Technology Stack Template

1. Introduction

This document outlines the key components, technologies, and application characteristics required for implementing a ServiceNow-based service management solution in an educational organization. The purpose of this document is to highlight the infrastructure and design considerations necessary to ensure a scalable, secure, and efficient system.

---

2. Needed Components

2.1 Hardware Components

- **User Devices:** Laptops, desktops, or mobile devices for students, faculty, and staff to access the ServiceNow portal.

- **Networking Equipment:** Routers, switches, and Wi-Fi access points to support campus-wide connectivity.

- **Server Infrastructure (Cloud-based):** Infrastructure provided by ServiceNow, reducing the need for physical on-premise hardware.

2.2 Software Components

- **ServiceNow Platform:** Core platform providing workflows, service catalog, knowledge base, dashboards, and automation capabilities.

- **Web Browser:** Chrome, Edge, Firefox, or Safari to access the portal.

- **Email/SMS Notification System:** Used for automated communication and alert delivery.

2.3 Human Components

- **ServiceNow Administrator:** Responsible for platform configuration and maintenance.

- **Project Manager:** Coordinates development and deployment plans.

- **Faculty/Administrative Representatives:** Provide workflow requirements and approval guidelines.

- **End-Users:** Students and staff who interact with the system.

---

3. Technologies Used

- **ServiceNow IT Service Management (ITSM):** Manages service requests, incident handling, and workflow automation.

- **Service Portal Framework:** Enables the creation of a user-friendly self-service interface.

- **Workflow and Flow Designer:** Automates routing, approvals, and notifications.

- **Access Control Lists (ACL):** Ensures role-based security and restricted data access.

- **Integration APIs (Optional):** Enables connectivity with institutional systems like HR, attendance, or ERP.

- **Reporting and Performance Analytics:** Used for monitoring efficiency and improving service delivery.

---

4. Application Characteristics

4.1 User-Friendly Interface

The application must offer a clean and intuitive portal layout that allows users to submit and track requests without technical complexity.

4.2 Scalability

The system must be able to handle increasing numbers of users and requests, especially during high-demand periods such as admissions and examinations.

4.3 Reliability

The application should operate with high uptime, ensuring continuous availability to users.

4.4 Security and Privacy

Role-based access and data encryption must be applied to ensure the confidentiality of academic and personal information.

4.5 Automation Capability

Automated workflows reduce manual workload, minimize human errors, and improve service turnaround time.

4.6 Performance Efficiency

The application should process service requests efficiently, providing quick response times and dynamic load handling.

---

5. Conclusion

The success of this ServiceNow implementation depends on the effective use of cloud infrastructure, workflow automation, secure data management, and user-centered portal design. By leveraging the components and technologies listed above, the educational organization can enhance operational efficiency and improve the service experience for students, faculty, and staff.