Project Design Phase
Solution Architecture

Date	2 November 2025
Team ID	NM2025TMID07850
Project Name	Streamlining Ticket Assignment for Efficient Support Operations
Maximum Marks	4 Marks

Solution Architecture:

Goals of the Architecture:

- Automate the ticket assignment process using intelligent rules and AI logic.
- Ensure quick, fair, and efficient distribution of tickets among support agents.
- Improve operational efficiency and reduce manual intervention.
- Maintain transparency and accountability in ticket tracking.

Key Components:

- **Incident Table:** Stores all raised tickets, including details like priority, category, and status.
- **User/Agent Table:** Contains details of support agents, their roles, skills, and workload capacity.
- **Assignment Rule Engine:** Logic that automatically assigns tickets based on predefined parameters such as agent availability, skill match, and ticket priority.
- **Workload Monitoring Dashboard:** Displays ticket distribution and agent performance metrics.

- **Notification System:** Sends alerts to agents when a new ticket is assigned or escalated.

AI Module (optional): Uses machine learning to predict best-fit agent based on historical data and performance.

Development Phases:

1. Create sample tickets with different priorities and issue categories.

2. Set up agent profiles with skills, current workload, and role.

3. Design and configure the assignment rule (manual rule or AI-based logic).

4. Integrate rule engine with the incident management system.

5. Test automation by raising new tickets and validating proper assignment.

6. Monitor and fine-tune the assignment process for efficiency.

Solution Architecture Description:

The solution architecture focuses on automating ticket distribution in IT service operations using intelligent rule-based or AI-powered logic. When a user raises a support ticket, it is stored in the Incident Table. The Assignment Engine evaluates available agents from the User Table based on criteria such as skill match, workload, and priority level. Once the optimal agent is identified, the ticket is automatically assigned and logged.
The architecture ensures that every ticket reaches the right person quickly without manual routing. This minimizes delays, improves workload balance, and increases customer satisfaction. The development process involves creating test tickets, setting assignment rules, applying automation, and verifying distribution accuracy.
By integrating dashboards and monitoring tools, supervisors can visualize workload distribution and agent performance in real time. The system promotes operational efficiency, accountability, and transparency in IT support workflows — ensuring consistent service delivery and faster incident resolution.

Example – Solution Architecture Diagram:

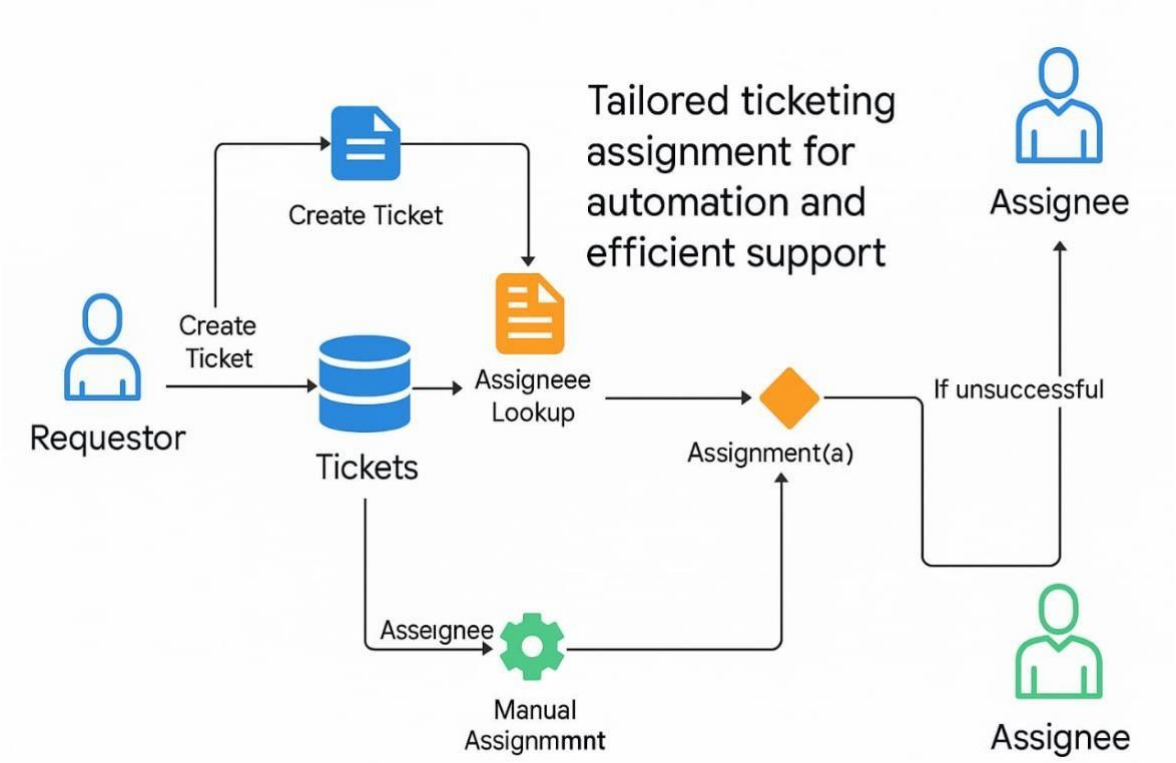

Figure 1: Architecture and data flow of the automated ticket assignment system