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SI 582: QOC analysis
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Overview

Problem Statement:

The University of Michigan (UM) is a reputable, well-rounded public university with over 50,000 students and faculty members. Most of the university's graduate programs are ranked in the top 10 in the United States. One day, when I was having difficulties figuring out how to solve my website coding issues, I thought 'since we have so many intelligent students from such a wide range of disciples, what if I could have a peer helping me out on the specific problems that I am having?', 'what if UM students could exchange knowledge and skills according to their learning needs?' and then, 'instead of wasting too much money on expensive private tutoring service, would it be great if UM students could get connected each other based on their learning needs?' In fact, UM students have been raising similar questions whenever they were unable to get enough help from school resources or could not find the right person to work on their problems with them. In this regard, my core problem statement is: users cannot easily find the right tutor on their desired subjects at an affordable price.

Target Audience:

My primary target audiences are UM students who 1) do not have enough money to afford expensive private tutoring service, 2) want to find credible local tutor around campus, and 3) want to exchange or share their knowledge as a tutor or tutee. As the University's student body is broad, subjects can be varied from school coursework to self-development lessons such as public speaking, vocal training, yoga, language, programming, etc. A secondary target audience would be any non-UM individuals around UM campus who are interested in learning new subjects or skillsets.

Target Solution:

In order to encourage more students/individuals to share their knowledge and skillsets, providing reasonable incentive to be a tutor (service provider) is imperative in this application service. In this regard, my application would facilitate more individuals to join my service by allowing users not only to FIND the right tutor, but also TO BE a tutor so that everyone can have decent amount of opportunities for teaching and money making. By having both systems, the solution would be able to tap the needs of both help provider and help seeker.

Features:

The primary features of my applications are:

- Allow users to exchange requested knowledge and skillsets
- Allow users to find a local, credible peer tutor at an affordable price
- Allow users to become a tutor to gain valuable teaching experience and make money

Critical Feature:

Providing an easy and quick way of connecting users based on learning needs would be the core feature of my application. What can be differentiated from other tutoring services are 1) users are UM students based, and 2) connecting a *local* and *affordable* tutoring service based on adaptive search. By doing this, users will not only enjoy various individualized learning opportunities without concerning too much about tutoring fee, but also gain a virtue of sharing knowledge as well as grow teaching skills within the community.

Feature Approaches

Approach 1 (Sketch 1):

- Users would be required to log in to the application. If the user had previously logged in, then log in process would be skipped and directed to the home screen straight.
- Users could see the home screen where various classes posted including newly opened classes, promotions, popular classes, etc. This does not necessarily include what users want, but show what classes are currently new and popular in the application.
- If users do not find what they want from the home screen, users could tap search tap to find more classes and this would take them to another screen where the user could directly search by typing in or tapping categories.
- Tapping the category users want, this would take them to another screen to see all list of available tutoring classes based on their category with basic information.
- Tapping to find the most attracted tutoring, this would take them to another screen where they could see all detailed information about tutor and the overall class curriculum. They would be able to communicate with the tutor or make a decision whether or not to take the class.

Design Rationale for approach 1:

