PROJECT DESIGN PHASE 2

Data Flow Diagram & User Stories

Date	02 NOVEMBER 2025
Team ID	NM2025TMID01377
Project Name	Streamlining Ticket Assignment for Efficient Support Operations
Maximum Mark	4 Marks

Level 0 – Context Diagram

Overview:
This high-level diagram shows how data moves between external entities and the main ticket assignment system.

External Entities:

- **Customer/User:** Submits new support tickets.
- **Support Agent:** Receives assigned tickets and updates status.
- **Admin/Manager:** Monitors performance, workload, and system reports.

Main Process:

- **Streamlined Ticket Assignment System** – The central process that handles ticket creation, classification, routing, and monitoring.

Data Flows:

- From **Customer → System:** Ticket details (issue type, priority, description).
- From **System → Support Agent:** Assigned ticket notifications and workload updates.
- From **Support Agent → System:** Ticket progress, resolution updates, and status changes.
- From **System → Admin:** Analytics reports and performance summaries.

Level 1 – Detailed Data Flow Diagram

Process 1: Ticket Creation

- Input: Ticket data (submitted by user).
- Output: Ticket record stored in the database.
- Data Store: *Ticket Database.*

Process 2: Ticket Classification

- Input: Ticket record from Ticket Database.
- Function: Analyze content using keywords, urgency, and category.
- Output: Ticket category and priority tag.
- Data Store: *Ticket Classification Rules.*

Process 3: Ticket Assignment

- Input: Classified ticket and Agent Database.
- Function: Match ticket with suitable agent based on skills, workload, and availability.
- Output: Assigned ticket sent to agent.
- Data Store: *Agent Profile Database.*

Process 4: Ticket Tracking & Update

- Input: Agent updates ticket status (in-progress, resolved).
- Output: Updated records and progress tracking.
- Data Store: *Ticket Tracking Log.*

Process 5: Reporting & Analytics

- Input: Ticket and agent performance data.
- Function: Generate insights for workload, resolution time, and performance efficiency.
- Output: Dashboards and reports
- for Admin.
- Data Store: *Analytics Database.*

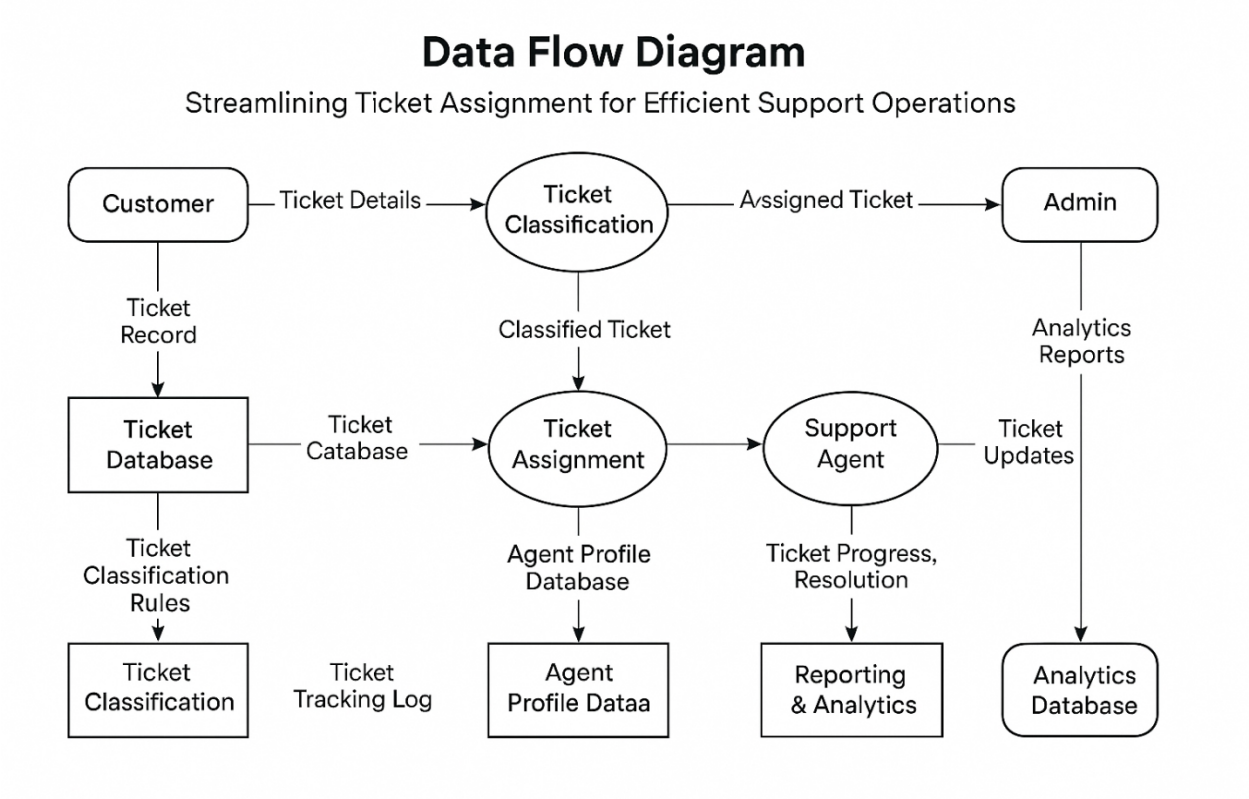
Data Stores

1. **Ticket Database:** Stores all created tickets.
2. **Agent Profile Database:** Stores agent details, skills, and workload.
3. **Ticket Classification Rules:** Contains predefined keywords, rules, and AI models for classification.
4. **Ticket Tracking Log:** Tracks ticket progress and updates.
5. **Analytics Database:** Stores performance and efficiency data for reporting.

