# ACROPOLIS INSTITUTE OF TECHNOLOGY AND RESEARCH

**Department of Computer Science & Engineering (Data Science)**

**Synopsis**

On

**Attendance management system**

# INTRODUCTION

## Overview

## The Attendance Management System is a web-based platform designed to streamline and automate the attendance tracking process for educational institutions. This project aims to reduce the time and effort involved in manual attendance, ensure accuracy, and provide real-time data access for students and faculty. The system will include functionalities like marking attendance, generating reports, and providing insights into attendance trends.

## Purpose

The purpose of this project is to develop a reliable and user-friendly system that replaces traditional paper-based or Excel-based attendance tracking methods. The proposed system aims to achieve enhanced accuracy, save time, and minimize the chances of data loss. Advanced features, such as analytics and report generation, will aid faculty in evaluating student attendance more effectively.

# LITERATURE SURVEY

## Existing Problem

Most educational institutions currently rely on manual methods or basic software tools to track attendance. These methods are time-consuming, prone to errors, and often lack the flexibility to generate detailed insights. Additionally, existing solutions may not provide instant data access or integrate with other college systems.

## Proposed Solution

Our solution is a web-based attendance management system that allows faculty to mark, view, and analyze student attendance through an easy-to-use interface. The system will include features like:

* Role-based access for students and faculty.
* Attendance marking and editing functionality.
* Automated report generation for detailed analysis.
* Data analytics for insights on attendance patterns and trends.

By developing this system, we aim to offer an efficient, secure, and scalable solution for attendance management.

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# THEORETICAL ANALYSIS

## Block Diagram

**RESULT**

**(Output)**

**Analytics Module**

**(Processes Data, identifies Patterns)**

**Backend server**

**(Centralized Storage, Records)**

**Database**

**(User request, Logic)**

**USER**

**(Faulty, Student)**

**UI**

**(User-Interface, Login)**

**Fig.1. Process of Attendance Management System**

## Hardware/Software Designing

## Hardware Requirements:

## Processor: Dual-Core CPU (e.g., Intel Core i3 or equivalent)

## RAM: 4GB

## Storage: 128 GB HDD

## Network: 10/100 Mbps Internet Connection

## OS: Linux-Based or Windows Server

## Software Requirements:

## Frontend: HTML, CSS, JavaScript

## Backend: Python with Flask or Django, or Node.js

## Database: MySQL, SQLite, or PostgreSQL

## Analytics: Basic data visualization tools (e.g., Chart.js) to represent trends and insights.

## Version Control: Git with GitHub

# APPLICATIONS

* The proposed Attendance Management System can be applied in:
* Schools, colleges, and universities for daily attendance tracking.
* Coaching centers or workshops to manage attendance for different batches.
* Corporate training programs to monitor employee participation and punctuality.

# REFERENCES

# Journal

# [1] Bharti, P. and Kumar, R. Automated Attendance Management System using Biometrics and Embedded Technology. Journal of computer science and Applications (2021)

# [2] Wakode, S., Shingade, S., and Pawar, P. Web-based Attendance Management System. International Journal of Computer Applications, 182(26), pp. 25-30. (2019)

# Research Paper

# [1] Dey, T., & Mukherjee, R. - Integration of Analytics in Attendance Management System at IEEE Xplore (2020)

**GitHub ID:**

<https://github.com/mustafa1850>

<https://github.com/hariiom08/Attendance-Management-System>

<https://github.com/gaganmandloi/Ams>

<https://github.com/Diya-Jaincoding>

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