Data Flow Diagram (DFD)

Project Title	**Streamlining Ticket Assignment for Efficient Support Operations**
Date	**02.11.2025**
Team ID	**NM2025TMID01861**
Maximum Marks	**4 Marks**

Level 0: Context Diagram

Purpose: Shows the overall system interaction between the user, ServiceNow system, and support groups.

Actors:

- Employee (User who raises a ticket)
- ServiceNow System (Processes and routes tickets)
- Support Groups (Certificate Group & Platform Group)

Flow Description:

1. Employee submits a new **support ticket**.
2. ServiceNow system receives and analyzes the **issue field**.
3. System automatically **assigns** the ticket to the correct group using **Flow Designer**.
4. The assigned **group receives** the ticket and starts resolving the issue.
5. System sends an **update/notification** back to the employee.

DFD Level 0 Summary:

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Employee → [ServiceNow Ticket System] → Support Groups
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↳ The system processes and routes the ticket automatically.

Level 1: Detailed DFD

Step-by-step Data Flow:

Process	Input	Output	Description
1. Ticket Creation	Employee enters issue details	Ticket record created in database	Ticket stored in “Operations Related” table
2. Ticket Evaluation	Issue field data	Identified issue type	System checks issue type using Flow Designer
3. Ticket Routing	Issue type	Assigned Group	Ticket auto-routed to correct support group
4. Notification	Assigned group data	Message/alert	System notifies team about new ticket
5. Resolution Feedback	Status update	Employee confirmation	Employee gets update on resolution

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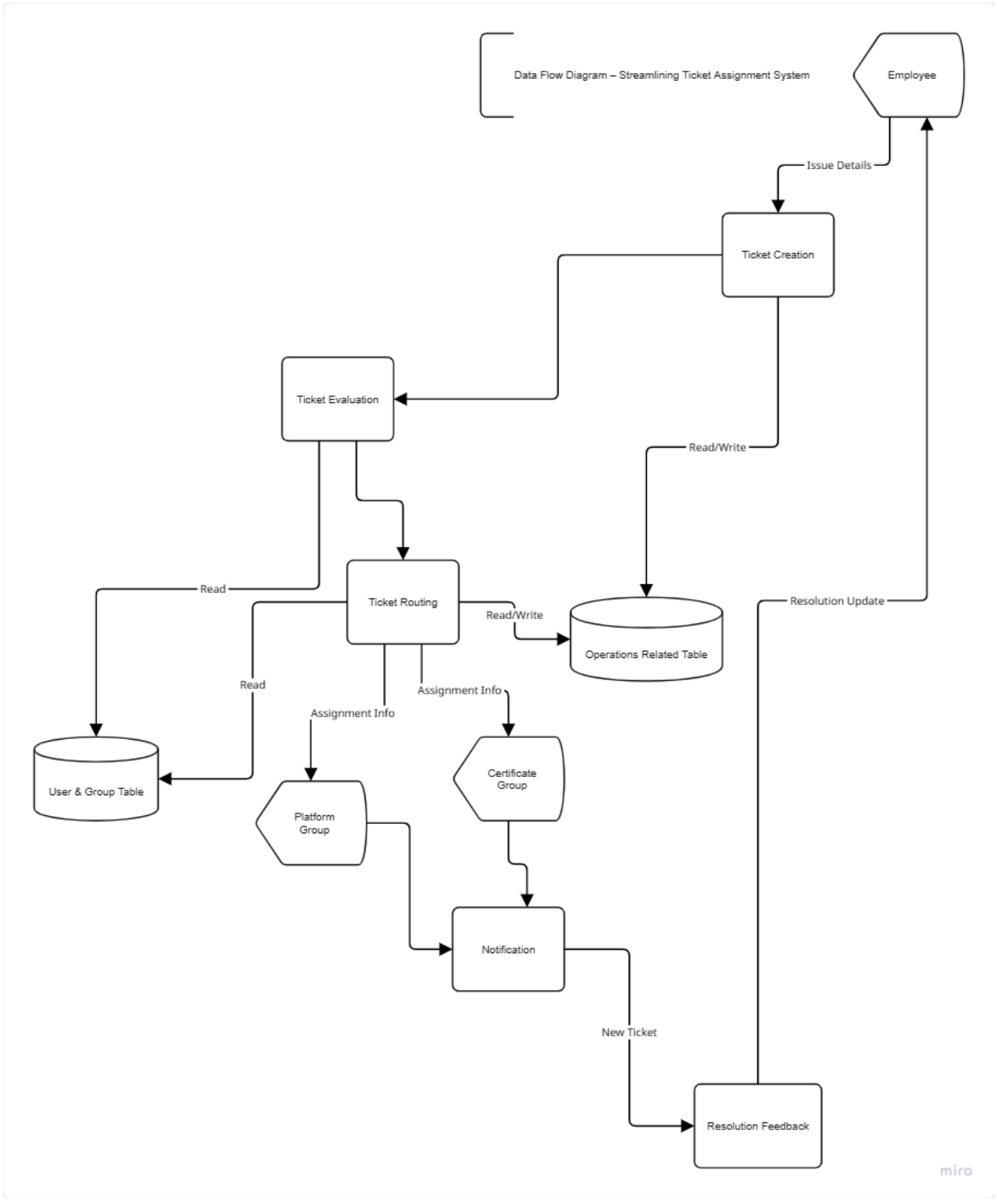
Data Stores:

