COMP3423 Human Computer Interaction

Individual Assignment (10%)

Deadline: 13th October, 2024 (Sunday), 23:59

Assignment: Re-Design a User Interface for a Food Ordering System in Catering

Assignment Overview:

Students are tasked with re-designing a user interface (UI) for a food ordering system used in catering services. This application will typically be in the form of a Progressive Web App (PWA). A PWA is an app built using web platform technologies but provides a user experience similar to a platform-specific app. Unlike food delivery apps like Foodpanda, this app is intended for food ordering by dine-in customers and is widely used in local restaurants such as "Cha Chaan Teng".

The system will allow waiters to provide customers with a QR code, which customers can scan to access the menu and place orders. The system should support A-la-carte and set lunch/dinner orders, ensuring ease of use, quick editing, and proper categorization of menu items. The design should be verified through user tests and incorporate stakeholder feedback.

Example systems can be found in *PolyU VA Staff Canteen, PolyU V Café, Tam Chai Yunnan Noodles, KFC, Mc Donald's, and Saizeriya,* etc.

Milestones and Tasks:

1. **User Research (15%)**

   Objective: To inform the design process and understand a potential end-user's needs, preferences, and pain points.

   Tasks:

   - **Analyze an Existing System:** Pick one existing food ordering system to identify its strengths, weaknesses, and opportunities for improvement.
   - **Conduct an Interview:** Interview one potential system user (e.g., a customer, waiter, or restaurant manager) to gather qualitative data on their needs, preferences, and pain points. The outcome of this task is to obtain five user requirements.
   - **Prioritize Requirements:** Rank the features and usability goals in order of importance to focus on the most critical aspects first.
   - **Create a User Persona:** Develop a detailed user persona based on the interview data to represent the user who will interact with the system.

2. **Wireframing (20%)**

Objective: Create low-fidelity wireframes to outline the basic structure and layout of the user interface.

Tasks:

- **Set Usability Goals:** Define **three** specific design objectives. They may relate to reducing the time it takes to place an order, minimizing errors, and ensuring ease of navigation. It would be best if you elaborated a bit to fit your case/system.
  Hint: you may apply the knowledge from Lectures, e.g., how fat finger problems can be avoided. How do you apply problem-solving methods in food selection?
- **Sketch Initial Wireframes on Paper:** Draw initial wireframes for key screens, including the menu, shopping cart, order confirmation, and editing screens on paper.
- **Scan and Document Wireframes:** Scan and paste the paper wireframes into a document for review.
- **Define Navigation Flow:** Ensure that the navigation flow is intuitive and that users can quickly move between different system parts.

3. Visual Design and Prototyping (50%)

Objective: Develop high-fidelity visual designs and create an interactive prototype using Figma to simulate the user experience and gather feedback through user testing.

Tasks:

- **Create Style Guide:** List out the visual elements, including color schemes, typography (i.e., the font type and sizes, etc.), iconography (what icons are used), and other visual elements.
  Hint: you may just show the colors used, like:

- **Develop an Interactive Prototype in Figma:** Use Figma to create an interactive version of the UI that users can navigate and interact with. The prototype should contain multiple pages (about 5 screens, no more than 10 screens) with all necessary functions.
- **Screen capture of the High-Fidelity Screens in Figma:** Capture any five representative screens and paste them on the report, with brief descriptions.
- **Design UI Elements:** Create buttons, menus, icons, and navigation elements with appropriate transition effects. Use layout techniques such as grids, rows, and columns to effectively place widgets, images, and texts.
- **Prototype URL:** Put the URL of a shared link to the end product in Figma, ensuring it is set to be publicly accessible.

4. Testing (15%)

Objective: Validate the design through user testing to identify usability issues and gather feedback for improvements.

Tasks:

- **Conduct User Testing:** Use Maze.co to test usability with two real users. Observe how they interact with the prototype and identify any issues or pain points. Design one task to test a particular function in your design.
- **Collect Feedback:** Gather qualitative (their verbal comments) and quantitative feedback (one measurable factor) from users to understand their experience and identify areas for improvement.
- **Analyze Feedback:** Say a few words from the collected feedback to pinpoint specific usability issues and areas where the visual design may not meet user expectations.

Deliverables in submission:

- A report in MS Word or PDF, including:
    - User research findings, including analyzing the existing system, interview results, and user persona.
    - Documented usability goals, i.e. **three** redesign objectives and **five** prioritized requirements.
    - Scanned paper wireframes and navigation flow diagrams. (The scans must be clear and readable).
    - Screen capture **any five** high-fidelity screens created using Figma, along with a style guide.
    - Make an Interactive Figma prototype and provide a publicly accessible URL to the Figma prototype.
    - Conduct a simple user test and report **any two** findings precisely in the user tests based on user feedback and analysis.
- Submit the report to the blackboard at “Assessments” > “Individual Assignment”.