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IT 3600 - Midterm Project

Problem: Confusing parking meter payment system

- A description of the user experience issue(s). Include a written description, images, etc. that show the problem.
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- Provide a short usability critique.
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- Propose a solution to the user experience issue(s).
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Real-World UX Problem: Confusing Parking Meter Payment System

Description of the Problem

Parking meters in many cities often provide a frustrating experience due to a lot of factors. The main problem I have experienced with using parking meters and what makes them difficult to use is the interface and unclear instructions, it is usually a mix of physical buttons, touchscreens, and faded printed instructions, leaving users confused about what to do first. In addition, there are a lot of issues with the payment process. Many meters accept multiple payment methods but the process is inconsistent or fails frequently.

Example Photo or Mockup:

Usability Critique

The parking meter system fails due to poor accessibility, lack of intuitive flow, error handling. In regard to poor accessibility, parking meters have small font sizes, low-contrast text, and placement of buttons make it difficult for individuals with vision impairments to use. Due to a lack of intuitive flow, it is often difficult to understand whether users should input their license plate, select a time, or pay first. Lastly, error handling has been proven very annoying when using these machines. They often show vague error messages, leading users to waste time guessing what went wrong.

I have provided my proposed solution to create a seamless user experience for parking meters below.

1. **Simplified and Intuitive Interface**:
    - Replace physical buttons with a clean and responsive touchscreen interface.
    - Use numbered steps on the screen, such as "Step 1: Enter Plate Number," "Step 2: Select Time," and "Step 3: Pay."
2. **Universal QR Code Payment**:
    - Display a prominent QR code on the parking meter that links to a standardized app or website. Users can complete the payment from their smartphones without directly interacting with the machine.
3. **Accessibility Enhancements**:
    - Add text-to-speech functionality for visually impaired users.
    - Use bold, high-contrast text and large fonts to improve visibility.
4. **Mobile App Integration**:
    - The parking system can integrate into popular navigation apps, showing real-time parking availability and enabling users to pay before reaching their destination.
5. **User Feedback and Confirmation**:
    - At every step, provide clear feedback (e.g., "Payment Processed Successfully") to reduce uncertainty.