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**Hardware Integrated Tiered Voting System**

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**ABSTRACT:**

The system proposed by us is an authenticated system that provides integration of three tiered security features which includes facial recognition and fingerprint scanner at the first stage, password matching at the second stage and, an encryption algorithm as the final stage. The existing voting system is based on ballot machine where when we press the button corresponding to the symbol, the voting is done. Here there is a security risk, the person who votes may be fake person voting. The people there might not know that a person is using fake voting card, this may cause problem.

The proposed system is an integrated system that provides three layers of security which is basically divided into three modules for 3 stages of voting. In the first module, security is provided by face recognition and fingerprint matching. The voter’s image is captured and compared with the image stored in the database, if it matches then, first 4-digit of the Aadhar card number of that person is passed on to the next stage. In the second module, a 4-digit key is generated which is displayed in the 7 segments. Also at the same time the first four digit of Aadhar card’s number along with 4-digit key is combined and encrypted. The voter will type the key along with the first four digit of his/her Aadhar card’s number at the time of casting vote in the third tier or final stage. If the key matches, user is allowed to vote. After he/she has voted the machine gets locked and can only be opened again by a new pin match. This system provides more security than the existing system.

**ARCHITECTURE DIAGRAM:**