- The user is required to log in. The rationale for this shown in the Design Space Analysis Question, Option, Criteria (QOC) diagram in Figure 1. Although requiring login might somewhat cumbersome, still it provides better accessibility, ease of sharing information and accepting terms and agreement. Since majority of users of this application would be University of Michigan (UM) students, I was initially thinking that users should login with UM email accounts. However, due to the possibility of non-UM students using the service, the most convenient way for everyone to have better accessibility and ease of sharing/gathering users' previous data information, social accounts login process would be the top choice for me.
- On the home screen, the user would be able to start exploring the application and initially start with looking at promotion classes, new/popular classes, and recommended classes on the top. Although users would not be able to find exact tutoring classes at first through this home screen, I intentionally designed home screen with such contents because it would give more exposure to users to know other learning opportunities, which might increase the level of interest in the application service (Figure 2).
- When the user wants to search the classes to reflect their needs, they should tap search button at bottom navigation to narrow down their search. This would lead them to next page having search bar at the top and a category of tutoring classes Having category chunk on the page would help users to have better accessibility and increase efficiency as they do not need to type in their needs (Figure 2). This also allows users to see other potential learning categories, which might increase future interaction between the users and application service.
- Once they narrow down their category, they could see the list of tutoring classes based on their needs. They would be able to find basic information about the tutor and the class from the list. Since the application would be managed and controlled by authorized person, information and contents provided within the application will increase trust and security and convenience of use (Figure 3).
- Once they found the desired classes from some tutors, they would be able to see more detailed information about the tutor and class. This includes introduction of the tutoring service, fee, curriculum, location, times, reviews and more importantly reliable information about tutor. Here, the users could directly message to tutor to ask about the class in more details. Direct communication within the application between users and tutors would also increase level of trust and security (Figure 3).
- Once both parties agree to having tutoring, some official or formal commitment, a.k.a. contract, would be necessary. This could be done within the application by payment. By doing so, users and tutors also can be responsible for what they confirmed, increasing security, trust, efficiency and formality. Since the application

would save all the records of payment, this could be used as an evidence for possible contract issues in the future (Figure 5).

- After the user had tutoring, they can evaluate the overall tutoring services within the application by writing reviews. Writing reviews in the application would increase accessibility (ease of writing), reliability, and ease of sharing. Since reviews are easily manipulated or fabricated by third parties or competitors, I believe this should be strictly managed by administrators; not the reviews itself, but the authenticity (Figure 6).

Approach 2 (Sketch 2):

- Users would be required to log in to the application. If the user had previously logged in, then log in process would be skipped and directed to the home screen straight.
- Users would be asked, "Hi, _____! What do you want to learn?" and have a search bar. Users could type in subjects that they are interested in. However, if users do not have particular preferences, they can explore more learning opportunities by tapping what's popular.
- Tapping what's popular would lead to another screen showing search bar at the top, and other popular, recommended classes below. Users could either type in or tap classes they are interested in.
- By searching certain subjects, they could see the list of classes which possibly meet their learning needs.
- Once finding the most desired tutoring class, users would tap it and it would lead them to another screen where they could see all detailed information about tutor and the overall class curriculum.
- Call to action button is located in the middle, so once users like the detailed information about the tutor and classes, they can directly communicate or book the tutoring sessions.

Design Rationale for approach 2:

- The user is required to log in. The rationale for this shown in the Design Space Analysis Question, Option, Criteria (QOC) diagram in Figure 1. Most of the rationale for this are the same as that of approach 1; however, prior log-in for design approach 2 is very imperative, because home screen would contain user's name.
- Users could see the home screen where directly ask users regarding their learning needs. And the search bar would allow users to type in quickly. I intentionally designed in this way because providing direct search bar on home screen would increase accuracy of search to exactly meet users' needs (Figure 2). This is just like what Airbnb has been doing then the very first landing home screen friendly asks

users to type in keywords they are looking for. However, it would also take away chances for users to explore other learning opportunities unlike approach 1 (Figure 2). As home screen does not provide potential classes that the user might be interested in, this would lead less marketing chances for tutors.

- When users directly type in what they want, i.e. python, they can see all the list of tutoring classes based on their search. Filters would allow users to narrow down their search by location, price, subjects, etc. As most of the information can be obtained within the application, this would be increase level of trust, security, efficiency and reliability rather than obtaining such information from outside of the application (Figure 3).
- When users find classes, they are most interested in, see detailed information about the tutor and the class. However, in this design, I put call to action button in the middle of the screen which allows users to quickly make decisions on either booking the class or talking to tutor. Direct message with potential tutors would increase level of trust and security (Figure 4).
- Once both parties agree to have tutoring, the application allow them to make a contract by filling out contract form within the application. Since the application would save all the records of this contract, this could be used as an evidence for possible contract issues in the future (Figure 5).
- After the user had tutoring, they can evaluate the overall tutoring services within the application by writing reviews. Writing reviews in the application would increase accessibility (ease of writing), reliability, and ease of sharing (Figure 6).

