Project Design: Problem and Solution

Project Title	**Streamlining Ticket Assignment for Efficient Support Operations**
Date	**02.11.2025**
Team ID	**NM2025TMID01861**
Maximum Marks	**2 Marks**

Problem Understanding

Background

In large organizations like ABC Corporation, support tickets are generated daily for various issues — login errors, expired certificates, or website issues.
Currently, these tickets are **manually routed** to different support teams. This manual approach causes:

- Time delays in ticket resolution.
- Wrong team assignments.
- Increased workload for administrators.
- Poor customer satisfaction.

Problem Definition

The main problem is:

> “Manual ticket routing in ServiceNow results in inefficient operations, delayed resolutions, and customer dissatisfaction.”

This project aims to design an **automated ticket assignment system** that ensures every ticket is sent directly to the **appropriate support team**.

Design Thinking Approach

Empathize

Through the empathy mapping process, we understood that:

- Support engineers feel overwhelmed by repetitive tasks.
- Employees are frustrated when their issues are delayed or misrouted.
- Managers want faster and more accurate ticket resolution.

Define

The challenge is to **reduce manual intervention** and **automate ticket assignment** while ensuring data security and role-based access.

Ideate

After brainstorming, several ideas emerged:

- Use **ServiceNow Flow Designer** for automation.
- Create **Groups, Roles, and ACLs** for access control.
- Integrate **TensorFlow** in the future for AI-based routing.

Prototype

The team built a functional prototype within ServiceNow that:

- Creates users, groups, and roles.
- Builds a new custom table called *Operations Related*.
- Sets up Flows to auto-assign tickets to correct groups.

Test

Tested using multiple issue types:

Issue Type	Expected Group	Result
Regarding Certificates	Certificates Group	✅ Correct
404 Error	Platform Group	✅ Correct
Unable to login to platform	Platform Group	✅ Correct
User expired	Platform Group	✅ Correct

Solution Design

System Architecture

1. **Frontend (User Interface)** – ServiceNow form to submit tickets.
2. **Database (Table)** – Custom “Operations Related” table to store tickets.
3. **Automation Layer (Flow Designer)** – Logic that checks issue type and assigns it to the correct group.
4. **Access Layer (ACL & Roles)** – Ensures only authorized users access relevant tickets.

Flow Logic Example

If: Issue = “Regarding Certificates”
Then: Assign → Certificates Group

If: Issue = “Unable to login to platform” OR “404 error” OR “User expired”
Then: Assign → Platform Group

Results and Benefits

Benefit	Description
⚙️ Automation	Tickets are routed instantly without manual work.
⏱️ Faster Resolution	Reduces delay between ticket creation and assignment.

👩‍💻 Resource Efficiency	Support staff focus on solving problems, not sorting them.
📈 Scalability	Can easily adapt to more issue types or teams.
💡 Future Scope	Integration with AI/ML for predictive ticket routing.

Future Enhancements

- Integrate **TensorFlow** to classify issues automatically from text.
- Add **Email-to-Ticket** automation.
- Create **dashboards and SLA monitoring** for analytics.
- Implement **escalation flows** for unresolved tickets.

Conclusion

The designed system successfully demonstrates how automation in ServiceNow can **streamline ticket assignment** and **enhance support efficiency**.
It serves as a scalable model for IT support automation in real-world organizations.