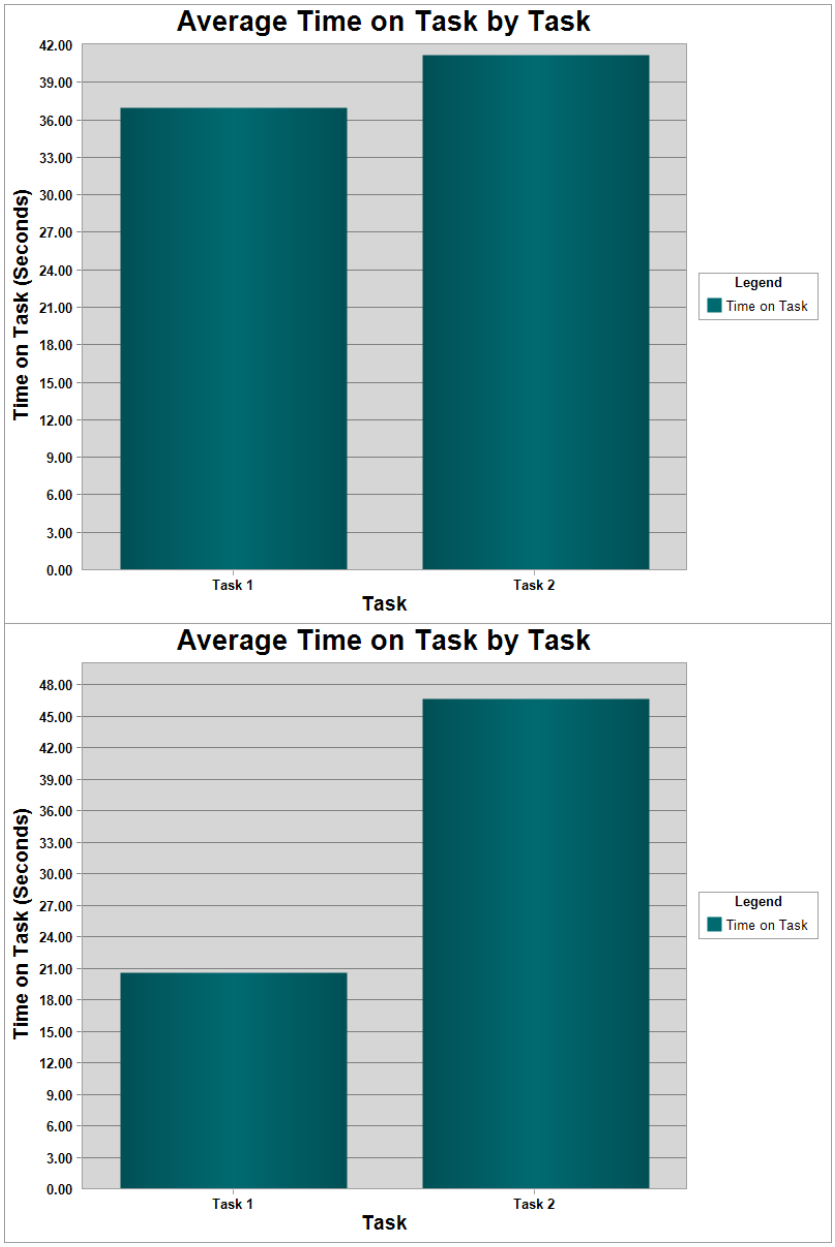
The main object of the usability testing was to make sure that the application is really **effective** which focuses on that user finds their specific information. The concerns also also look at **efficiency** due to finding the information easily as well as **easy to learn** which focuses on that the user learns new environment conveniently. Therefore, fixing the header, making the form easy to fill-up and providing content over navigation will help make the page effective, efficient and easy to learn.

