Project Design Phase
Solution Architecture

Date	1 November 2025
Team ID	NM2025TMID00443
Project Name	Streamlining Ticket Assignment for Efficient Support Operations
Maximum Marks	4 Marks

Solution Architecture:

Goals of the Architecture:

- Automate ticket assignment to ensure faster and more accurate distribution of support requests.
- Optimize agent workload through intelligent, rule-based, and AI-assisted assignment mechanisms.
- Improve response and resolution times, thereby enhancing customer satisfaction.
- Increase transparency and operational efficiency in support systems.
- Reduce manual intervention and minimize the possibility of human error in ticket allocation.

Key Components:

- Incident Table (Tickets): Contains all incoming support tickets that need to be assigned.
- User/Agent Table: Stores agent details such as skills, workload, and availability.
- Assignment Rules / Business Rules: Define logic to route tickets automatically to the most suitable agent.
- Workload Balancer / AI Engine: An intelligent layer that analyzes agent performance and adjusts assignments dynamically.
- Notification Module: Sends alerts to assigned agents for new tickets and updates.
- ServiceNow Platform: Acts as the core workflow automation environment where all processes are integrated.

Development Phases:

- **Requirement Gathering:** Identify key parameters for ticket assignment (priority, skill, workload, etc.).

- **Design Phase:** Define assignment logic and create rule-based conditions in ServiceNow.

- **Implementation:** Develop assignment rules and integrate automation using business logic or AI workflows.

- **Testing:** Simulate ticket generation and verify correct agent assignment under various conditions.

- **Monitoring & Optimization:** Continuously monitor assignment efficiency and refine algorithms based on feedback.

Solution Architecture Description:

The **solution architecture** for *"Streamlining Ticket Assignment for Efficient Support Operations"* focuses on automating the process of routing tickets to appropriate support agents within a service management platform like **ServiceNow**. The system integrates assignment rules, workload analytics, and real-time data to ensure that each incoming ticket is automatically assigned to the most suitable agent.

When a ticket is raised, the rule-based engine evaluates multiple parameters such as agent skill set, availability, and ticket priority. Based on this data, it assigns the ticket to an agent while maintaining an even workload distribution across the team. The AI-assisted mechanism can further learn from historical data to optimize future assignments.

This architecture eliminates manual errors, reduces delay in ticket handling, and ensures consistent service quality. It also enhances agent productivity, customer satisfaction, and operational transparency, laying a strong foundation for scalable and efficient IT support management.

Example - Solution Architecture Diagram: