

UI/UX (MAPD715)
Midterm Test

By:

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1. Design Thinking Process:

The Design Thinking process is a problem-solving approach that emphasizes empathy, creativity, and iterative prototyping. While the specific steps can vary slightly depending on the source, the core principles often remain consistent. Here's an outline of the steps involved in the Design Thinking process along with brief explanations:

Empathize: In this initial step, designers seek to understand and empathize with the end users, gaining insights into their needs, desires, and pain points. This involves engaging with users through interviews, observations, and other methods to gain a deep understanding of their perspectives.

Define: After gathering insights from users, designers define the problem they want to solve. They frame the problem statement in a way that is specific, focused, and actionable. This step is crucial in ensuring that the design process addresses a well-defined issue.

Ideate: This step involves generating a wide range of ideas and potential solutions to the defined problem. Designers engage in brainstorming sessions, creative thinking, and other techniques to encourage a diverse array of ideas. The focus is on quantity over quality at this stage.

Prototype: In this step, designers create rough, low-fidelity prototypes of potential solutions. These prototypes can be in the form of sketches, mock-ups, or even simple physical models. The goal is to quickly visualize and experiment with different ideas.

Test: After creating prototypes, designers test these solutions with real users. The focus is on obtaining feedback and observing how users interact with the prototypes. This step helps identify what works and what needs improvement, leading to iterative refinement.

Implement: Once a solution has been refined and validated through testing, it is ready for implementation. This step involves developing a detailed plan for bringing the solution to market, which can include production, marketing, and distribution.

Iterate: Design Thinking is an iterative process, and this step involves repeating the above steps as needed. After implementing a solution, designers continue to gather feedback, make improvements, and iterate on the design to address evolving needs and challenges.

Evolve: The final step involves the ongoing evaluation and evolution of the design. As user needs and market conditions change, the solution should adapt accordingly. Designers continuously gather feedback, analyze data, and refine the design to ensure its long-term success.

The Design Thinking process is highly adaptable and can be tailored to specific projects and contexts. It encourages a user-centered, creative, and iterative approach to problem-solving, making it a valuable tool in various fields, including product design, service design, and innovation.

2. Nielsen's 10 Usability Heuristics

Nielsen's 10 Usability Heuristics are a set of principles for evaluating the usability of user interfaces. Here are the heuristics:

- **Visibility of System Status:** The system should always keep users informed about what is happening, through appropriate feedback within a reasonable time.
- **Match between System and the Real World:** The system's terminology, concepts, and actions should match the real-world as closely as possible to reduce the gap between the user's mental model and the system.
- **User Control and Freedom:** Users should have the freedom to easily navigate and exit from unwanted states or actions. This can be achieved through clearly marked exits and "undo" options.
- **Consistency and Standards:** The system should follow consistent conventions and standards, both in terms of interface design and functionality. Users shouldn't have to wonder whether different words, situations, or actions mean the same thing.
- **Error Prevention:** The system should provide options for users to avoid making errors and offer clear and concise error messages when errors occur.
- **Recognition Rather than Recall:** Minimize the cognitive load on users by making objects, actions, and options visible and easily recognizable rather than relying on users' memory to recall information.
- **Flexibility and Efficiency of Use:** Expert users should be able to use shortcuts and accelerated workflows, but the system should remain usable for novice users as well.
- **Aesthetic and Minimalist Design:** The interface should present only the information and controls that are relevant to the user's task, avoiding unnecessary distractions or clutter.
- **Help Users Recognize, Diagnose, and Recover from Errors:** Error messages should be clear, plain language, and indicate how to resolve the problem.

- **Help and Documentation:** If necessary, the system should provide easily accessible, concise, and context-sensitive help and documentation to assist users in their tasks.