5. Appendices

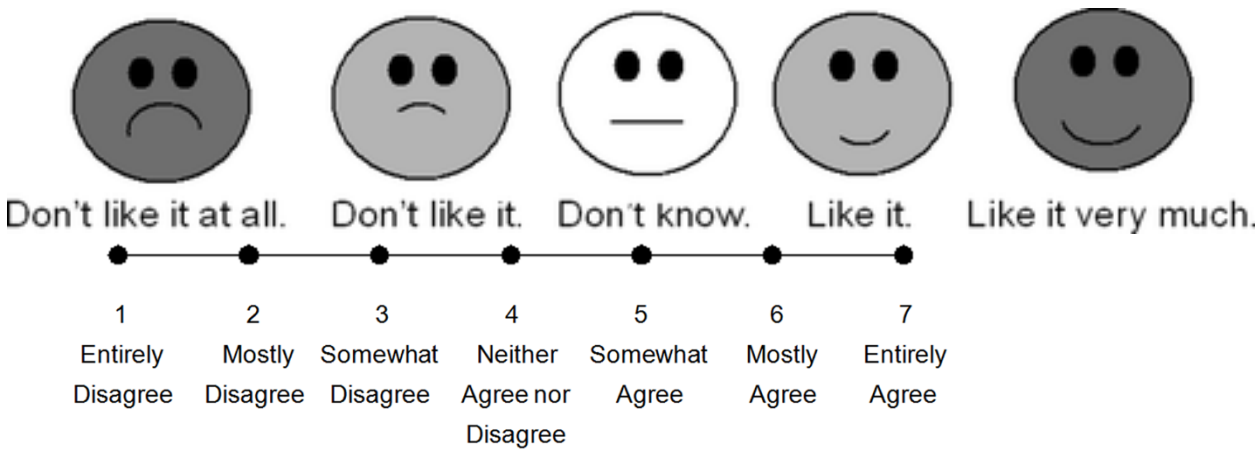







Average Time on Task by Task
Time on Task (Seconds)
42.00
39.00
36.00
33.00
30.00
27.00
24.00
21.00
18.00
15.00
12.00
9.00
6.00
3.00
0.00
Task 1
Task 2
Task
Legend
Time on Task

Average Time on Task by Task
Time on Task (Seconds)
48.00
45.00
42.00
39.00
36.00
33.00
30.00
27.00
24.00
21.00
18.00
15.00
12.00
9.00
6.00
3.00
0.00
Task 1
Task 2
Task
Legend
Time on Task


Don't like it at all.
Don't like it.
Don't know.
Like it.
Like it very much.
1
Entirely Disagree
2
Mostly Disagree
3
Somewhat Disagree
4
Neither Agree nor Disagree
5
Somewhat Agree
6
Mostly Agree
7
Entirely Agree

Template – Card 1

Instructions for the experiment:
One student is the evaluator and other students act as participants.
The evaluator sets up Morae and configures the experiment (Tasks, surveys, markers, inputs etc.).
The participant performs the assigned tasks and answers survey questions. The participant is required to think out loud as he/she performs the task steps.

Template – Card 2

Instructions for the Evaluator

1. **Prepare users by saying**
   "We are testing the software, not you. We need your help to see if people can use it."
   "If you ask questions during the test, I may not be able to answer right then, but I will answer after we're done."
1. Tell them at the beginning:
   "If you fall silent, I will remind you to keep talking."
   Don't tell or show them how to use the system.
   Don't answer their questions
   Allow them to give up before giving hints
   Remind user to keep talking if they fall silent.
   - *"What are you thinking now?"*
   - *"Why did you do that?"*
   - *"Tell me what you are trying to do."*
   - *"Are you looking for something? What?"*
   - *"What did you expect to happen just now?"*
   - *"What do you mean by that?"*

Template – Card 3

Scenario:
Create a task scenario similar to what we did in class today (9 April)
Please think aloud as you carry out your tasks.

Suppose, you're an international student in CMU and you're staying in the dorms for summer. You'd need a bike for 1 month to attend the summer classes. Now look who's sharing bike and create a request for sharing bike.

