

# Requirement Analysis Phase

## Solution Requirements

### Template

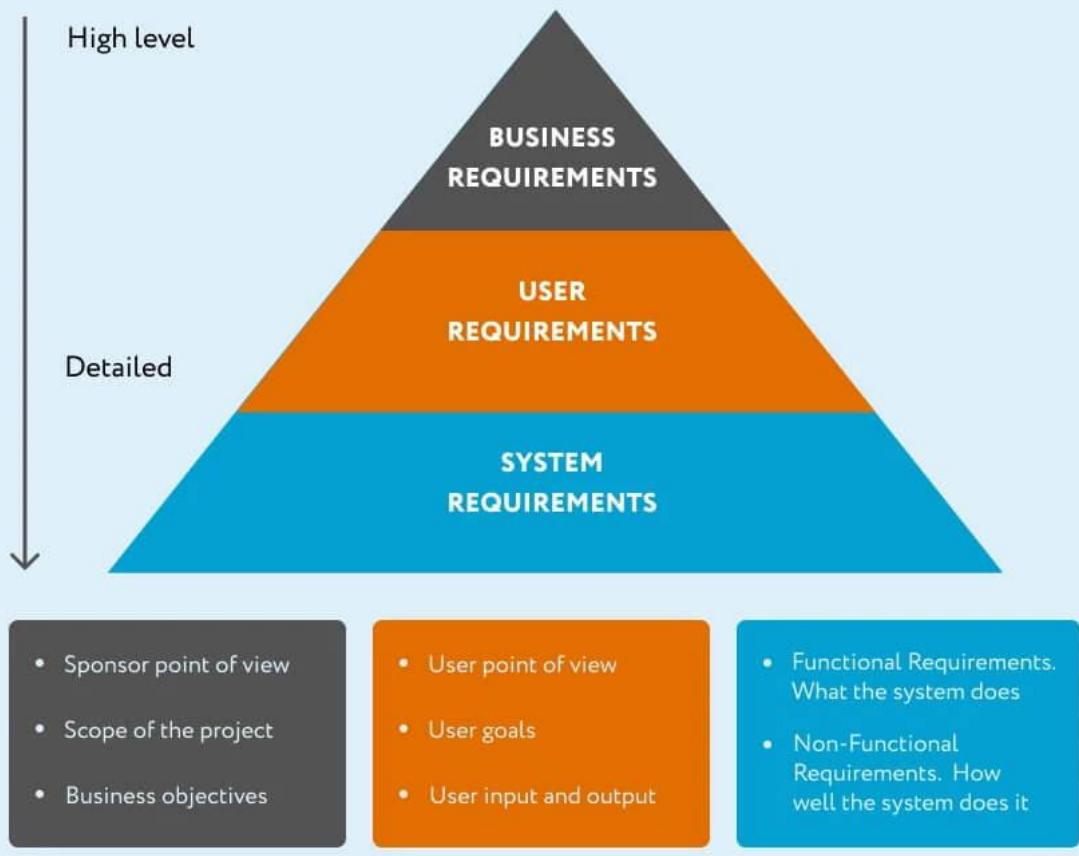
#### Educational Organisation Management using ServiceNow

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#### Solution Requirements – Educational Organisation Management using ServiceNow

Solution requirements define the **functional and non-functional needs** that the Education Management System must fulfill to address institutional challenges. These requirements guide the design, development, and deployment of the system and ensure that it meets stakeholder expectations.

## TYPES OF REQUIREMENTS



### 1. Functional Requirements

Functional requirements describe the **specific capabilities and features** that the system must provide:

#### A. Student Admissions and Enrollment

- Digital submission of application forms by students.
- Automated validation of input data (eligibility, prerequisites, documents).
- Workflow for approval and rejection by administrators.
- Notifications to students on application status.
- Integration with fee management system (optional).

#### B. Centralized Student Database

- Secure storage of all student-related data, including personal, academic, and administrative information.
- Ability to create, read, update, and delete student records (CRUD operations).
- Search and filter functionality for easy retrieval of information.
- Support for role-based access to ensure privacy and confidentiality.

### C. Academic Tracking and Performance Monitoring

- Recording attendance and assignment submissions.
- Grade management for exams, quizzes, and projects.
- Real-time dashboards for teachers and students.
- Alerts for low attendance, pending assignments, or academic performance issues.

### D. Workflow Automation

- Approval workflows for admissions, fee payments, leave applications, and academic requests.
- Automated notifications for pending tasks and approvals.
- Role-based task assignment and tracking.
- Escalation mechanism for overdue approvals.

### E. Reporting and Analytics

- Customizable dashboards for administrators and teachers.
- Reports on student performance, attendance trends, and workflow efficiency.
- Exportable reports for audits and management review.
- Visual analytics like charts, graphs, and heatmaps for quick insights.

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## 2. Non-Functional Requirements

Non-functional requirements define the **quality attributes and constraints** of the system:

### A. Performance

- System must support concurrent access by multiple students, teachers, and administrators without slowdown.

- Response time for data retrieval and report generation should be under 2 seconds for normal operations.

## B. Security

- Role-based access control for students, teachers, and administrators.
- Data encryption at rest and in transit.
- Audit logs for all user activities and workflow approvals.

## C. Usability

- Intuitive user interface for easy navigation.
- Mobile-friendly and responsive design.
- Help guides and tooltips for end-users.

## D. Reliability and Availability

- System uptime of 99.5% or higher.
- Automated backup and recovery mechanism.
- Error handling and notifications for system failures.

## E. Scalability

- Ability to handle increasing numbers of students, teachers, and records without performance degradation.
- Support for adding new modules or integrating with other institutional systems in the future.

## F. Compliance

- Ensure compliance with data privacy regulations applicable to student information.
- Maintain institutional standards for academic record-keeping and reporting.

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## 3. Stakeholder Requirements

- **Students:** Easy access to personal records, grades, attendance, notifications, and enrollment status.
- **Teachers:** Efficient tools for tracking performance, submitting grades, and approving workflows.

- **Administrators:** Real-time insights into operations, approvals, reporting, and centralized control of records.
  - **Management:** Dashboards for data-driven decision-making, trend analysis, and policy planning.
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#### 4. Conclusion

The solution requirements ensure that the ServiceNow-based Education Management System is **functional, secure, user-friendly, and scalable**. By meeting both functional and non-functional requirements, the system will automate administrative processes, provide accurate real-time data, and improve operational efficiency for students, teachers, and administrators.