

Project Design Phase – II

Technology Stack (Architecture & Stack)

Date: 2 November 2025

Team ID: NM2025TMID06479

Project Name: Streamlining Ticket Assignment for Efficient Support Operations **Maximum**

Marks: 4 Marks

Technical Architecture

This project utilizes the ServiceNow platform to automate and optimize ticket assignment within IT support operations. The architecture integrates built-in ServiceNow modules, cloud infrastructure, and flow designer automation to improve efficiency and reduce manual workload in support ticket management.

The key components include:

- Web-based UI for administrators and support agents.
- Flow Designer for automation and rule-based assignment.
- GlideRecord scripting for dynamic logic and validations.
- Cloud-hosted CMDB and Incident tables for centralized data management.

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	Not applicable (ServiceNow is proprietary).–	

2	Security Implementations	Role-based access and ACLs.	Role-based Access, ACLs
3	Scalable Architecture	Supports multi-instance scaling.	ServiceNow Cloud

- Notifications and REST APIs for external integration and communication.

Table 1: Components & Technologies

S.No	Component	Description	Technology
1	User Interface	Admin dashboard for ticket handling.	ServiceNow Web UI
2	Application Logic – 1	Automates ticket routing.	ServiceNow Flow Designer
3	Application Logic – 2	Validates and routes tickets.	Business Rules, GlideRecord
4	Application Logic – 3	Triggers notifications.	ServiceNow Notifications
5	Database	Stores ticket data.	ServiceNow CMDB, Incident Tables
6	Cloud Database	Managed cloud storage.	ServiceNow Cloud Database
7	File Storage	Stores logs and attachments.	ServiceNow File Storage
8	External API – 1	Integrates with HRMS.	REST API Integration
9	External API – 2	Not applicable.	–
10	Machine Learning Model	Future enhancement.	–
11	Infrastructure (Server / Cloud)	ServiceNow model.	SaaS ServiceNow Cloud (SaaS)

Table 2: Application Characteristics

4	Availability	High uptime with load balancing.	Load-Balanced Instances
5	Performance	Optimized through scripts and indexing.	GlideRecord, Background Scripts