- **Operations Related Table** → Stores all ticket details.
- **User & Group Tables** → Store information about users and their groups.
- **Roles Table** → Manages permissions.

Example Data Flow

1. User submits: “Unable to login to platform.”

2. System identifies keyword → “Platform.”
3. Ticket auto-assigned to **Platform Group**.
4. Notification sent to **Manne Niranjan** (group member).
5. Manne resolves and updates the ticket → user gets notified.


Data Flow Diagram – Streamlining Ticket Assignment System
Employee
Issue Details
Ticket Creation
Ticket Evaluation
Read/Write
Read
Ticket Routing
Read/Write
Operations Related Table
Resolution Update
Read
Assignment Info
Assignment Info
User & Group Table
Certificate Group
Platform Group
Notification
New Ticket
Resolution Feedback
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User Stories

A **User Story** describes what a user wants and why, written in simple language.
Format:

> *As a [user type], I want to [goal] so that [benefit].*

User Story 1 – Employee

As an Employee,
I want to submit a support ticket easily,
so that my technical issue reaches the right support team quickly.

User Story 2 – Support Engineer

As a Support Engineer,
I want to automatically receive tickets related to my domain (e.g., platform or certificates),
so that I can focus on resolving issues faster without manual sorting.

User Story 3 – System Administrator

As a System Administrator,
I want to configure users, groups, and roles,
so that the automation process correctly controls who can view and handle each type of ticket.

User Story 4 – Manager

As a Manager,
I want to see reports of how many tickets each team resolved,
so that I can analyze performance and identify improvement areas.

User Story 5 – Future Enhancement

As a Data Analyst,
I want to integrate machine learning (TensorFlow) for intelligent routing,
so that the system automatically learns and improves ticket classification over time.

Summary

Aspect	Description
Main Goal	Automate ticket routing to the correct group using ServiceNow Flow Designer
Data Stores	Users, Groups, Roles, Operations Related Table
System Benefits	Reduced manual work, faster response, higher satisfaction
Future Add-ons	AI-based routing, dashboards, escalation alerts

	User Type	User Story	Priority	Status
1	Employee	I want to submit a support ticket easily, so that my issue reaches the right team quickly.	High	Planned
2	Employee	I want to track my ticket status, so that I know when it's resolved.	Medium	Planned
3	Support Engineer	I want tickets related to my expertise (Platform or Certificates) to be automatically assigned to my group, so that I can focus on resolving them efficiently.	High	Planned
4	Support Engineer	I want to receive notifications for new tickets, so that I can respond immediately.	Medium	Planned
5	System Administrator	I want to configure users, roles, and groups in ServiceNow, so that access and automation work correctly.	High	Planned
	System Administrator	I want to monitor all ticket flows, so that I can ensure the system functions smoothly.	Medium	Planned
7	Manager	I want to view reports of how many tickets each team resolved, so that I can measure performance.	Medium	Planned
8	Manager	I want to identify recurring issues, so that I can allocate resources better.	Medium	Planned
9	Data Analyst/AI System	I want to integrate a machine learning model using TensorFlow, so that tickets are automatically classified by issue type.	Low	Planned