Approach 3 (Sketch 3):

- Users would be required to log in to the application. If the user had previously logged in, then log in process would be skipped and directed to the home screen straight.
- Users would see a service slogan for the application and would have direct search bar below. Users would also see new classes, promotions, and advertisement.
- Users would be able to tap search bar and would be directed to search page which provides diverse filters.
- Users would find a list of classes based on users' learning needs and see some basic information about tutors and classes.
- Once finding the most desired tutoring class, users would tap it and it would lead them to another screen where they could see all detailed information about tutor and the overall class curriculum.
- Tutor profile is located in the middle, so users could see tutor profiles ahead of the class descriptions.

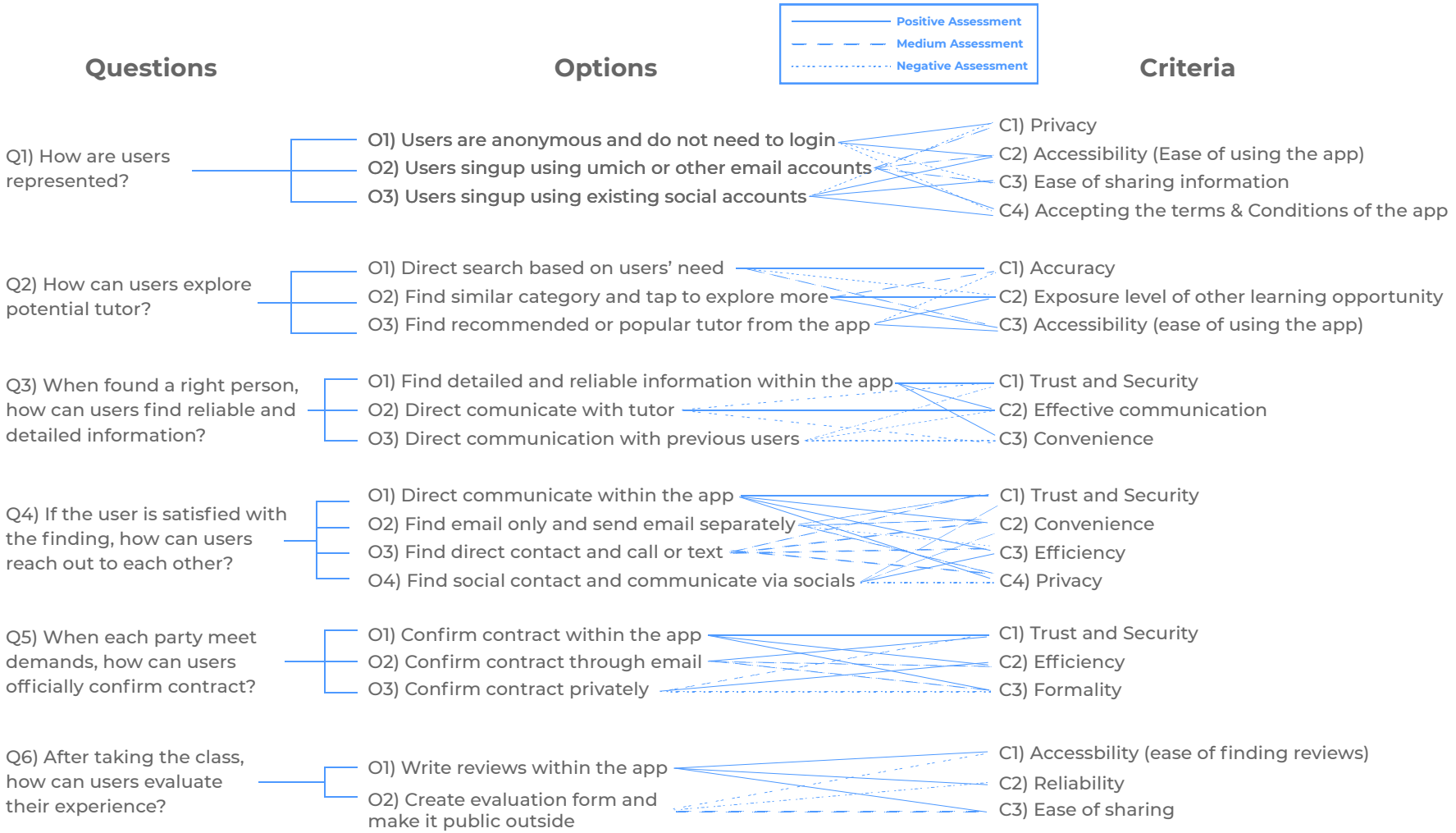
Design Rationale for approach 3:

