**1.2 PROBLEM STATEMENT.**

In traditional attendance systems, taking and managing attendance can be time-consuming, prone to errors, and often lacks transparency. This issue is particularly prevalent in educational institutions, businesses, and organizations, where manual attendance tracking can lead to inefficiencies and inaccuracies. Current methods of attendance tracking (such as paper-based registers, manual entry into spreadsheets, or basic digital systems) fail to efficiently handle large numbers of individuals, are susceptible to errors, and are time-consuming. In addition, these systems often lack real-time reporting, are prone to manipulation, and do not provide detailed insights into attendance patterns. These challenges lead to wasted administrative time, reduced productivity, and can contribute to issues like low accountability.

A smart attendance system could greatly reduce human error, save time, and improve the accuracy of attendance records. By implementing a web-based smart attendance system that utilizes technologies such as biometric recognition ( facial recognition), institutions and organizations can streamline attendance tracking. This system would allow for real-time data capture, automated attendance logging, instant notifications, and comprehensive analytics.