Project Design Phase – II

Technology Stack (Architecture & Stack)

Date	02-11-2025
Team ID	NM2025TMID04283
Project Name	Streamlining Ticket Assignment for Efficient Support Operations
Maximum Marks	4 Marks

Technical Architecture:

The deliverable includes the architectural diagram and detailed information about the technologies used in the project.

This system automates ticket assignment using ServiceNow workflows, business rules, and server-side scripting.

It leverages the **ServiceNow Cloud Platform** to enable intelligent ticket routing, real-time data processing, and efficient performance monitoring.

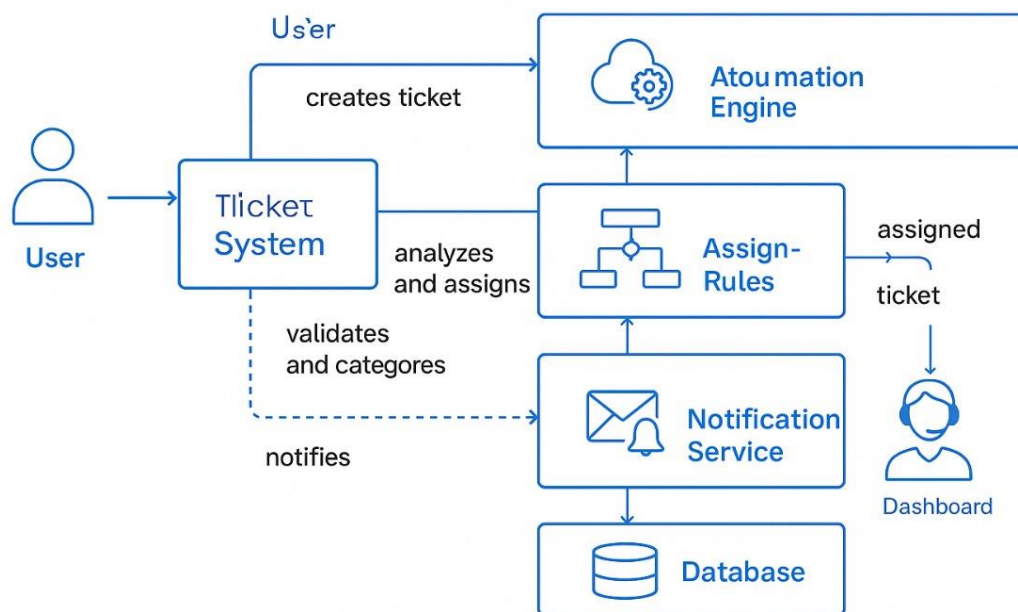## Streamlining Ticket Assignment for Efficient Support Operations

Table – 1 : Components & Technologies

S.NO	Component Description	Technology Used
1	User Interface – Admins and agents interact via ServiceNow dashboard to view and manage tickets.	ServiceNow Web UI
2	Application Logic – 1 – Captures and validates ticket details during creation.	ServiceNow Flow Designer
3	Application Logic – 2 – Executes rule-based ticket assignment to agents based on skills and workload.	ServiceNow Business Rules / Server Scripts
4	Application Logic – 3 – Handles ticket escalation and SLA tracking automatically.	ServiceNow Workflow Engine
5	Database – Stores ticket, agent, and performance data.	ServiceNow CMDB / Incident Tables
6	Cloud Database – Data hosted and managed securely on ServiceNow cloud infrastructure.	ServiceNow Cloud Backend
7	File Storage – Logs and workflow data stored within system logs.	ServiceNow System Logs
8	External API (Optional) – For integration with other support tools or CRM.	REST API Integration
9	Machine Learning (Future Scope) – Can integrate AI models for predictive ticket assignment.	TensorFlow / ServiceNow Predictive Intelligence
10	Infrastructure (Server / Cloud) – Fully managed on	ServiceNow Cloud (SaaS)

		the ServiceNow SaaS environment.	

Table – 2 : Application Characteristics

S.NO	Characteristics	Description	Technology
1	Open-Source Frameworks	Not applicable (ServiceNow is a proprietary SaaS platform).	-
2	Security Implementations	Role-based access, ACLs, and scoped applications ensure data safety.	ServiceNow ACLs
3	Scalable Architecture	Cloud-hosted SaaS model supports horizontal scaling and multiple agents.	ServiceNow Cloud Architecture
4	Availability	Highly available and load-balanced across cloud servers.	ServiceNow Managed Instances
5	Performance	Optimized through background scripts, indexed tables, and asynchronous execution.	GlideRecord, Background Scripts