**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| --- | --- |
| Date | 31 January 3035 |
| Team ID | LTVIP2025TMID30574 |
| Project Name | Educational Organisation using ServiceNow |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

This project uses a low-code architecture powered by ServiceNow PDI (Personal Developer Instance). It includes:

Creation of custom tables for student admissions and academic progress,

Client-side automation via scripts,

Use of default ServiceNow components for workflows, forms, and UI.

The architecture is cloud-hosted, scalable, secure, and ideal for rapid educational workflow deployments.

**Table-1 : Components & Technologies:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Component** | **Description** | **Technology** |
|  | User Interface | Web UI where admin interacts with forms | ServiceNow Form UI, HTML/CSS |
|  | Application Logic-1 | Business logic for student admission process | Client Scripts in JavaScript |
|  | Application Logic-2 | Auto-fill, validations, dynamic updates | GlideForm (g\_form) APIs, JS |
|  | Application Logic-3 | Result calculations and conditional logic | Client Scripts |
|  | Database | Stores student, admission, and academic records. | ServiceNow Tables (MySQL-based) |
|  | Cloud Database | Cloud-hosted internal DB through ServiceNow instance | Hosted on ServiceNow Cloud DB |
|  | File Storage | File uploads or documentation if added in future | Not implemented (can extend) |
|  | External API-1 | Optional for integrating school data from third parties | (Future scope) |
|  | External API-2 | Optional for Aadhaar/OTP-based student verification | (Future scope) |
|  | Machine Learning Model | Not applicable for current version | NA |
|  | Infrastructure (Server / Cloud) | Cloud-hosted PDI provided by ServiceNow | ServiceNow Cloud Infrastructure |

**Table-2: Application Characteristics:**

| **S.No** | **Characteristics** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | Open-Source Frameworks | Client-side scripts and Glide APIs used in ServiceNow environment | JavaScript (within ServiceNow) |
|  | Security Implementations | Role-based access, record security, ACLs, and default ServiceNow IAM policies | RBAC, ServiceNow Security Model |
|  | Scalable Architecture | Tables and modules can be extended; ServiceNow handles horizontal scaling | ServiceNow’s scalable cloud infra |
|  | Availability | Highly available via ServiceNow PDI (99.9% uptime), accessible through browser | ServiceNow Cloud |
|  | Performance | Optimized with server-side processing and client scripts; designed for minimal latency | ServiceNow backend engine, caching mechanisms |