

PROJECT DESIGNN PHASE PART II

REQUIREMENT ANALYSIS

DEFINITION:

Requirement analysis is a process used to determine the needs and expectations of a new product. It involves frequent communication with the stake holders and end users of the product to define expectations, resolve conflicts, and document all the key requirements.

FUNCTIONAL REQUIREMENTS:

1. User Management:

Registration and login for administrators, teachers, students, and parents. Role-based access control.

2.Student Information:

Student profiles with personal details, enrollment history, and contact information. Enrollment and admission processes. Attendance tracking.

3.Teacher Information:

Teacher profiles with qualifications, contact information, and assigned courses. Course scheduling and management.

4. Course Management:

Course creation and configuration. Assignment of teachers to courses. Syllabus and curriculum management.

5.Attendance Management:

Recording and tracking student attendance. Generating attendance reports.

6. Communication:

Messaging system for communication between teachers, parents, and students. Announcements and notifications.

7. Timetable and Scheduling:

Creation and management of class schedules. Exam and event scheduling.

8. Library Management:

Cataloging and tracking of library resources. Check-out and return system.

9. Finance and Billing:

Fee collection and management. Financial reports and receipts.

10. Reporting and Analytics:

Generating various reports such as attendance, grades, and financial reports. Data analytics for insights into student performance and trends.

11. Online Learning:

Integration with e-learning platforms for online classes and resources.

12. Alumni Management:

Alumni database and engagement features.

13. Inventory Management:

Tracking school assets and supplies.

14. Transport Management:

Bus routes, vehicle tracking, and student transportation details.

15. Hostel Management:

Accommodation details for students living in hostels.

16. Health and Attendance:

Health records and tracking of student health.

17.Security:

User data protection and access controls.

18.Mobile Accessibility:

Mobile app for easy access on smartphones and tablets.

19.Integration:

Integration with other school systems and tools, like HR management or accounting software.

20.Grading and Assessment:

Recording student grades and assessments. Grade calculation and report card generation.

OPERATIONAL REQUIREMENTS:

1.User Roles and Permissions:

Define user roles such as administrators, teachers, students, and parents, and specify their permissions and access levels.

2.Data Management:

Implement a database system to store and manage student records, attendance, grades, and other relevant data.

3.Attendance Tracking:

Include features for tracking student attendance, both manually and through automated systems like RFID or biometrics.

4.Gradebook and Assessment:

Develop a gradebook module to record and calculate student grades. Include features for creating and scheduling exams and assignments.

5. Timetable and Scheduling:

Create a scheduling system for managing classes, exams, and other school events. Ensure it can handle conflicts and adjustments.

6.Communication and Messaging:

Incorporate a messaging system to facilitate communication between teachers, students, and parents. Ensure notifications and announcements can be sent easily.

7.Admission and Enrollment:

Develop features for student admission, registration, and enrollment. This may include online application forms and payment processing.

8.Financial Management:

Implement modules for fee collection, expense tracking, and financial reporting.

9. Library Management:

Include functionality for managing the school library, including book inventory and check-out systems.

10. Transportation Management:

If the school provides transportation services, add a feature for managing bus routes, schedules, and student transportation records.

11. Staff Management:

Keep track of teacher and staff information, including attendance, payroll, and performance evaluations.

12. Reporting and Analytics:

Provide reporting tools to generate various reports, such as student progress reports, financial statements, and academic performance analytics.

13. Security and Data Privacy:

Ensure data security through encryption, user authentication, and regular backups. Comply with data privacy regulations, such as GDPR or HIPAA.

14. Scalability:

Design the application to handle growth in the number of students, teachers, and data volume over time.

TECHNICAL REQUIREMENTS:

1. Salesforce Platform:

Ensure you have a Salesforce account and access to the necessary features, like custom objects, Apex (for custom code), and Lightning components.

2.Data Model:

Define the data model for your school management system, including objects for students, teachers, courses, classes, grades, and other relevant entities.

3.Custom Objects:

Create custom objects in Salesforce to represent the various entities in your system.

4.Data Integration:

Plan how to integrate with other data sources, such as student records, attendance, and grades. You might use Salesforce Connect, custom APIs, or third-party tools for data integration.

5. User Management:

Implement user profiles, roles, and permission sets to control access to different parts of the system for students, teachers, administrators, and parents.

6.Workflows and Automation:

Define and implement automation rules and workflows to streamline processes like enrollment, attendance tracking, and grading.

7.Reporting and Dashboards:

Create custom reports and dashboards to provide insights into student performance, attendance, and other relevant metrics.

8.Mobile Access:

Consider building a mobile app or ensuring that your system is mobile-responsive for accessibility on various devices.

9. Custom Code (if necessary):

If your requirements can't be met with standard Salesforce configurations, you may need to write custom Apex code and Visualforce pages.

10.Security:

Ensure that your application complies with data security and privacy regulations, such as GDPR or HIPAA, depending on your location and the data you handle.

11.Testing:

Thoroughly test your application to ensure it functions correctly and securely.

12.Training and Support:

Provide training for staff and administrators who will use the system, and establish a support mechanism for addressing issues and questions.

13. Scalability:

Plan for scalability as your school management system grows in users and data volume.

14.AppExchange (optional):

If you plan to offer your solution to other educational institutions, consider listing it on the Salesforce AppExchange.

15.Documentation:

Create comprehensive documentation for administrators and end-users to understand how to use the system.

FLOWCHART:

