

EDUCATIONAL ORGANIZATION USING SERVICE NOW

Requirement Analysis Phase:

Introduction

The Requirement Analysis Phase is a crucial step that identifies and documents the functional and non-functional requirements needed to implement the “Educational Organization Using ServiceNow” project. This phase ensures that all stakeholders have a clear understanding of what the system will deliver, aligning user expectations with technical feasibility.

Objective

The main objective of this phase is to gather, analyze, and define the system requirements that will help in automating academic and administrative operations within an educational organization using the ServiceNow platform.

Information Gathering Techniques

To ensure all perspectives are considered, the following methods were used:

- Interviews: Conducted with administrators, faculty, and students to understand challenges and expectations.
- Surveys and Questionnaires: Collected feedback about common issues in academic and support systems.
- Observation: Analyzed existing manual processes such as student registration, request handling, and attendance tracking.
- Document Review: Examined current institutional policies and workflow structures.

System Requirements

A. Functional Requirements

These are the essential operations the system must perform.

Requirement ID	Functional Requirement Description
FR-01	The system shall allow students to register and manage their profiles through the ServiceNow portal.
FR-02	The system shall enable faculty to update attendance and grades for each course.
FR-03	The system shall allow students to raise academic and administrative requests (e.g., ID card, re-evaluation, leave).
FR-04	The system shall automatically route requests to the concerned faculty or department using predefined workflows.
FR-05	The system shall notify users via email/SMS about request status updates.
FR-06	The system shall provide an admin dashboard for monitoring student and faculty activities.
FR-07	The system shall generate reports and analytics (attendance trends, grade statistics, and request performance).
FR-08	The system shall include a help desk module to handle IT and non-academic issues.
FR-09	The system shall maintain records of all users, requests, and transactions securely.
FR-10	The system shall provide role-based access (Student, Faculty, Admin).

B. Non-Functional Requirements

These define the quality, performance, and constraints of the system.

Requirement Type	Description
Performance	The system should handle multiple concurrent users without lag.
Security	All data should be encrypted, and access should be based on user roles.
Usability	The interface must be user-friendly and easily navigable for all user types.
Scalability	The system should allow future integration of new modules (e.g., library or hostel management).
Reliability	The system must ensure 99% uptime for academic operations.
Maintainability	Administrators should be able to update workflows and rules without external support.
Compatibility	The platform must work on standard web browsers and mobile devices.

User Requirements

The following outlines what each type of user expects from the system:

User Type	Requirements
Students	<ul style="list-style-type: none">- Register for courses and manage profiles- View attendance and grades- Submit academic/service requests- Receive timely notifications

User Type	Requirements
Faculty	- Manage student records
	- Update attendance and grades
	- Approve or reject requests
Administrators	- View class schedules and reports
	- Configure workflows and user roles
	- Generate analytics reports
	- Manage requests and SLAs
	- Oversee system performance and security

System Requirements Specification (SRS) Overview

The SRS document defines all system functionalities and constraints, ensuring clarity for both developers and users. Key sections include:

- System Overview
- Functional and Non-Functional Requirements
- User Interface Requirements
- Hardware and Software Requirements
- Data Requirements
- Workflow and Use Case Diagrams

Hardware and Software Requirements

Hardware Requirements

Component Minimum Requirement

Processor Intel Core i5 or higher

RAM 8 GB minimum

Component Minimum Requirement

Storage 256 GB SSD or higher

Internet Stable broadband connection (10 Mbps or more)

Software Requirements

Software	Purpose
ServiceNow Platform	Core system for workflow automation and data management
Web Browser (Chrome/Edge)	User access interface
Microsoft Excel / Power BI	For data export and reporting
Email Server (SMTP)	For notification and communication services

Use Case Scenarios

Use Case 1: Student Submits Request

Actors: Student, Faculty, Administrator

Description:

1. Student logs into the ServiceNow portal.
2. Student selects a request type (e.g., ID card replacement).
3. The system routes the request to the relevant faculty or department.
4. Faculty reviews and approves/rejects.
5. Student receives notification with status update.

Use Case 2: Faculty Updates Attendance

Actors: Faculty, Student

Description:

1. Faculty accesses the attendance module.
2. Selects class and date range.
3. Marks student attendance.
4. System automatically updates student records.
5. Students can view attendance in their portal.

Data Requirements

- Student Data: Name, ID, Department, Attendance, Grades.
- Faculty Data: ID, Subject, Schedule, Contact Info.
- Request Data: Request ID, Type, Status, Created Date, Resolution.
- System Logs: Activity history for audit and tracking.

Constraints

- Internet connectivity required for accessing the ServiceNow platform.
- User authentication through institutional credentials.
- Limited customization due to platform licensing constraints.

Assumptions

- All users have access to basic computer and internet facilities.
- The organization already has a ServiceNow license.
- All users will undergo training before system deployment.

Expected Outcomes

- Clear and structured documentation of all system requirements.

- Elimination of ambiguity between user needs and technical implementation.
- Foundation for the design and development phases of the project.

Conclusion

The Requirement Analysis Phase provides a comprehensive understanding of what the “Educational Organization Using ServiceNow” system must achieve. It serves as a bridge between the conceptual vision and the technical design, ensuring that the final system meets all functional, operational, and user expectations.