REQUIREMENT ANALYSIS

STREAMLINING TICKET ASSIGNMENT FOR EFFICIENT SUPPORT OPERATIONS

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Introduction

Requirement analysis is a crucial stage in any software development process. It involves understanding and documenting what the system should achieve, what the users expect, and what constraints must be considered.

For our project, "Streamlining Ticket Assignment for Efficient Support Operations," the goal of the requirement analysis phase is to clearly identify the functional and non-functional needs for developing an intelligent ticket assignment system.

The project aims to replace the manual process of ticket routing with an automated, intelligent, and efficient ticket assignment mechanism. This phase helps ensure that the system design meets user needs, performs efficiently, and integrates smoothly with existing support platforms.

Objectives of Requirement Analysis

To identify and document the needs of the support team and end-users.

To define the functional features required for automated ticket assignment.

To determine technical, software, and hardware requirements.

To analyze system constraints, risks, and dependencies.

To establish a strong foundation for design, development, and testing**.**

Functional Requirements

1.User Login and Authentication:

The system must allow authorized users (support agents, managers, and administrators) to securely log in using credentials.

2.Ticket Creation and Input:

Users or customers can create tickets describing their issue, attaching necessary details like category, priority, and description.

3.Automatic Ticket Classification:

The system should automatically analyze the content of the ticket (subject, keywords, and text) to determine the relevant department or team. 4.Ticket Assignment:

The system should assign tickets to the appropriate team or agent based on predefined rules or AI-based classification.

5.Priority Management:

The system should identify ticket priority (High, Medium, Low) and route it accordingly to ensure urgent issues are handled first.

6.Dashboard and Monitoring:

An interactive dashboard must display open, assigned, and resolved tickets, along with analytics like average response time and pending count. 7.Reassignment Option:

Admins or team leads should have the option to manually reassign tickets if the automated classification is incorrect.

8.Feedback and Learning:

Agents should provide feedback on ticket categorization accuracy. The system should learn and improve over time.

9.Notifications and Alerts:

The system should send real-time notifications to teams or users when a ticket is assigned, updated, or closed.

10.Report Generation:

The system should generate weekly or monthly reports summarizing performance metrics such as ticket volume, response time, and team efficiency.

Non-Functional Requirements

1.Performance:

The system must classify and assign tickets within a few seconds of creation.

2.Scalability:

It should handle an increasing number of tickets and users without performance degradation.

3.Security:

User authentication, role-based access, and data encryption must be implemented to ensure ticket privacy.

4.Usability:

The interface should be intuitive and user-friendly, allowing users to easily track, search, and manage tickets.

5.Reliability:

The system should ensure consistent and error-free ticket assignment with minimal downtime.

6.Maintainability:

The system architecture should allow easy updates, bug fixes, and feature enhancements.

7.Compatibility:

The system should integrate smoothly with existing helpdesk tools such as Zendesk, Freshdesk, or ServiceNow.

8.Availability:

The system should be available 24/7 to handle ticket creation and monitoring without interruption**.**

User Requirements

1.Support Agents:

Should receive only relevant tickets related to their department.

Want an organized dashboard to track ticket status.

Need a way to update, resolve, and comment on tickets easily.

2. Team Leads / Managers:

Need to monitor ticket distribution and team workload.

Should be able to reassign tickets if needed.

Require performance and productivity reports.

3.Customers / End-Users:

Expect quick acknowledgment and timely resolution of their issues.

Should be able to view the current status of their tickets.

Want simple, clear communication with the support team.

System Requirements

Processor : Intel Core i5 or above

RAM : 8 GB minimum

Hard Disk : 500 GB or above

Display : 1366×768 resolution orhigher

Network : Stable internet connection for cloud or API operations

Feasibility Analysis

1.Technical Feasibility

2.Economic Feasibility

3.Operational Feasibility

4.Schedule Feasibility

5.Legal Feasibility

Conclusion

The requirement analysis clearly defines the system's needs, objectives, and constraints. By automating ticket assignment, this system will improve overall support efficiency, reduce human error, and enhance customer satisfaction.

The next phase—System Design—will focus on building the architecture, data flow, and components based on the requirements specified above.