

EDUCATIONAL ORGANIZATION USING SERVICE NOW

Project Design Phase

Introduction

The Project Design Phase focuses on defining the system's architecture, workflow structure, and user interfaces required to implement the "Educational Organization Using ServiceNow" project. The design ensures that the system meets all user and business requirements, maintaining scalability, usability, and efficiency.

System Architecture

The system will be developed on the ServiceNow platform, leveraging its cloud-based architecture and workflow automation capabilities.

Architecture Components:

- User Interface Layer: Accessible through a web portal for students, faculty, and administrators.
- Application Layer: Built using ServiceNow modules such as Service Catalog, Incident Management, Knowledge Management, and Workflow Designer.
- Database Layer: Stores all student, faculty, and administrative data in the ServiceNow database (secured and cloud-hosted).
- Integration Layer: Enables communication between modules (e.g., between Student Requests and Faculty Approvals).

System Design Diagram (Conceptual Overview)

Users (Students, Faculty, Admin)



ServiceNow Portal (UI)



ServiceNow Modules (Workflows)

- └─ Student Management
- └─ Faculty Management
- └─ Academic Request System
- └─ Attendance & Grading
- └─ Help Desk & Support
- └─ Report & Analytics



ServiceNow Database

Module Design

1. Student Management Module

- Handles student profiles, enrollment, and academic records.
- Automates notifications for course registration, fee payments, and attendance.
- Enables self-service through the student portal.

2. Faculty Management Module

- Stores faculty details, schedules, and class assignments.
- Manages leave requests, workload distribution, and approvals.

3. Academic Request & Workflow Module

- Allows students to raise academic-related requests (e.g., transcript, ID card, re-evaluation).
- Requests are automatically routed to the appropriate department for approval.
- Uses ServiceNow's Flow Designer for workflow automation.

4. Attendance and Grading Module

- Maintains attendance logs linked with class schedules.
- Faculty can update grades directly in the system, accessible to students in real-time.

5. Help Desk & Support Module

- Provides a ticketing system for resolving student and staff issues.
- Supports categories like IT issues, course queries, or general support.
- Includes SLA tracking to ensure timely resolution.

6. Reports & Analytics Module

- Generates visual dashboards for management insights.
- Tracks academic performance, staff productivity, and request turnaround time.

User Roles and Permissions

User Role	Access Level	Description
Admin	Full Access	Can configure modules, manage data, and generate reports.
Faculty	Moderate Access	Can manage courses, attendance, grades, and respond to student requests.
Student	Limited Access	Can view their records, raise requests, and track progress.

Workflow Design

Example Workflow: Student Request Process

1. Student submits a request through the portal.
2. The system automatically routes it to the respective faculty or department head.
3. Faculty/Administrator reviews and approves/rejects.
4. Status Update is sent back to the student.
5. The request and response are logged for reporting.

User Interface (UI) Design

- Homepage Dashboard: Displays announcements, quick links, and task lists.
- Student Portal: Options for requests, attendance view, and grades.
- Faculty Portal: Course management, attendance update, and support tickets.

- Admin Dashboard: Analytics, user management, and workflow monitoring.

Security Design

- Role-based access control (RBAC) using ServiceNow roles.
- Encrypted data storage and communication through HTTPS.
- Audit logs for all user actions.
- Regular backup and data recovery configurations.

Database Design (Conceptual)

Table Name	Description	Key Fields
Student_Details	Stores student information	Student_ID, Name, Course, Email
Faculty_Details	Stores faculty data	Faculty_ID, Department, Email
Request_Table	Tracks all raised requests	Request_ID, Request_Type, Status
Attendance_Record	Logs attendance	Attendance_ID, Student_ID, Date, Status
Grades	Stores student grades	Grade_ID, Student_ID, Subject, Marks
Tickets	Help desk ticket details	Ticket_ID, Category, Priority, SLA_Status

Integration Design

- Email Notifications: Automated alerts for approvals, deadlines, and updates.
- Calendar Integration: Syncs class schedules and events.
- ServiceNow Reports: Integrated analytics dashboards for administrators.

Testing Plan (High-Level)

- Unit Testing: For each module's internal functionality.
- Integration Testing: To verify cross-module interactions.
- User Acceptance Testing (UAT): Conducted by selected faculty and students.
- Performance Testing: Ensures optimal response times under load.

Expected Outcomes

- Streamlined academic and administrative workflows.
- Improved transparency and communication between stakeholders.
- Reduced manual processing time.
- Centralized data management and analytics.

Conclusion

The design phase provides a clear and structured blueprint for building the "Educational Organization Using ServiceNow" project. It ensures that all functional and technical aspects are aligned with organizational goals, supporting a smooth transition into the implementation and deployment phases.