Project Proposal: Self-checkout machines in stores

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1 Project Goals

Self-checkout systems have become increasingly common in stores, offering convenience and efficiency for both customers and businesses. However, many users experience problems due to unclear feedback and confusing layouts. This is especially a problem for first-time and elderly shoppers. The goal of this project is to design an improved self-checkout interface that minimizes user error, enhances accessibility, and creates a smoother, more satisfying shopping experience. Our design will emphasize usability principles such as visibility of system status, error prevention, and user control. The project aims to combine functional design with clear interaction flows to improve ease of use.

2 Methodology

We will begin with observing people, how they interact with self-checkout machines in local stores, identifying common issues (**Observation** and **Empathy Mapping**). Next, we will conduct short interviews and simple surveys to gather user perspectives on pain points and expectations. Based on this research, we will **brainstorm** possible improvements and create sketches to test ideas, following **Nielsen's usability heuristics**. We will then build a prototype in **Figma** to simulate real interactions and perform user testing to evaluate efficiency, error rates, and satisfaction. We will use the feedback to do iterative refinements until a final prototype is achieved.

3 Execution Plan

- Observation and interviews (Weeks 5-6)
- Brainstorming and task analysis (Week 6)
- Sketches and initial layout (Week 7)
- Interactive prototype (Week 8)
- User testing and evaluation (Weeks 9-10)
- Refinement and final prototype (Weeks 11-14)