Two heuristics (Visibility of System Status and Flexibility and Efficiency of Use) to evaluate the "Build & Price" tool of a Volkswagen Canada website:

- **Visibility of System Status:**
 - **Evaluation:** Check if the tool provides clear and timely feedback on the user's actions. Ensure that users are always informed about the status of their selections and any changes made.
 - **Improvement Suggestion:** Ensure that after each user selection, a clear summary of the chosen car features and pricing updates dynamically. This feedback should be immediate and prominently displayed on the screen, reducing uncertainty and making it easy for users to understand how their choices affect the final price.
- **Flexibility and Efficiency of Use:**
 - **Evaluation:** Determine if the tool caters to both novice users and expert users. Are there shortcuts or accelerated workflows for experienced users, but can it be used efficiently by those who are new to it?

Improvement Suggestion: Provide customization options for expert users who may want to quickly select and compare features. This could include a way to save and load configurations, keyboard shortcuts, or a streamlined "quick build" mode for experienced customers. However, make sure the default mode remains user-friendly for those who are new to the system.

By implementing these improvements, the "Build & Price" tool can enhance its usability by aligning with Nielsen's heuristics and providing a more user-friendly experience for a broader range of customers.

3. Empathy Map

a) What is empathy map?

An empathy map is a visual tool used in design thinking and user-centered design processes to help teams gain a deeper understanding of their target users or customers. It is a collaborative exercise that helps team members build empathy by collectively focusing on the user's perspective. An empathy map typically includes four key quadrants:

Says: This quadrant captures what the user or customer says, which includes their explicit statements, opinions, and comments related to the product or problem being addressed.

Thinks: In this section, you document what the user is likely thinking. These are their internal thoughts, aspirations, worries, and motivations.

Feels: Here, you note the emotional responses and feelings of the user. This quadrant helps uncover the user's emotional state, such as frustration, excitement, or concern.

Does: This quadrant covers the observable actions and behaviors of the user. It helps in understanding the user's activities, habits, and interactions related to the problem or context.

b) Why do we create them?

- a. Understand user perspectives deeply.
- b. Foster a user-centered design approach.
- c. Identify pain points and opportunities.
- d. Inform the design and innovation process.
- e. Enhance team empathy and collaboration.
- f. Improve user communication and engagement.
- g. Serve as a reference for validation and testing.

c) How many do we need?

The number of empathy maps needed depends on the project and the number of distinct user personas or segments you want to understand. In most cases, you should create one empathy map for each unique user persona or segment. This ensures that you have a tailored understanding of the needs, emotions, and behaviors of each distinct user group. Therefore, you may need as many empathy maps as there are distinct user personas or segments that you want to explore.

4. Customer Journey Map

Link:

<https://www.figma.com/file/IK1O36TgkBHG Tk02BKKkXC/test?type=whiteboard&node-id=0%3A1&t=kgafxJCE5xjYNHkI-1>

