HelpDesk Ticketing System

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Abstract-The main aim of proposed HelpDesk Ticketing system is to generate tickets for the queries & get the required solution to solve the queries. This management system provides an online platform to raise tickets, view raised tickets & check status of the raised tickets. HelpDesk Ticketing system has increased the productivity for many users in the organization. Helpdesk Ticketing system lets you solve the queries with the help of online platform via a web-based environment. The user can raise tickets for even the minute queries so as to work smoothly & effectively. The ticketing tool can be used within the organization or remotely which can be accessed by anyone in organization or end user. The conventional system used for solving any queries were executed with the help of e-mail which was much time consuming & unorganized in the nature. The Ticketing System is an effective way of solving queries effectively & in a time saving manner. This helpdesk ticketing system can be used on any platform as it is available in the virtual environment.

Keywords: helpdesk; ticket; e-mail; virtual; remote.

I. INTRODUCTION

Nowadays, Helpdesk ticketing system is the most widely used tool for solving the day-to-day queries in the organization. Previously, the conventional system such as e-mail were used for solving the queries which was much time consuming & irrelevant. The HelpDesk Ticketing system has shown 25% reduction in costs, 40% increase in users' satisfaction & 31% increase in productivity. This ticketing system has proved many organizations to solve the queries in a efficient & effective manner thereby giving solution to queries as soon as possible in mean time.

The time of ticket creation till the time of solving the ticket consumes a lot of time for solving any level of ticket/query. The timeline for solution of queries can be reduced by proposing three tier architecture for helpdesk ticketing system which is divided as User, IT coordinator & Engineers. This proposed system will result in getting the tickets resolution in the meanest time.

II. PROBLEM DEFINITION

HelpDesk System's primary objective is to give solution to the tickets raised at the possible earliest time. In the traditional system of HelpDesk Ticketing system when the user raises any query for the solution, the query gets pushed into the ticketing system where the engineers can view the tickets raised. This consumes a lot of time for the engineers as engineers are unaware of the problem & nature of the query when they open any ticket. The solution to this traditional system is three tier architecture mainly divided as User, IT coordinator & engineer. When the user raises ticket for the query for the problem arising, firstly, the ticket gets reflected onto the portal of IT coordinator. The IT coordinators work is to assign the query to the engineer according to the nature of the problem arising. The three-tier architecture will provide an effective solution to the queries not getting the delays in giving solutions while giving resolutions as soon as possible.

III. EXISTING SYSTEM

The Helpdesk systems are widely used by the organizations to manage support requests from the user. When the user creates a query with the problem definition, the tickets gets logged into the system. The tickets logged are reflected directly to the support engineer's management system, which are then opened/viewed for the resolution of the ticket. The status of the ticket changes to "Opened" so as to start work on the query. After resolution of the ticket by giving solution to the query, the ticket is then closed

& in turn notified to the user as closed. The helpdesk systems are typically based on the web-based interfaces where users can log the tickets for the queries. i.e., raise the tickets, which gets routed to the support engineers for providing a solution to the queries. The system tracks the ticket lifecycle which can be easily viewed by the by the user such as updates to the ticket, which also notifies the user whether the issue has been resolved or not.

Some of the popular helpdesk ticketing systems include Zendesk, Freshdesk & Servicenow. The Helpdesk ticketing system has become an essential part of the organizations. It provides hassle free experiences to the users within the least amount of time while solving queries at the earliest.

IV. PROPOSED SYSTEM

This proposed system will help users to easily generate tickets for the queries while giving desired solution for the users. The solution to ticket raised will be given by the specialized engineer according to the nature of the query. It will not only provide a solution to the query but also reduce the timeline for resolving the queries for the better working.

When user generates a ticket for the query, the ticket will reflect into the ticketing system of the IT coordinator by logging with his/her credentials. The tickets are only visible to IT coordinator on the ticketing system unless & until it is assigned to the engineer. IT coordinator then assigns the ticket to the engineer according to the nature of the query. Also, it checks which engineer is specialized in solving these types of queries. The ticket is then assigned to the engineer for the solution of the query with the given timeline. The timeline given is based on the problem statement for which the query should be resolved in given timeline only. Suppose, If the engineer is unable to solve the query, then, the query gets passed on to the other engineer of the same specialization. Other engineer of the same specialization takes down the work of solving the query which is unresolved.

