# Ideation Phase

## Define Problem Statement

| Date | 7.11.2025 |
|------|-----------|
| Team ID | NM2025TMID00037 |
| Project Name | Streamlining ticket assignment for efficient support operation |
| Maximum mark | 2 |

## Problem statement :

In many organizations, customer support systems rely heavily on manual ticket assignment, where incoming service requests or issues are assigned to support agents by supervisors or through simple round-robin methods. This manual process often results in delayed responses, uneven workload distribution, and inefficient utilization of resources.As the number of support requests increases, it becomes difficult to ensure that each ticket is handled by the most suite agent based on skill, availability, and priority. This leads to longer resolution times, lower customer satisfaction, and reduced overall productivity of the support team.

## Problem statement and solution table:

| S.no | Problem | Description | Solution |
|------|---------|-------------|----------|
| 1. | Manual Ticket Assignment | Tickets are assigned manually by supervisors, leading to delays and inconsistency. | Implement an automated ticket assignment system using predefined rules or AI-based logic. |
| 2. | Uneven Workload Distribution | Some agents handle more tickets while others remain underutilized. | Introduce a workload balancing algorithm that monitors active tickets per agent and assigns new ones accordingly. |
| 3. | Slow Response and Resolution Time | Manual routing causes delays in acknowledging and resolving customer issues. | Enable automatic ticket routing to available and skilled agents for faster responses. |
| 4. | Lack of Skill-Based Assignment | Tickets are not always assigned based on the agent's area of expertise. | Integrate a skill-matching module that assigns tickets based on issue category and agent skill set. |

## Example

### Manual vs. Automated Ticket Assignment

**Scenario:** A software company receives 50–100 customer support tickets daily.Currently, a support manager manually assigns each ticket to an available agent.

### Manual Process Example:

| Ticket ID | Issue type | Assigned agent | Problem |
|-----------|-----------|----------------|---------|

| | | | |
|---|---|---|---|
| T001 | Login issue | Agent A | Agent A already has 8 tickets — delayed response |
| T002 | Payment error | Agent B | Agent B doesn't specialize in payment issues |
| T003 | Bug report | Agent C | Correct assignment, but done after 15 mins delay |

Result:

- Response time is slow.
- Some agents are overloaded.
- Customer satisfaction drops.

*Automated System Example (Your Project's Approach):*

| Ticket id | Issue type | System action | Assigned agent | Outcome |
|---|---|---|---|---|
| T001 | Login issue | Checked agent workload & skill | Agent C | Resolved quickly |
| T002 | Payment error | Matched with finance skill agent | Agent E | Solved within SLA |
| T003 | Bug report | Prioritized as high severity | Agent A | Escalated immediately |

Result:

☑ Workload evenly distributed

☑ Faster ticket resolution

☑ Improved customer satisfaction