PROJECT DESIGN PHASE II

SOLUTION REQUIREMENTS(FUNCTIONAL& NON FUNCTIONAL)

TeamID	NM2025TMID04990
Project Name	Streamlining Ticket Assignmentfor efficient support operations

Functional Requirements

These define the specific behaviors and capabilities needed for the automated assignment process.

1. Intelligent Categorization and Initial Assignment

- **FR1.1:** The system **must** automatically classify new inbound tickets (Incidents, Requests) by **Category** and **Subcategory** based on input text (Short Description/Description) using **Predictive Intelligence** models trained on historical data.
- **FR1.2:** The system **must** automatically suggest or set the initial **Assignment Group** based on the predicted Category/Subcategory or the associated **Configuration Item (CI)**.
- **FR1.3:** The system **must** support manual overrides by an authorized agent or administrator during the initial triage phase before final assignment.

2. Dynamic Agent Assignment Logic

- **FR2.1:** The system **must** support **Assignment Rules** that trigger based on criteria like Priority, CI, Service, or Location.
- **FR2.2:** The system **must** implement **load-balancing** logic (e.g., **Round Robin** or **Least Busy/Capacity**) to assign tickets to individual agents within the designated Assignment Group.
- **FR2.3:** The assignment logic **must** check an agent's **current availability status** (e.g., **Busy**, **Away**, **On Shift**) before assigning the ticket.

- **FR2.4:** The system **must** incorporate **skill-based routing**, prioritizing agents who possess primary or mandatory skills matching the ticket's required skill tag.
- **FR2.5:** The system **must** support configuration for **Escalation Routing**, automatically reassigning a ticket if it remains unassigned or unhandled by the initial assignment group beyond a defined threshold (e.g., 30 minutes).

3. Workflow and Notification

- **FR3.1:** The system **must** send an immediate **email/system notification** to the assigned agent upon assignment.
- **FR3.2:** The system **must** update the ticket record with an **Audit Log** entry detailing the **method** of assignment (e.g., "Auto-assigned via Predictive Intelligence," "Manually assigned by Agent X via Round Robin").
- **FR3.3:** The system **must** allow configuration for **fallback assignment** (e.g., assign to a specific backup group or a manager) if no eligible agent is found in the primary assignment group

That's a great next step! Defining clear requirements is crucial for a successful ServiceNow implementation.

Here are the key **Functional** and **Non-Functional Requirements (NFRs)** for streamlining ticket assignment in ServiceNow.

Functional Requirements (What the system must do)

These define the specific behaviors and capabilities needed for the automated assignment process.

1. Intelligent Categorization and Initial Assignment

- **FR1.1:** The system **must** automatically classify new inbound tickets (Incidents, Requests) by **Category** and **Subcategory** based on input text (Short Description/Description) using **Predictive Intelligence** models trained on historical data.
- **FR1.2:** The system **must** automatically suggest or set the initial **Assignment Group** based on the predicted Category/Subcategory or the associated **Configuration Item (CI)**.
- **FR1.3:** The system **must** support manual overrides by an authorized agent or administrator during the initial triage phase before final assignment.

2. Dynamic Agent Assignment Logic

- **FR2.1:** The system **must** support **Assignment Rules** that trigger based on criteria like Priority, CI, Service, or Location.
- **FR2.2:** The system **must** implement **load-balancing** logic (e.g., **Round Robin** or **Least Busy/Capacity**) to assign tickets to individual agents within the designated Assignment Group.
- **FR2.3:** The assignment logic **must** check an agent's **current availability status** (e.g., **Busy**, **Away**, **On Shift**) before assigning the ticket.
- **FR2.4:** The system **must** incorporate **skill-based routing**, prioritizing agents who possess primary or mandatory skills matching the ticket's required skill tag.
- **FR2.5:** The system **must** support configuration for **Escalation Routing**, automatically reassigning a ticket if it remains unassigned or unhandled by the initial assignment group beyond a defined threshold (e.g., 30 minutes).

3. Workflow and Notification

- **FR3.1:** The system **must** send an immediate **email/system notification** to the assigned agent upon assignment.
- **FR3.2:** The system **must** update the ticket record with an **Audit Log** entry detailing the **method** of assignment (e.g., "Auto-assigned via Predictive Intelligence," "Manually assigned by Agent X via Round Robin").
- **FR3.3:** The system **must** allow configuration for **fallback assignment** (e.g., assign to a specific backup group or a manager) if no eligible agent is found in the primary assignment group.

Non-Functional Requirements

These define the quality attributes necessary for the assignment process to be deemed efficient and reliable.

1. Performance&Latency

- **NFR1.1 (Latency):** The time taken from **Ticket Submission** to **Final Assignment** (when the ticket appears in the agent's work queue) **must not exceed 5 seconds** for 95% of submissions (excluding email processing time).
- **NFR1.2 (Scalability):** The assignment engine **must** be able to handle up to **1,000 new ticket assignments per hour** during peak times without performance degradation.

- **NFR1.3 (Model Accuracy):** The Predictive Intelligence assignment model **must maintain an assignment accuracy rate of at least 85%** for initial group prediction.

2. Reliability&Availability

- **NFR2.1 (Uptime):** The automated assignment mechanism **must** have an **availability of 99.9%** during business hours.
- **NFR2.2 (Error Handling):** In the event of an assignment engine failure, the system **must** revert to a **defined static fallback group** and log a critical error.
- **NFR2.3 (Auditability):** All routing decisions, including skipped agents or failed conditions, **must be logged** for troubleshooting and compliance purposes.

3. Usability&Maintainability

- **NFR3.1 (Configuration):** Assignment logic (**Rules, Agent availability, Skill mapping**) **must be configurable** by authorized administrators through **Flow Designer or standard Business Rules**, with minimal or no custom scripting required for standard changes.
- **NFR3.2 (Visibility):** Managers **must** be able to easily view the **current assignment load** for all agents and groups via a dedicated **Performance Analytics Dashboard**.
- **NFR3.3 (Learning):** The AI/ML models **must** support automated retraining cycles (e.g., weekly) to learn from new ticket resolutions.