W11 Report (Project Part I): Conceptual Design, Lo-fi Prototyping, Cognitive Walkthrough

Jesse Woo 39616545
Sadia Khan Durani 43762962
Kelsey Chua 85997864
Arshvir Bhandal 60148079
Calvin Zhang 69875094

Team: Team 5
March 20 (Thursday), 2025

Project Direction *(1-1.5 pages)*

a) **Topic (Step 1):**
- An interface to improve the experience of searching and/or browsing of restaurants.

b) **Requirements (Step 2):**
- Allow users to search for restaurants that suit their preferences and needs
    - People want to visit restaurants with options they would like, whether that is the food, the service and overall experience
- Allow users to know relevant thoughts and opinions from other people if they so wish
    - People tend to strongly value a second, trustworthy opinions when selecting a restaurant
- Allow users to understand a restaurant's food selection
    - People want to know what kind of food a restaurant serves before choosing to go there
- Allow users to receive tailored recommendations of restaurants
    - People usually do not want to learn about restaurants that they would not like

c) **Task examples (Step 3):**

1) John is a 4th year university student who is very busy with his schoolwork. He goes out to eat occasionally by himself and is happy to go by instinct when looking for a restaurant. If a place has tasty looking food for him, then that is good enough. He does have some mild considerations however, he mainly looks for open restaurants with nice ambiance so he can eat there immediately and comfortably.

   When John is hungry, he both asks his friends and searches for nearby restaurants. At times, he might have a small preference and seek specific cuisines such as Italian or Chinese. After having a list, he then lightly considers his option until he finds somewhere that is open, looks like it has good food, and a decent enough reputation. Once he thinks he's found a restaurant that looks promising from its present information or what other people think, he takes a closer look at the menu to decide on what he might want. Extensive pictures of the menu items aid greatly in his selection. After selecting a restaurant, he does not easily change his mind and will start to go there immediately if he is not already there.

2) Hannah is a first-year university student who loves trying new restaurants when she gets the opportunity to go out with friends. She looks for places that are affordable, have good reviews, and offer a variety of vegetarian options. Hannah enjoys discovering new places in her city but doesn't want to spend too much time researching. She prefers a simple way to compare restaurants to make a quick decision.

   Hannah usually spends 15 minutes or less looking for new restaurants. She first looks through photos to see if the restaurant's food options look appetizing. Next, she looks at the restaurant's ratings and amount of reviews to ensure the restaurant is popular and liked by others, particularly focusing to see if any negative reviews exist. Hannah also considers that a variety of food options are available since she's vegetarian, but her friends are not. She only wants recommendations based on her specific preferences and gets frustrated when irrelevant information is given.

Lo-fi Prototyping and Cognitive Walkthrough Report *(1.5-2 pages)*

d) Summary of Brainstorming and Conceptual Models (Step 4):

For our first conceptual model, we went with the metaphor of the book review website "Goodreads". As seen in Figure 1 in section a.1 the key concepts we took from "Goodreads" are seen in the boxes in Figure 1. Figure 1 also depicts the relationship between the concepts that we utilize. The key ones being the user's ability to create, edit and save lists of books, the users ability to write/view reviews for books, and the user's ability to browse lists. The key mappings are restaurants are added to user created lists where the books in the conceptual model are the restaurants. The rest of the conceptual model shown in Figure 1 essentially maps one-to-one just with them now in the context of restaurants as opposed to books (i.e. lists are restaurant lists instead of book lists). The main ways the user will interact with the interface includes browsing lists (exploring), creating, editing, or saving lists (instructing), reading/writing restaurant reviews (instructing). The interface for this model is meant to be a desktop browser.

For our second conceptual model, we use the metaphor of "TikTok". The key concepts we took from "TikTok" are seen in the boxes in Figure 2, section a.1. Figure 2 depicts the relationships between the concepts that we utilized. The key relationships being the user's ability to create/interact with posts, browse posts and manage their profile. The concept of "Profiles" maps to both user and restaurant profiles in our model. User profiles are able to create reviews and restaurant profiles are able to upload restaurant information. Users will scroll through "Posts" on the "For You Page", which map to restaurant reviews with their "Captions" containing the review. Posts also contain links to the reviewer and restaurant profiles. The concept of "Tags" essentially maps one-to-one with each tag representing a restaurant category. The concepts of the "For You Page" and "Search Bar" also map essentially one-to-one. The main ways the user interacts with the interface include searching up/browsing posts/reviews/restaurants (exploring) and creating posts/reviews (instructing). The interface for this model is meant to be a mobile app.

e) Lo-fi Prototyping Rationale (Justification for Step 5):

By prototyping, we wanted to learn if we showed the right/wanted information on each design. We wanted to ensure the navigation made sense and if a user would have enough control over things they wanted to manage. We wanted to note any points of confusion in our potential interfaces and discuss which features are important to include for users. Our team focused on horizontal prototype scope, covering a range of features in both designs and making sure our conceptual models are well represented. This ensures we capture the key user choices, whether it is for a more thorough search like Hannah's case who takes a decent amount of time before selecting a restaurant. Or, a more casual quick search like John, focusing more on visuals and minimal effort.

