

Introduction

A student attendance management system is a digital solution designed to capture, monitor, and report student attendance across various learning environments (Marianne David, August 13, 2025). Attendance is important for any academic institution, as it is used to determine how engaged students are in class, monitor student attendance or behavior towards the teacher, and maintain student discipline. Managing student attendance during lecture periods has become a difficult challenge (Shahab Zebari, February 2018). Traditionally, a manual sign-in sheet, roll call, or paper register is used for tracking student attendance. The inefficiency of this approach is that it is very time-consuming for the lecturer, as they have fixed hours, and there is a risk of errors since a student could accidentally mark another's work.

These limitations indicate that it lacks structural logical control since there are no clear rules or validations in it. Logical thinking can easily be applied to an online attendance system. These include user authentication to verify attendance, recording of attendance by lecturers to mark attendance, student attendance check-in, viewing attendance, and generating reports. These steps increase accuracy, reduce human error, and are simple to use.