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Fingerprint Bank Lock with Image Capture

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Abstract: The fingerprint based bank locker system is an enhancement to the traditional bank locker system that uses keys. Now keys can easily be copied and made by theif's who know about it. Also the keys must be taken care of and can also be lost due to some negligence. Well fingerprint based bank locker system is here to solve all these issues. The fingerprinted authenticated bank locker system is safe as well as easy to use and maintain. No key handling no need to worry about key getting lost. The system uses fingerprint sensing to read fingerprints and first store registered fingerprints against the bank locker record. Now next time a person scans finger the sensor reads it and compares it with past records. Now if match is found with existing prints, it sends the match signal to the microcontroller and the controller displays this data on the LCD display. Also the controller drives the driver motor to open the bank locker door and opens it for authorized customers. The door of locker wont open for unauthorized customers. And when door is open one photo is taken by the ESP32CAM module and it is saved in SD card. Later if any lost of assets happed then we can check those photos to check if any unauthorized person has opened bank locker by chance. This system helps to make more secure bank lockers and also gives plus point to security by taking photo of the bank locker accessing person.

Keywords: Fingerprint Module, Intrusion Detector, Microcontroller Motor driver, Memory SD card etc.

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