We made sure to make these prototypes essentially entirely horizontal as they were low-fi and therefore expected to be low-cost, time wise. As a result there was little to no functionality in favour of making sure all features needed to satisfy the task examples were covered. This let us focus on figuring out if navigation made sense and if the user could do what they wanted to. We kept visuals simple to make sure the features/information we provided and navigation were the focus of evaluations. We also decided to use fake data (for reviews and restaurants) for both prototypes, as real data was not necessary to decide on the kind of information to be shown.

Neither prototype was on its final intended platform as the purpose of our prototypes were to just understand if the navigation made sense and the features/information people wanted to have were present. As a result of these choices, the user was given little autonomy and needed to be guided to know where to click/look. We had to trade off adding more filters to not clutter the interface designs, so we considered important ones to keep, to not overwhelm/distract the user.

We developed the "Goodreads" prototype to target Hannah's task example. We included the search feature to ensure the restaurant meets the user's criteria. We included a restaurant page which gives access to the restaurants website, images of the food/venue, reviews, and other information. We included lists to collect/save restaurants that meet the users specific wants. We also added a home page which enabled browsing. These features can be seen in the "Goodreads" prototype video.

We developed the "TikTok" prototype to target John's task example. We included a "For You" page that provides a tailored experience showcasing reviews and images of the restaurant to allow for a quick understanding of a restaurant. We added a save/favourite feature to make it easy to collect restaurants. We included a restaurant page as well for the user to get a deeper understanding of the restaurant if they want. These features can be seen in the "TikTok" prototype video.

f) Cognitive Walkthrough Evaluation Findings (Outcome of Step 6):

Goodreads:

We had one member play the role of "Tom," who is looking for a new place to eat using the GoodReads prototype. He has been to Chinese City, and liked the food there. The overall flow was to find a list, choose a restaurant, add it to his own list, then update his list to reflect that. When told to search for Italian, it was unclear whether to use the search bar or the intended tag. Later, when he got to the restaurant page, he found that there were a lot of things all at once and did not immediately locate the "add to list" feature. Finally, when told to add the Italian tag to his list, it was not clear to press "edit list" first, then "edit tags." These problems seem to somewhat arise from the prototype implementation, where many things are big and blocky, which may make things look cluttered or unclear. On pages with less items however, the simple looks made some things easier to identify and use, such as the search bar. In terms of overall model, the user was able to identify and make use of the concept of lists in a satisfactory manner.

TikTok:

We had another member play the role of "Sam" who wanted to find a restaurant quickly using the Tiktok prototype. She didn't have anything in mind, and when asked to find a restaurant, it was clear to her that she would scroll on the main feed. However, she wasn't sure how different favoriting the restaurant vs saving the review is for a post. She found that a search bar exists which can be used to quickly find a restaurant of a specific type as well. She looked at the results for "Italian", but wasn't sure how to navigate through the results as it appeared to display one restaurant. She was expecting multiple suggestions after searching. Finally, she didn't wish to make any reviews of her own yet, but was confused if a review was made by clicking the "+" on the center of the screen. If yes, she wasn't sure how to add it for a specific restaurant profile. These bad aspects result from the prototype design which didn't detail this enough. However, the user is able to identify the main feed in the 'Discover' page and the search bar.

Appendix A (No page limit)

a.1) **Conceptual design images:** You should caption any images with brief descriptions.

