Electronic Voting Machine (EVM)
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The Electronic Voting Machine (EVM) is a Verilog-based project simulating a secure voting process. It allows users to cast votes for multiple candidates and securely stores the counts.
Features of the Project

- **Multiple Candidates Voting:** Supports voting for multiple candidates in a secure and user-friendly interface.
- **Vote Authentication:** Includes a simple authentication mechanism to ensure valid voting.
- **Real-Time Vote Counting:** Displays vote counts in real-time as the votes are cast.
- **End Voting Process:** Admin has the ability to end the voting session and lock the results.
- **Result Declaration:** Displays final vote counts for each candidate after voting is complete.
- **Reset Functionality:** Admin can reset the voting system for a new session.

Modules of the Project

1. **Control Unit:**
    - Manages the overall process flow: initialization, voting, result display, and reset.
    - Implements state transitions based on inputs (start, vote, end).
2. **Authentication Module:**
    - Verifies voter eligibility through a voter ID or predefined authentication logic.
    - Prevents unauthorized access.
3. **Vote Casting Module:**
    - Handles the input for casting votes.
    - Maps input buttons/switches to specific candidates.
4. **Vote Counter Module:**
    - Stores and increments vote counts for each candidate.
    - Ensures counts are securely stored in registers.
5. **Display Module:**
    - Shows the current state of the system (e.g., waiting for vote, vote casted, results).
    - Displays the vote counts for each candidate at the end of voting.
6. **Admin Module:**
    - Provides controls for starting, ending, and resetting the voting session.
    - Prevents tampering during the voting session.