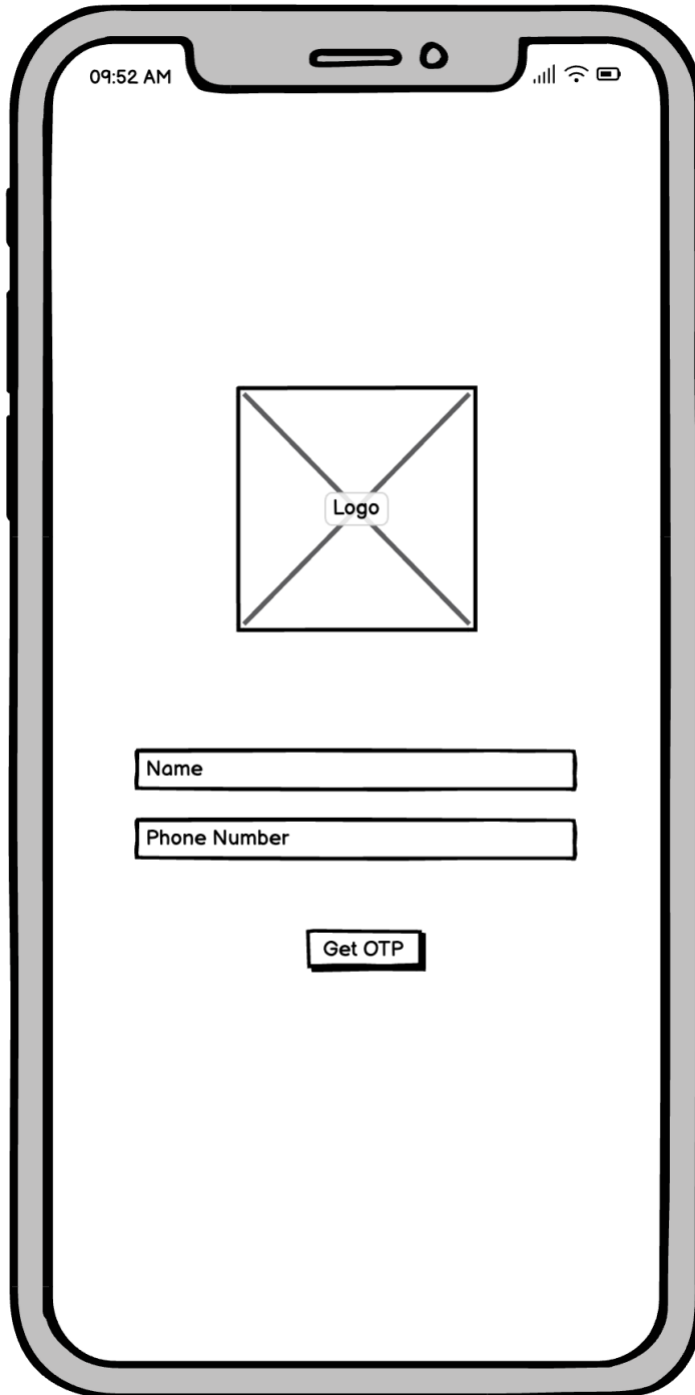


5. Wireframes with Balsamiq

