Project Design Phase-II

Data Flow Diagram & User Stories

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Project Name: Streamlining Ticket Assignment for Efficient Support Operations

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Data Flow Diagrams:

A **Data Flow Diagram (DFD)** visually represents how information moves through the **ticket assignment system**. It depicts the process of how support tickets are created, categorized, routed, and resolved across various teams. The DFD highlights how automation replaces manual routing by enabling efficient data exchange between the **customer portal**, **support system**, **routing engine**, and **support team database**.

In the project **"Streamlining Ticket Assignment for Efficient Support Operations,"** the DFD illustrates how incoming support requests are processed.
When a customer submits a ticket:

1. The **system receives the ticket** via the support portal.
2. The **routing logic (manual rules or AI model)** analyzes its category, urgency, and keywords.
3. The **ticket routing module** automatically assigns it to the appropriate **support team** based on the rules defined.
4. Assigned agents then resolve or escalate issues, and the system logs performance data for analytics.

This structured flow ensures that each ticket reaches the right person the first time, reducing delays and improving SLA compliance.

Example Diagram Description (DFD Overview):

Entities:

- **Customer** → Submits ticket
- **Support System** → Receives, stores, and routes ticket
- **Routing Engine** → Processes categorization and team mapping
- **Support Team Database** → Contains team and expertise data
- **Support Agent** → Works on assigned tickets and updates status

Data Stores:

- Ticket Database
- Routing Rules Repository
- Analytics Dashboard

Processes:

- Create Ticket
- Categorize & Prioritize Ticket
- Auto-Assign Ticket
- Track & Monitor Resolution

User Stories:

User stories define how different system users interact with the automated ticket assignment process. They focus on user goals, outcomes, and acceptance conditions for each functional component.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Support Agent	Ticket Management	USN-1	As a support agent, I want tickets automatically assigned to me based on issue type and my skill set.	The system assigns tickets automatically based on preconfigured rules and skills.	High	Sprint-1
System (Routing Logic)	Auto Categorization	USN-2	As a system, I must analyze and classify tickets based on keywords and priority level.	Ticket category and urgency are auto-detected and stored in the system database.	High	Sprint-1
Support Manager	Escalation Management	USN-3	As a manager, I want to receive alerts if tickets remain unassigned beyond a set threshold.	The system generates alerts for unassigned tickets exceeding SLA limits.	Medium	Sprint-2
Administrator	Configuration & Rules	USN-4	As an admin, I can modify routing rules and assign ownership for specific issue types.	The system saves and applies updated routing rules instantly.	High	Sprint-2
Analytics Viewer	Performance Tracking	USN-5	As a reporting user, I can view dashboards showing routing	The dashboard displays metrics for ticket volume, routing success	Medium	Sprint-3

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			accuracy and response times.	rate, and average resolution time.		

Explanation:

These user stories collectively ensure that ticket routing is efficient, intelligent, and measurable. The DFD and stories complement each other by defining both **how data flows** and **how users experience the system**, ensuring end-to-end operational improvement and better customer satisfaction.

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