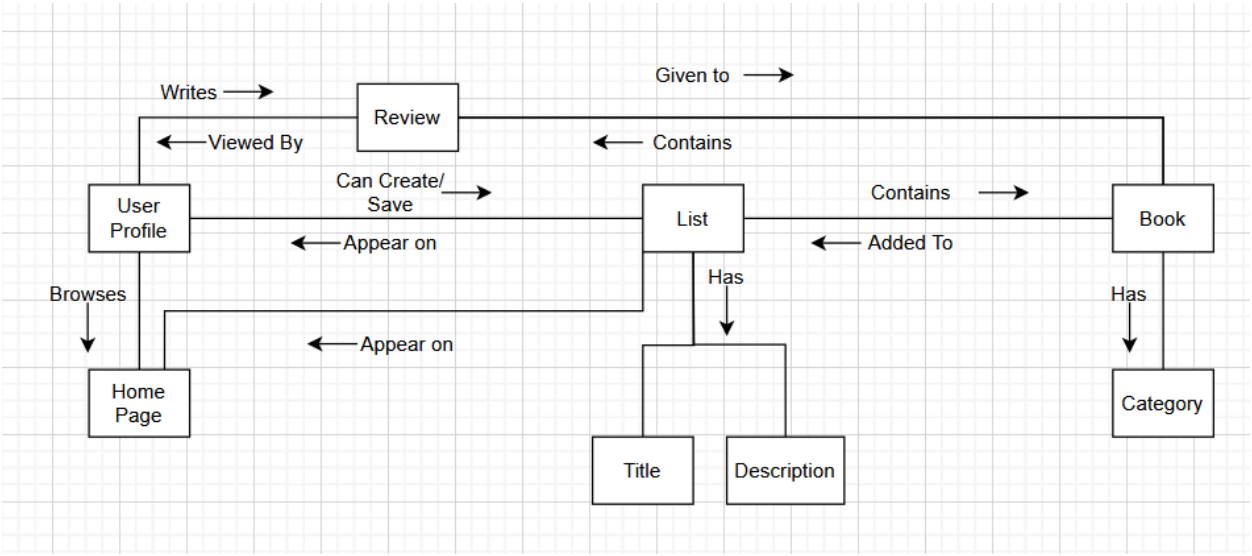

Figure 1: Conceptual model diagram for our "Goodreads" metaphor prototype.

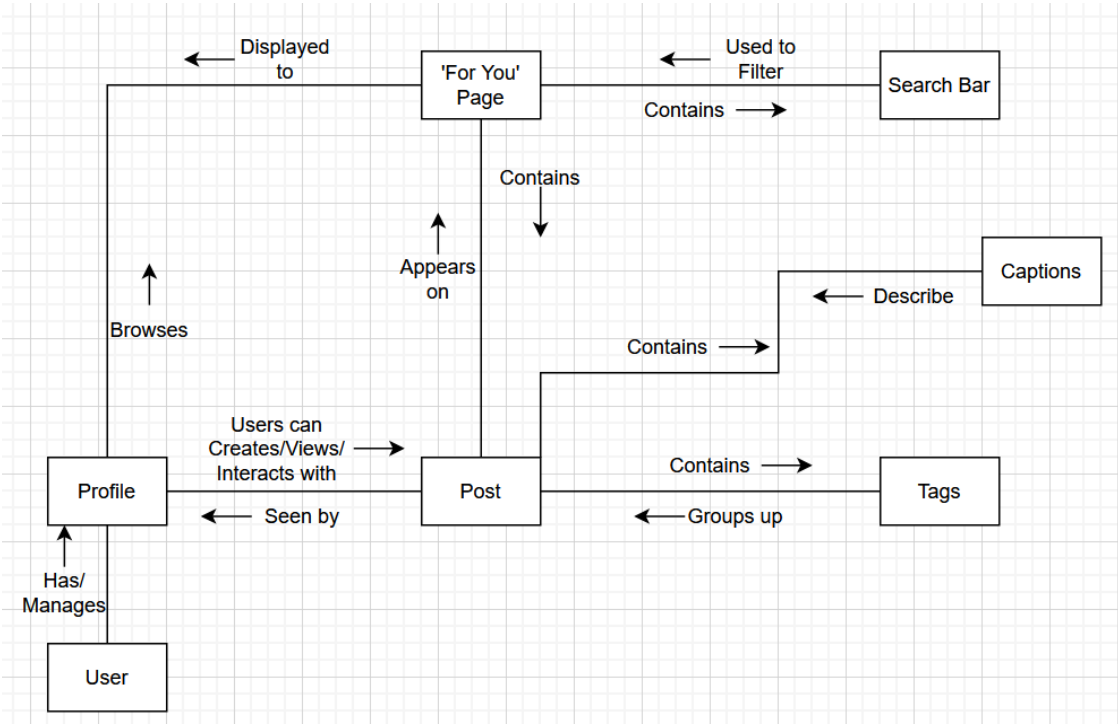

Figure 2: Conceptual model diagram for our "TikTok" metaphor prototype.

a.2) **Lo-fi prototyping videos:** For each prototype video, provide a link to the video.

GoodReads: https://www.youtube.com/watch?v=_tfl7h7ptCc
TikTok: https://youtu.be/m3CAHbxGrkA

a.3) **Supplemental lo-fi prototype images (optional):** Include images demonstrating additional features or aspects of your lo-fi prototypes that are not well documented elsewhere, but that you feel are important for understanding the quality or rationale for your prototype. Any images included should be captioned and should be chosen for a purpose (i.e. explain what they show that isn't documented elsewhere).