- The user is required to log in. The rationale for this shown in the Design Space Analysis Question, Option, Criteria (QOC) diagram in Figure 1. Most of the rationale for this are the same as that of approach 1.
- Users could see the home screen where includes a huge representative picture of the application in addition to the service slogan. This is designed intentionally as home screen could provide strong first impression about the application service and its design.
- Also, the user would be able to explore promotion classes, new/popular classes, and recommended classes on the top. In here, users can have both direct search bar and promotions/advertisement of popular and new classes together. Having both features would increase both level of exposure and accuracy of the search (Figure 2).
- Depending on whether or not the user type in or tap the promotion classes, users would be able to go search tap to narrow down their search. When users directly type in their needs, it would show the list of tutoring classes including basic information about the tutor and the class from the list. All information and contents from the information would be managed and controlled by authorized person, this will increase users' trust and security and convenience of use compared to have that information from outside of the application (Figure 3).
- Once they found the desired classes from some tutors, they would be able to see more detailed information about the tutor and class. This includes introduction of the tutoring service, fee, curriculum, location, times, reviews and more importantly reliable information about tutor. Direct communication within the application is available in this design as well, increasing level of trust and security (Figure 3).
- Once both parties agree to having tutoring, some official or formal way of confirming would be necessary. In this application, both parties would exchange their email to set up the meeting and make official/formal contract. Although having those contracts through email might be an extra work reducing efficiency and formality, this might increase level of trust and security as the emails could record history as well as prevalent everywhere.
- After the user finished tutoring, they can evaluate the overall tutoring services by writing reviews within the application (Figure 6). Rationale for this process is exactly the same as the above two approaches. In terms of reviews, I personally believe that there would be nothing better than having them within the application; this would powerfully impact accessibility, reliability, and ease of sharing.

Final Decision

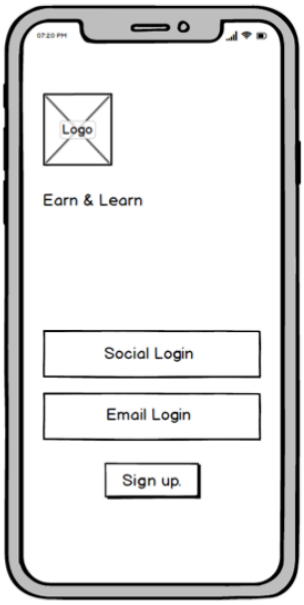
I would like to apply a mix of great strengths of each design. Through this process, I was convinced that I should have direct search bar and promotions or potential marketing features on home screen; having those two features together on home screen provide good reasons based on QOC diagram. Therefore, my home screen would have those two features for certain. Also, I found search tap on bottom navigation is somewhat redundant if I make my decision to have search bar on home screen. Therefore, I would not keep search tap on bottom navigation, but make sure to allow user to find search option on every screen. I would keep providing list type of potential classes on search result screen based on the above analysis. On detailed information screen, I decided to put tutor's profile first before the class description as reliability and credibility issues about tutors are perhaps utmost important thing that matters to users. While writing this, I just thought the idea of incorporating the video into the service when the peer tutor provides the introduction of the class. I might incorporate this idea later and draw another QOC diagram to evaluate.

