Prepared By: Siri Varshini Pentakota

Email: Sirivarshini.pentakota@gmail.com

Student Attendance & Performance Tracker

Phase 1: Problem Understanding & Industry Analysis

Requirement Gathering

In most colleges and universities, attendance and academic performance are still managed manually through registers, Excel sheets, or individual faculty records. This approach is slow, prone to mistakes, and offers little real-time visibility. Faculty members spend hours preparing attendance reports and compiling results, while students and parents receive updates only at the end of the term. Academic administrators also face challenges in identifying struggling students early enough to take corrective actions.

To address these issues, the key requirements identified are:

- A centralized platform to record and store attendance and examination results.

- Automation of alerts for low attendance, backlogs, or poor performance.

- Real-time dashboards and analytics for faculty, students, and management.

- Easy access to historical data for audits, counseling, and academic planning.

2. Stakeholder Analysis

This solution is designed to support different stakeholders within an educational institution:

- **Faculty:** Mark attendance, upload marks, view class-level insights, and receive automated alerts for at-risk students.

- **Students:** Ensure their attendance and performance are tracked accurately with real-time visibility into their progress.

- **Academic Management:** Access dashboards, analyze trends, and make data-driven decisions for academic improvement.

- **Parents (Optional):** Receive automated notifications on poor attendance, low marks, or behavioral issues, helping them intervene early.

3. Business Process Mapping

Current Process (Manual):

- Attendance is marked daily in physical registers or spreadsheets.

- Exam results are recorded separately, often across multiple files.

- End-of-semester reports require manual compilation, leading to high workload and delays.

- There is no automated alerting system, making it difficult to identify at-risk students early.

Proposed Process (Salesforce-Based):

- Attendance and marks are directly recorded in Salesforce through custom objects.

- Automated workflows and flows notify faculty, students, and parents of low attendance or poor performance.

- Centralized dashboards provide real-time insights for classes, departments, and management.

- The process becomes standardized, transparent, and significantly more efficient.

This transformation reduces administrative effort, improves accuracy, and enhances the ability to take timely corrective actions.

4. Industry-Specific Use Case Analysis

In the education industry, effective monitoring of attendance and academic performance is essential for improving student success rates. Manual processes often fail to provide the visibility required for early interventions. A Salesforce-based Attendance & Performance Tracker:

- Significantly reduces manual effort and eliminates data duplication.

- Automates critical alerts to ensure struggling students are identified early.

- Enhances communication between teachers, students, and management.

- Supports data-driven decision-making with accurate, real-time insights.

- Improves institutional transparency and accountability.

With Salesforce, institutions benefit from scalability, security, and rapid customization—making it ideal for academic process automation.

5. AppExchange Exploration

Salesforce AppExchange includes solutions like Learning Management Systems (LMS) and Student Information Systems (SIS). While these solutions are powerful, many are large-scale and require complex implementation.

This project focuses on building a **customized and lightweight Attendance & Performance Tracker** specifically designed for college use cases. This allows flexibility and provides an opportunity to demonstrate Salesforce features such as:

- **Custom Objects, Fields, and Relationships** for structured academic data.

- **Flows, Validation Rules, and Email Alerts** for process automation.

- **Apex Triggers** for updating results and calculating performance metrics.

- **Dashboards & Reports** for real-time academic monitoring.

This approach ensures adaptability, ease of use, and hands-on experience with core Salesforce development components.

Conclusion

The need for a Student Attendance & Performance Tracker is strong and clearly justified. By implementing this system on Salesforce, institutions can streamline attendance management, automate performance notifications, reduce manual workload, and empower management with real-time insights.
 Ultimately, this solution improves transparency, strengthens academic supervision, and contributes to better student outcomes.