V. FLOW CHART DIAGRAM
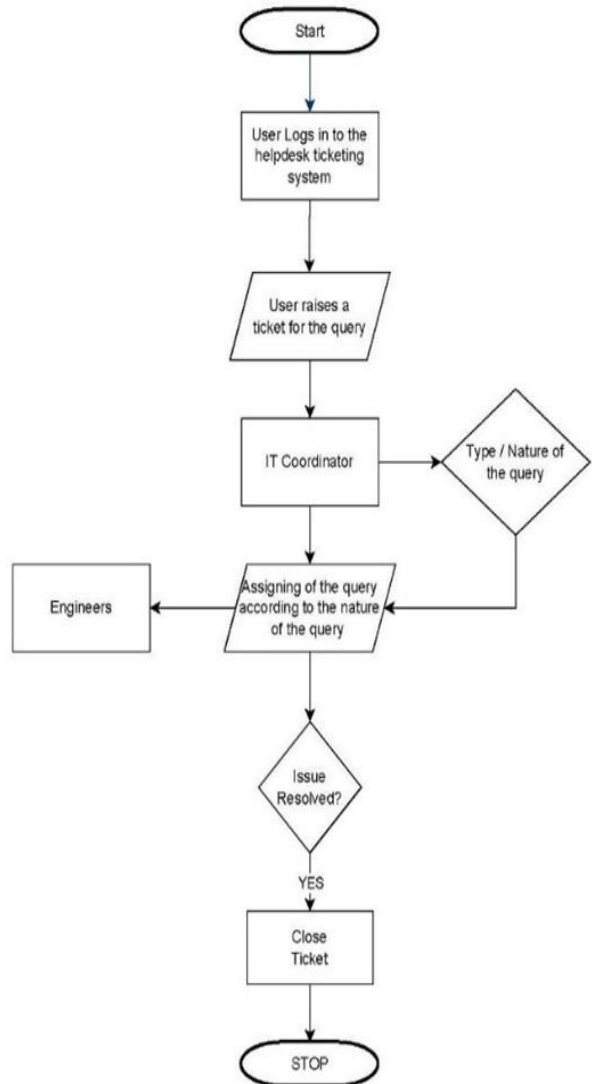
(i). Flow diagram explanation:

1. The user logs in to the helpdesk ticketing system with the login credentials.
2. User creates a new ticket for the query.
3. The ticket gets reflected to the IT coordinator which can be viewed on the ticketing system.
4. IT coordinator then assigns the query to the engineers according to the nature of the query.
5. Engineers opens the ticket & tries to resolve the issue of the query.

VI. 3-TIER ARCHITECTURE:
(i). Helpdesk ticketing system comprises of:

1.	User Dashboard	The users are able to raise the tickets by

		logging in to the dashboard of helpdesk ticketing system. Users can also view the status of the tickets raised, status of the tickets, etc.
2.	IT Coordinator	IT Coordinator can view the tickets raised by the users, escalate the queries to the engineers, update the status of the query & reassign the ticket to the other engineer in case of query not being solved.
3.	Engineers	The engineers can view all the tickets assigned to them for the solution of the queries in the given timeframe.

(ii). Architecture:

➢ The 3-tier proposed architecture basically consists of the User, IT coordinator & the support engineer.
➢ The user logs in to the HelpDesk Ticketing system with the login credentials.
➢ User creates a query with all the required information such as problem statement, etc. details. The ticket gets generated after filling all the required information.
➢ The ticket is then transferred to the IT Coordinator which is then allocated to support engineers according to the nature & specialization by the IT Coordinator.
➢ The allocated tickets to the engineers are opened for the resolution of the query.
➢ In this way 3-tier architecture can be used for the

better solving of the queries efficiently in a time saving manner.
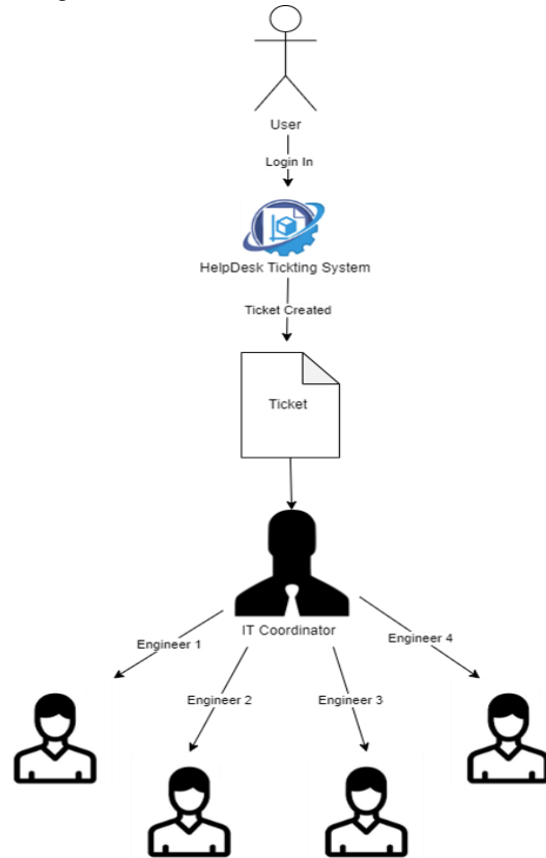

Fig: 3-Tier Architecture

VII. LITERATURE REVIEW

Florika G. and Vikash K. [7] found the ticketing system to be a line of communication for anyone asking questions who needed help resolving a problem. The ticketing tool has a Requests module that acts as a helpline manager to provide a predefined solution by retrieving all requests from users with requests related to a specific issue and then providing all these requesters with the necessary solutions.

Supporting Environmental Compliance Manager Through Ticket Systems By Heiko Henning Thimm 2017[1]. Tickets can be used in an organization to track, detect, report and review of several types of incidents / problems.

M. Harcenko, P. Dorogovs, and A. Romanovs, "IT Service Desk Implementation Solutions," [3]. Declare that IT Service Desk or end-user in one or another form can now be found in almost every

company that uses IT Service Support services. Eka Rachmawati *et al*, International Journal of Computer Science and Mobile Computing. 2018 [5]. A help desk is a focal point in an organization that helps resolve customer or user needs related to questions, service, technical support, or complaints about a particular service, and is organized in a numbering system (ticket request).

VIII. CONCLUSION

A successful helpdesk ticketing system will automate the process of raise the tickets for queries, check status of the ticket & get exact solution for the queries with the help of three tier architecture. It will also result in the solution of the queries in the possible earliest time. By implementing this system, users will have a modern and computerized environment to efficiently and effectively perform user support services.

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