Key Data Flows

- **Customer → System:** Ticket details.
- **System → Agent:** Assigned ticket and alerts.
- **Agent → System:** Ticket updates and resolution info.
- **System → Admin:** Performance analytics and reports.

EXAMPLE



User Stories

1. Support Agent

- *As a support agent,* I want tickets to be automatically assigned based on my skills and workload, so that I can focus on resolving issues efficiently without spending time on manual ticket selection.

2. Support Manager

- *As a support manager,* I want to monitor ticket distribution and agent performance in real time, so that I can ensure fair workload balance and improve overall team productivity.

3. End User (Customer)

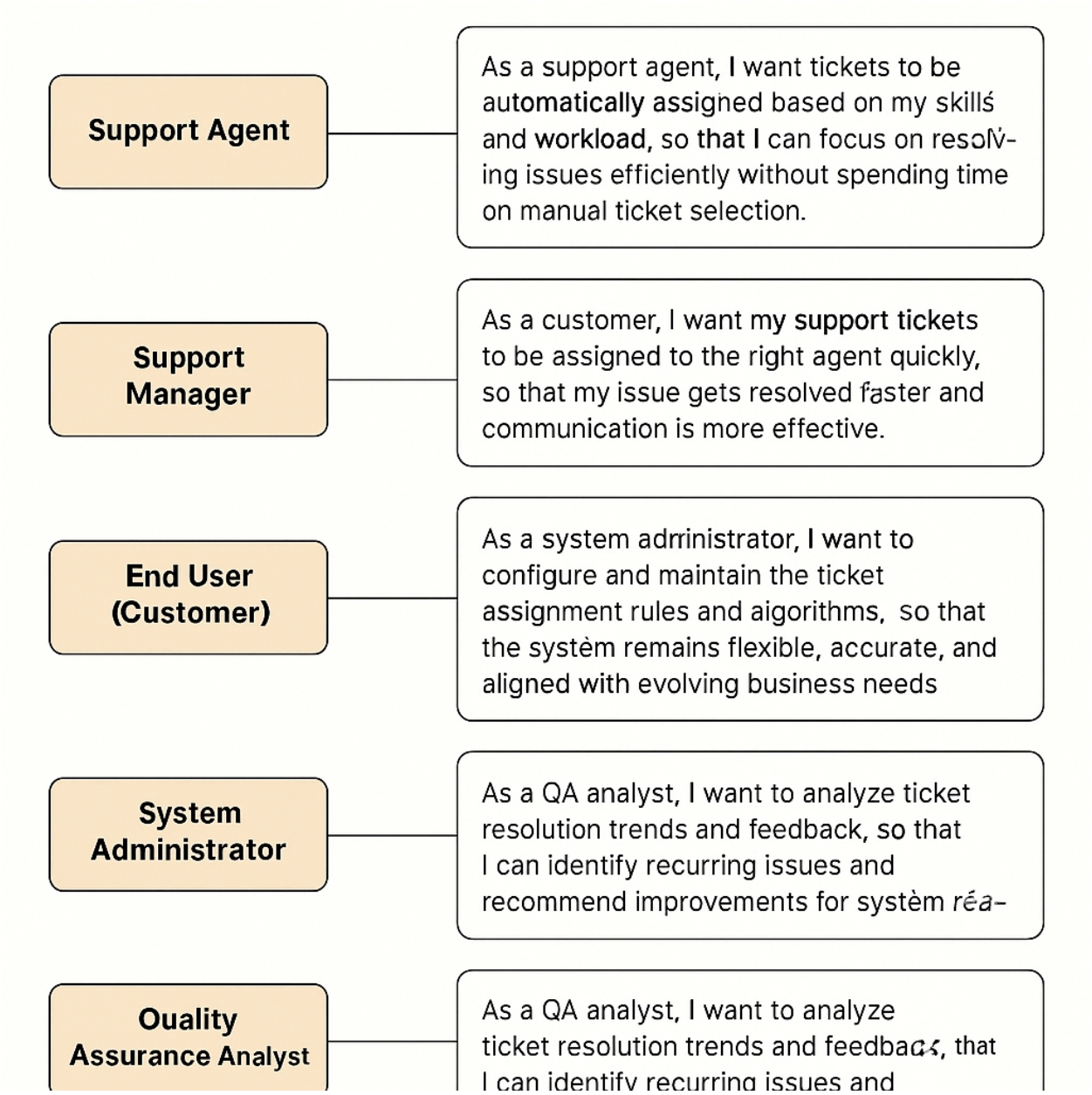
- *As a customer,* I want my support tickets to be assigned to the right agent quickly, so that my issue gets resolved faster and communication is more effective.

4. System Administrator

- *As a system administrator,* I want to configure and maintain the ticket assignment rules and algorithms, so that the system remains flexible, accurate, and aligned with evolving business needs.

5. Quality Assurance Analyst

- *As a QA analyst,* I want to analyze ticket resolution trends and feedback, so that I can identify recurring issues and recommend improvements for system reliability.


Support Agent
As a support agent, I want tickets to be automatically assigned based on my skills and workload, so that I can focus on resolving issues efficiently without spending time on manual ticket selection.
Support Manager
As a customer, I want my support tickets to be assigned to the right agent quickly, so that my issue gets resolved faster and communication is more effective.
End User (Customer)
As a system administrator, I want to configure and maintain the ticket assignment rules and algorithms, so that the system remains flexible, accurate, and aligned with evolving business needs
System Administrator
As a QA analyst, I want to analyze ticket resolution trends and feedback, so that I can identify recurring issues and recommend improvements for system
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