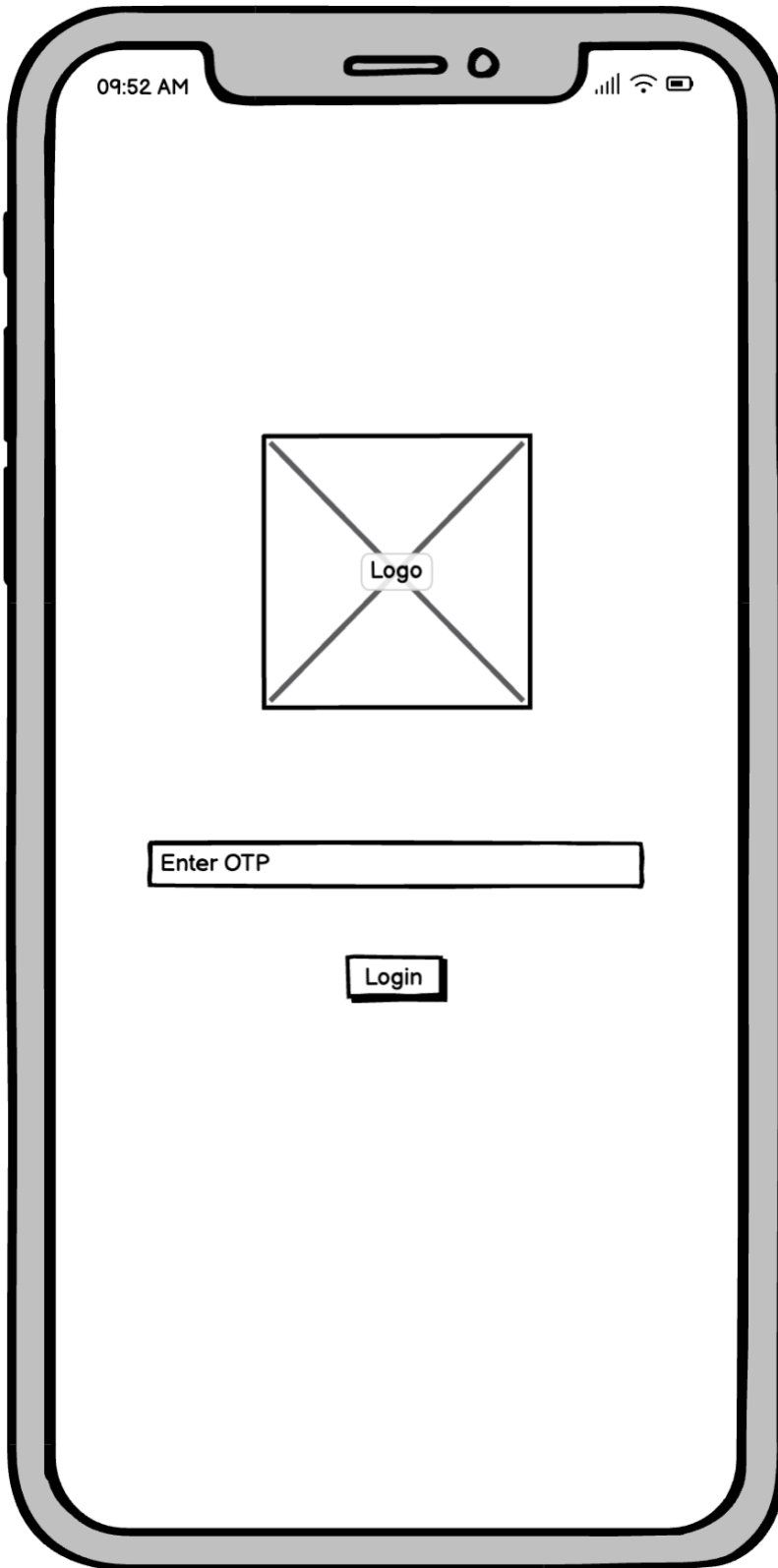
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