

## Contactless Attendance System along with Temperature Monitoring

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**Abstract :** The current scenario of the pandemic due to COVID-19 has led to the awareness among the people to avoid unnecessary contact in public places. There is a need to avoid contact with physical objects to stop the spreading of infection. The contactless feature has to be included in the systems in public places wherever possible. For example, attendance monitoring systems with fingerprint biometric can be replaced with a contactless feature. One more important protocol followed in the current situation is temperature monitoring and screening. The paper describes an attendance system with a contactless feature and temperature screening for the university. The system displays a QR code to scan, which redirects to the student login web page only if the location is valid (the location where the student scans the QR code should be the location of the display of the QR code). Once the student logs in, the temperature of the student is scanned by the contactless temperature sensor (mlx90614) with an error of 0.5°C. If the temperature falls in the range of the desired value (range of normal body temperature), then the attendance of the student is marked as present, stored in the database, and the door opens automatically. The attendance is marked as absent in the other case, alerted with the display of temperature, and the door remains closed. The door is automated with the help of a servomotor. To avoid the proxy, IR sensors are used to count the number of students in the classroom. The hardware system consisting of a contactless temperature sensor and IR sensor is implemented on the microcontroller, NodeMCU.

**Keywords :** NodeMCU, IR sensor, attendance monitoring, contactless, temperature

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