Template – Card 4

Please think aloud as you carry out your task.
Task Steps: Task #1: Find & contact person sharing bike.
* Look for people sharing bike nearby.
* Contact that person by phone.

Please think aloud as you carry out your task.

Template – Card 5

Please think aloud as you carry out your task.
More Task Steps: Task #2: Create a sharing post for bike.
* Inside sharing post, insert all required info for sharing bike.

Please think aloud as you carry out your task.

Template – Card 6

Fill out questionnaire at the end (Morae can be setup to do this automatically at the end of the set of tasks)

Osama

Software Usability Scale

	1 (Strongly disagree)	2	3	4	5 (Strongly agree)	
1. I think that I would like to use this system frequently				✓		3
2. I found the system unnecessarily complex		✓				3
3. I thought the system was easy to use				✓		3
4. I think that I would need the support of a technical person to be able to use this system		✓				3
5. I found the various functions in this system were well integrated				✓		3
6. I thought there was too much inconsistency in this system		✓				3
7. I would imagine that most people would learn to use this system very quickly				✓		3
8. I found the system very cumbersome to use		✓				3
9. I felt very confident using the system			✓			2
10. I needed to learn a lot of things before I could get going with this system	✓					4

= 30x2.5
= 75

Anima

Software Usability Scale

	1 (Strongly disagree)	2	3	4	5 (Strongly agree)	
1. I think that I would like to use this system frequently					✓	4
2. I found the system unnecessarily complex	✓					4
3. I thought the system was easy to use					✓	4
4. I think that I would need the support of a technical person to be able to use this system	✓					4
5. I found the various functions in this system were well integrated				✓		3
6. I thought there was too much inconsistency in this system	✓					4
7. I would imagine that most people would learn to use this system very quickly				✓		3
8. I found the system very cumbersome to use	✓					4
9. I felt very confident using the system				✓		3
10. I needed to learn a lot of things before I could get going with this system	✓					4

37x2.5
=92.5

Software Usability Scale

	Strongly disagree 1	2	3	4	Strongly agree 5
1. I think that I would like to use this system frequently				✓	
2. I found the system unnecessarily complex	✓				
3. I thought the system was easy to use				✓	
4. I think that I would need the support of a technical person to be able to use this system	✓				
5. I found the various functions in this system were well integrated				✓	
6. I thought there was too much inconsistency in this system	✓				
7. I would imagine that most people would learn to use this system very quickly				✓	
8. I found the system very cumbersome to use		✓			
9. I felt very confident using the system				✓	
10. I needed to learn a lot of things before I could get going with this system	✓				

Make the menu mobile-friendly - need to zoom in a lot.

Software Usability Scale

	Strongly disagree 1	2	3	4	Strongly agree 5
1. I think that I would like to use this system frequently				✓	
2. I found the system unnecessarily complex	✓				
3. I thought the system was easy to use					✓
4. I think that I would need the support of a technical person to be able to use this system	✓				
5. I found the various functions in this system were well integrated					✓
6. I thought there was too much inconsistency in this system		✓			
7. I would imagine that most people would learn to use this system very quickly					✓
8. I found the system very cumbersome to use	✓				
9. I felt very confident using the system				✓	
10. I needed to learn a lot of things before I could get going with this system	✓				

Software Usability Scale

	Strongly disagree 1	2	3	4	Strongly agree 5
1. I think that I would like to use this system frequently					✓
2. I found the system unnecessarily complex	✓				
3. I thought the system was easy to use					✓
4. I think that I would need the support of a technical person to be able to use this system	✓				
5. I found the various functions in this system were well integrated				✓	
6. I thought there was too much inconsistency in this system		✓			
7. I would imagine that most people would learn to use this system very quickly					✓
8. I found the system very cumbersome to use	✓				
9. I felt very confident using the system					✓
10. I needed to learn a lot of things before I could get going with this system	✓				

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