**Title**

**RFID and Face Recognition Based Smart Attendance System using Django**

**Aim**

To design and implement an automated attendance system that ensures accurate, real-time logging of student attendance using a combination of **RFID scanning** and **facial recognition**, while offering a user-friendly Django-based web interface for administration, tracking, and reporting.

**Abstract**

In traditional attendance systems, manual processes often lead to errors, delays, and fraudulent entries. This project introduces a **Smart Attendance System** that combines **RFID technology** and **facial recognition** to provide a more secure and efficient alternative. When a student taps their RFID tag, the system triggers a live camera feed that authenticates their identity through facial recognition using **OpenCV**. Upon successful verification, their attendance is marked automatically in a **SQLite** database.

The system includes a custom-built **Django admin dashboard** with modern UI theming, dark mode support, and Excel export features for daily, subject-wise, or full attendance reports. The complete solution runs as a **desktop application packaged into a .exe file**, which launches both the backend server and the face reader in separate terminals, allowing real-time monitoring and control.

This hybrid solution is designed to improve transparency, security, and ease of use for institutions managing large-scale student attendance data.

**Theme**

The project’s core theme revolves around **smart automation** and **hybrid biometric security**. By integrating **IoT (RFID)** with **AI-powered computer vision**, the system delivers a next-generation attendance solution. The aesthetic design follows a **dark mode user interface** with clean admin control panels, real-time logging, and exportable reports for educators and administrators. The theme reflects modern education systems moving toward **digital transformation and intelligent monitoring**.