Project Design Phase

Solution Architecture

Date	13 November 2025
Team ID	NM2025TMID03380
Project Name	Streamlining Ticket Assignment For Efficient Support Operation
Maximum Marks	4 Marks

Solution Architecture:

Goals of the Architecture

- Automate the ticket assignment process to reduce manual work.
- Assign tickets to the right support agent based on skills and workload.
- Improve response time and customer satisfaction.
- Maintain data consistency between tickets and users.

Key Components

- Ticket Table – Stores ticket details (ID, priority, status, assigned_to).
- Agent Table – Stores agent details (name, skills, availability, workload).
- Assignment Logic (Business Rule) – Automatically assigns new tickets to available agents.

- Notification System – Sends alerts to agents when a new ticket is assigned.

- Monitoring Dashboard – Displays ticket and agent status for supervisors.

Development Phases

1. Create sample tickets and agents.

2. Implement automatic assignment logic (Business Rule).

3. Notify agent when ticket is assigned.

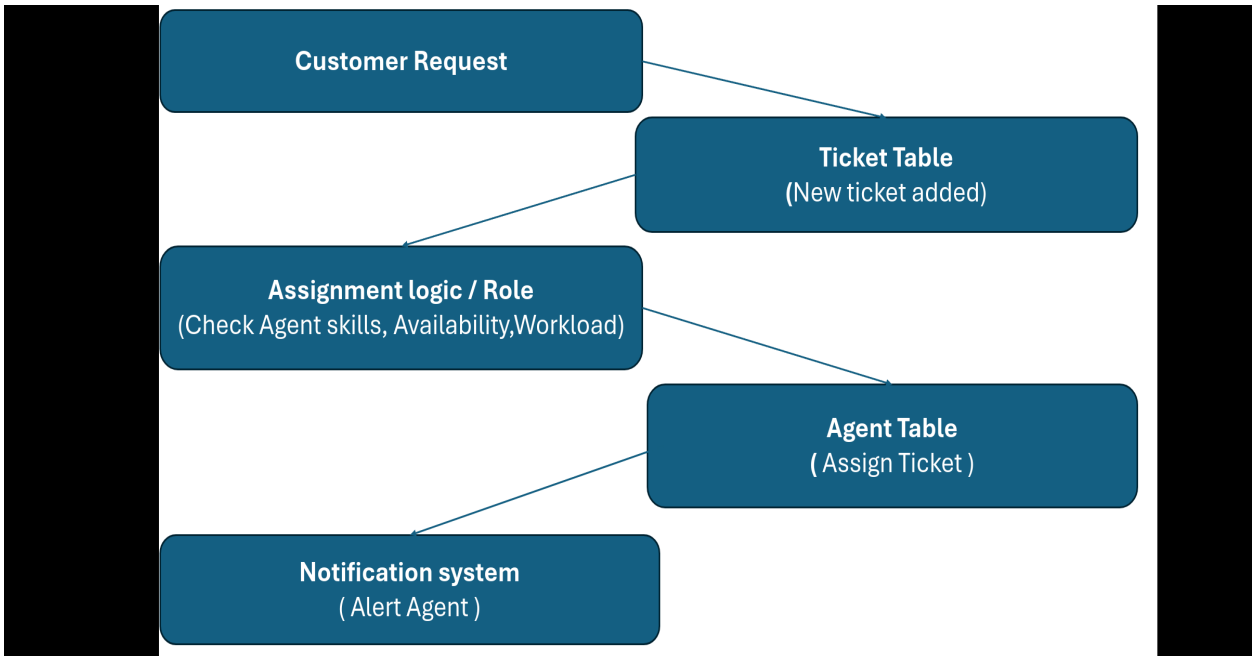
4. Test the process with multiple tickets and agents.

5. Verify load balance and rule accuracy.

Solution Architecture Description

This architecture simplifies support operations by automatically assigning new support tickets to available agents based on their skills and current workload. When a ticket is created, the Business Rule checks the Agent Table for suitable agents who match the ticket category and have the least workload. The system then assigns the ticket to that agent and updates the Ticket Table. A notification is sent to the agent.Supervisors can view assignments on the Monitoring Dashboard, which provides insights into agent workload and ticket distribution. This automation reduces manual intervention, improves response time, and maintains operational efficiency.

Example: Solution architecture diagram



Reference:

https://aws.amazon.com/blogs/architecture/