QOC Diagram (Figure 1 = Q1, Figure 2 = Q2, Figure 3 = Q3, Figure 4 = Q4, Figure 5 = Q5, Figure 6 = Q6)



Sketch 1

1-1.



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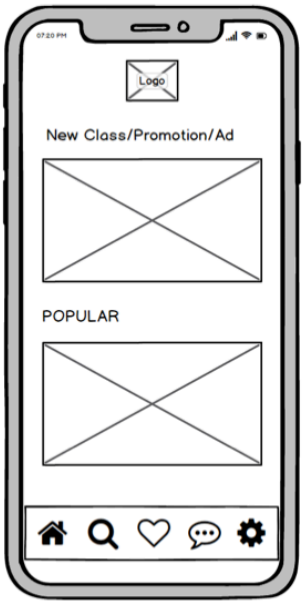

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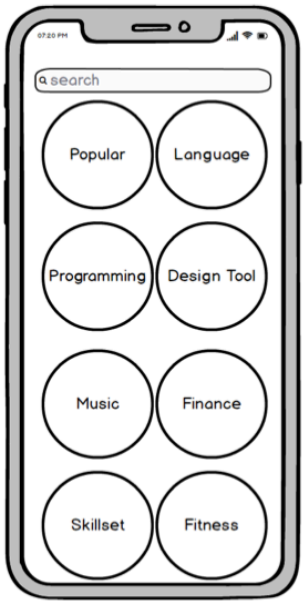

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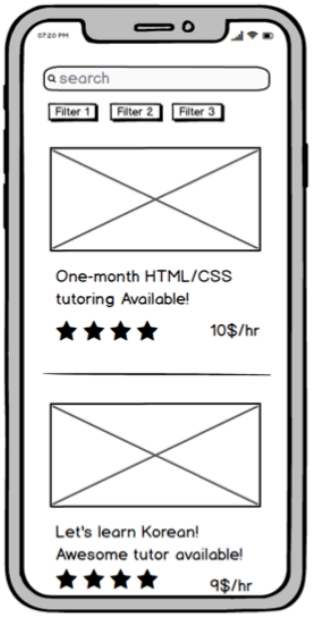

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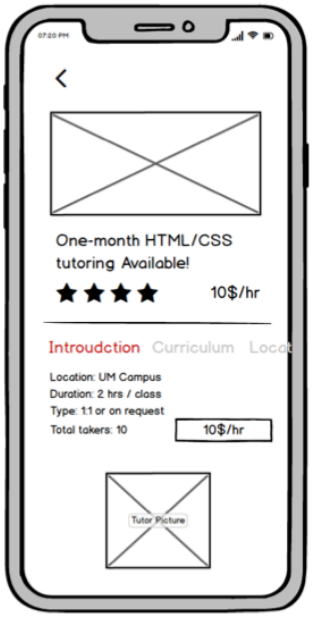
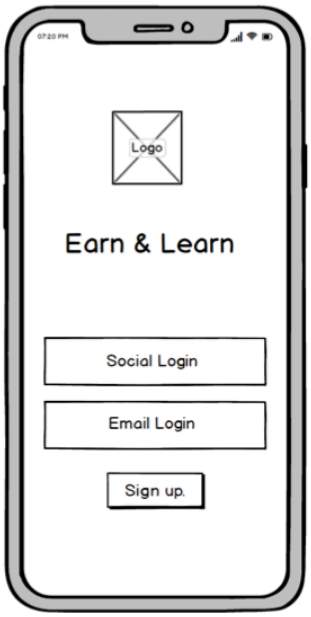


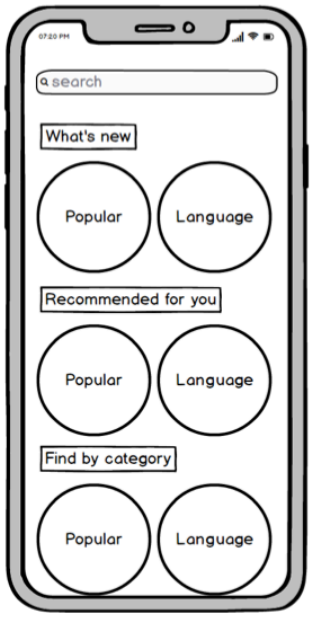
Sketch 2

2-1.