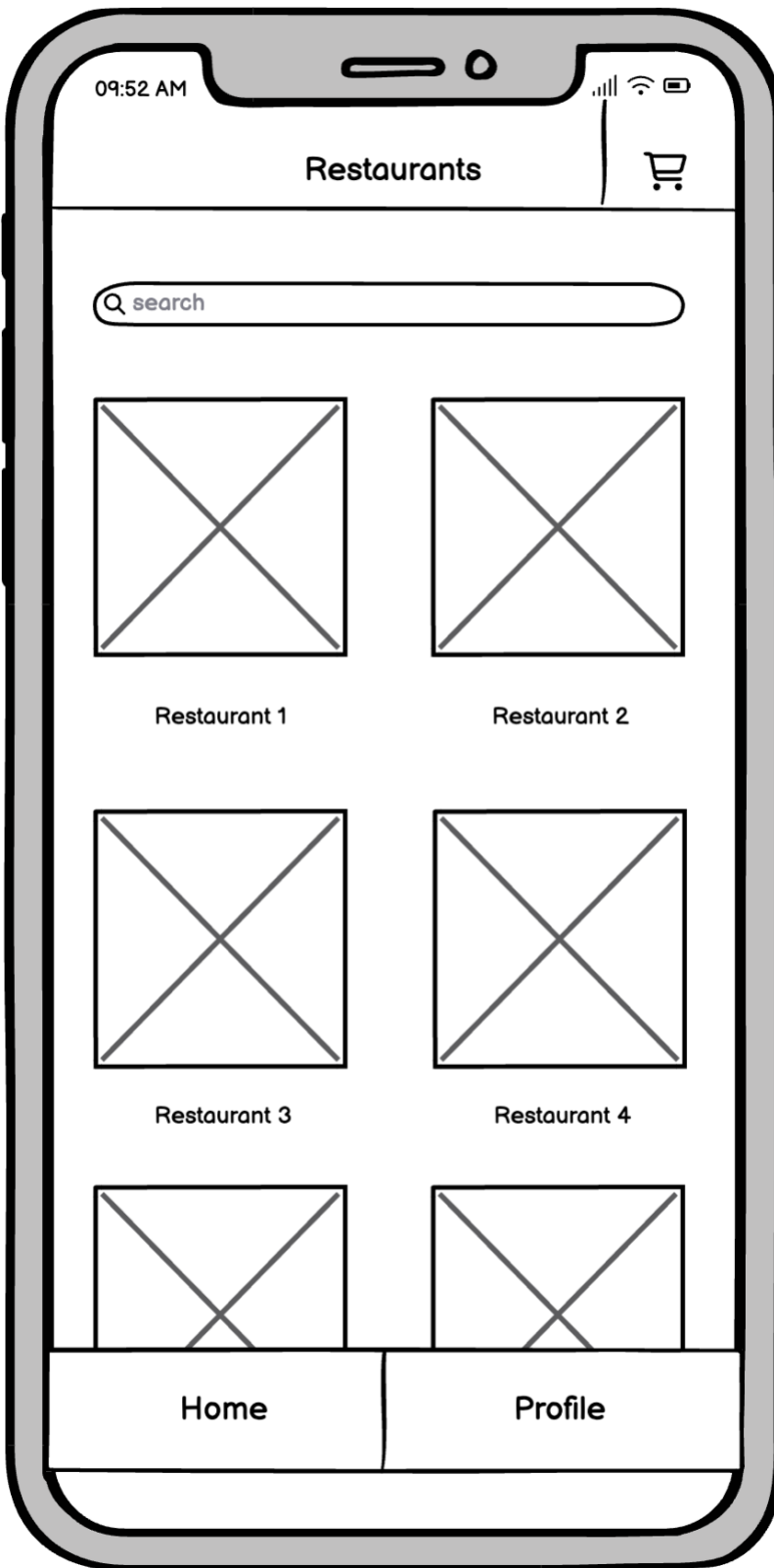
a. Wireframe 1



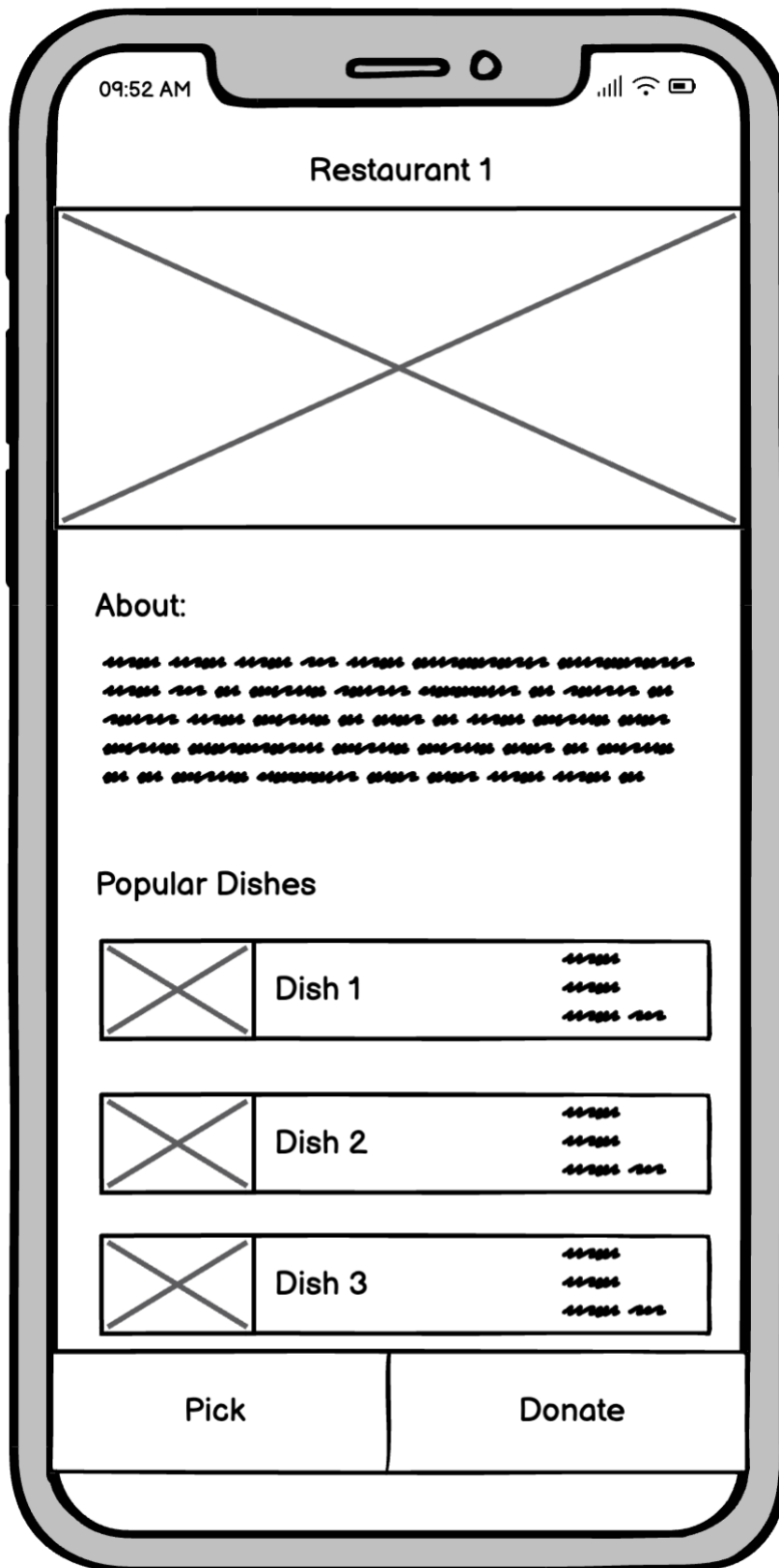
b. Wireframe 2



c. Wireframe 3



d. Wireframe 4



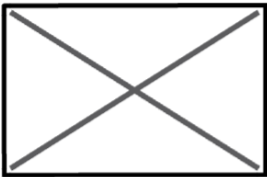
e. Wireframe 5

A wireframe for a mobile application titled "Donate". The form is contained within a rounded rectangle representing a smartphone screen. At the top, there is a status bar with the time "09:52 AM", signal strength, Wi-Fi, and battery icons. Below the status bar is a header with the word "Donate". The main content area is divided into three sections. The first section is titled "Select the type of meal you want to donate". It contains two identical boxes. Each box has a placeholder image (a rectangle with an 'X') and a label: "Meat:" and "Vegan:". Below each label are two numbered input fields: "1. _____" and "2. _____". The second section is titled "Select number of meals:". It contains three buttons. Each button is a square with a number and a price: "1 \$9", "2 \$18", and "3 \$27". The third section is a single button labeled "Proceed" at the bottom of the screen.

09:52 AM

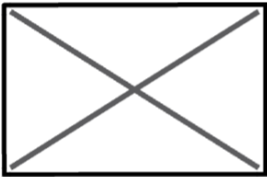
Donate

Select the type of meal you want to donate

 Meat:

1. _____

2. _____

 Vegan:

1. _____

2. _____

Select number of meals:

1
\$9

2
\$18

3
\$27

Proceed

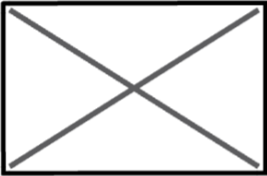
f. Wireframe 6

09:52 AM

Confirmation

Meal from:
Restaurant 1

Meal type:



Vegan:

Number of meals:

2

\$18.00

Personal Message:

Proceed

g. Wireframe 7

The wireframe shows a mobile application interface for a payment screen. At the top, the status bar displays the time '09:52 AM' and icons for cellular signal, Wi-Fi, and battery. The app's header is titled 'Payment'. The main content area begins with the text 'Your are about to pay:' followed by the amount '18.00 \$'. Below this is a credit card summary box containing the word 'Credit', the card number '5432 XXXX XXXX XXXX', the expiration date '05/29', and a logo consisting of two overlapping circles. The form then includes input fields for 'Card holder name:', 'Card number', 'Card expiry' (with a slash separator), and 'CVV'. A large 'Submit' button is positioned at the bottom of the form area.

09:52 AM

Payment

Your are about to pay:

18.00 \$

Credit

5432 XXXX XXXX XXXX

05/29

Card holder name:

Card number

Card expiry CVV

Submit

h. Wireframe 8