2-2.

2-3.



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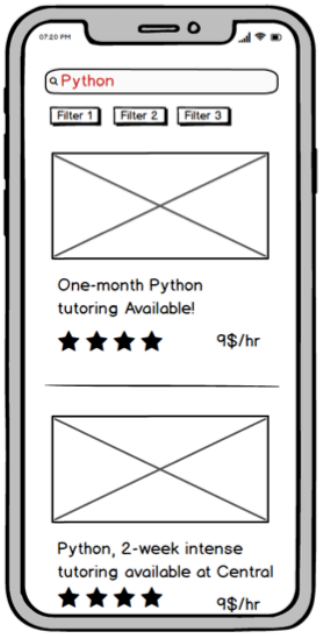
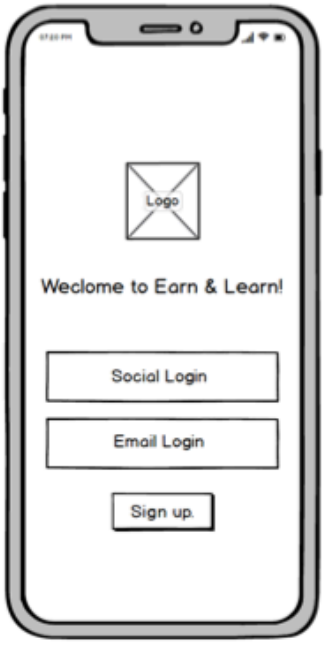


2-5.

Sketch 3

3-1.



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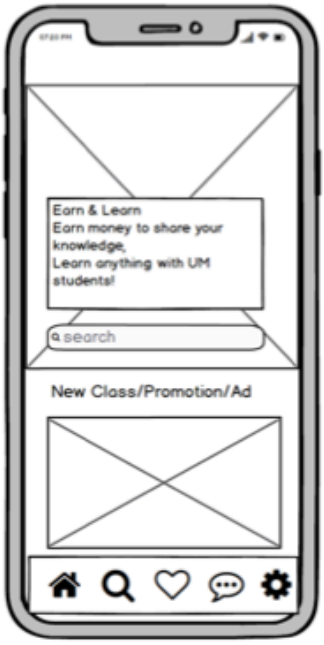

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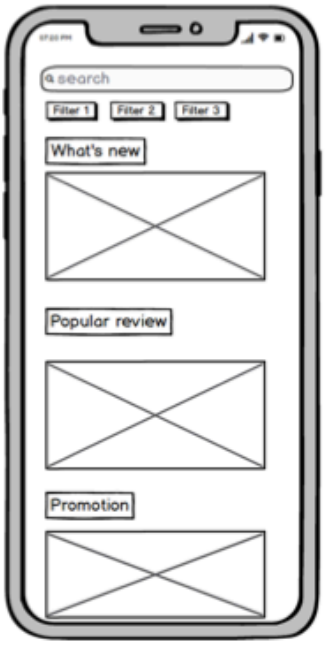

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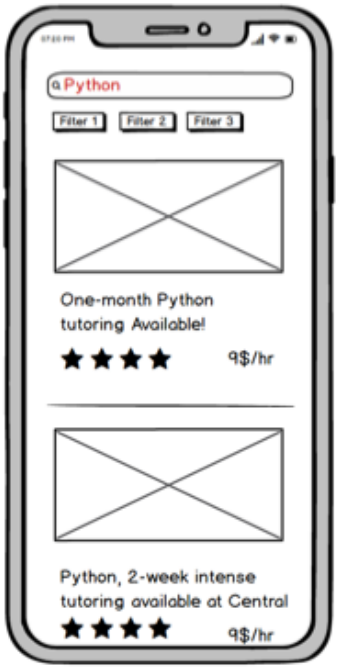

3-5.