

# A Web Application on Inventory Management System for Server Center of AIKTC

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**Abstract** - Considering the existing experience in AIKTC Server management center, we have analyzed basic aspects of manually maintained Inventory Management. As a first step, we have detected the need for developing the proposed system, covering configuration management, functional area. The main goal of this system is to collect process and store inventory data through users. This project eliminates the paper work, human mistakes, manual delay and speed up process.

Inventory Management System will have the ability to track purchase and available inventory, tells admin when it's time to reorder and how much to purchase. Inventory Management System for server center focuses in the area of Inventory control and generates the various required reports that will increase efficiency and services and minimize the errors and reduce the manual maintenance and maintain data integrity.

**Key Words:** Inventory Management, Orders, Tracking, Stock Maintenance, Server Centers.

## 1. INTRODUCTION

There is a need for improvement in the traditional way of Inventory Management in the Server Centers. Maintaining different files for different months/ equipment may not be helpful when it comes to maintain data of all of those equipment with also be able to deal with maintenance of all the equipment as and when necessary.

In order to meet the target of effective maintenance of data of all the equipment, tracking of order and maintenance of the equipment, this new system is designed.

The main aim of this project is to allocate the resources to the users as per the requests and then maintenance of those resources as well as maintaining the stock and generating reports regarding the equipment purchases as well as the maintenance worked carried out.

### 1.1 Motivation

The motivation of this paper is to create better understanding in redefining the inventory management of server centers out of the old traditional way, which was by maintaining files for equipment manually and then creating

reports from them, and also to increase the transparency in between the users of the inventory.

### 1.2 Problem

The main problem arrives in maintaining the data for the equipment purchased, tracking the orders and also maintaining enough equipment in the stock for use as per the incoming requests. Also, problem arrives when we need to generate report as per the administrator's requirements.

### 1.3 Solution

The solution of the above problems is to design a system in such a way that it is easy to create and retrieve data. Hence the Inventory Management System for Server Centers will abolish all the redundancies previously faced by the administrators and the users.

## 2. OBJECTIVE OF THE SYSTEM

The main objective of the system is to maintain stock, give new purchase order to the store, maintain information of the equipment purchased over time and also to maintain the information of the maintenance work carried out on the specific equipment.

## 3. OVERVIEW OF THE SYSTEM

### a) Users of the system:

#### i. Administrator:

Administrator is the superuser of the system. He will be able to see the requests from all the users, approve the request based on the priority and emergency of the request and then be able to allocate an engineer to carry out a maintenance job for the maintenance request from the users. The Administrator will also be responsible to add or delete the users from the system and also to generate the reports based on the requirements.

#### ii. Store Manager:

Store Manager will be able to see the purchase order from the Administrator and will

acknowledge the request by issuing the equipment to the Administrator.

iii. *Engineer:*

The Engineer will be specified by the administrator to do the maintenance job who will then do the maintenance and will update the job completion report into the system.

iv. *Requester:*

The requester will be that user of the system who will be able to request the Administrator for the new issue request or for the maintenance request for a particular equipment.

After this the request will be proceeded to the Request Manager module who will identify the type of request and if it is a new request altogether for a new equipment purchase then the request will be forwarded to the Availability Manager, If the request is a temporary request for temporary replacement of an equipment then that request will be forwarded to the Issue Manager and Issue Manager will issue a temporary equipment.

Or else if the request is for the maintenance of the equipment, then that request will be forwarded to the Maintenance Manager. The Request Manager will also contain the information of the request status from the Users of the system.

If the request is a maintenance request then the Request Manager will forward the request to the Maintenance Manager, Maintenance Manager will allocate an Engineer for the new maintenance request and the Engineer will do his part in maintenance; Here, maintenance can be of two types, cost maintenance and no cost maintenance, First the Engineer will diagnose the fault and generate the fault report, if the fault can be corrected without any new sub-parts needing to be integrated with the equipment then the maintenance will be a no cost maintenance, the Engineer will complete the fault diagnosis and will update the job completion in the system, If the fault is costly (for example: a new sub-part of the equipment is required) then the engineer will integrate the additional component and its cost and will complete the job and update the system about job completion.

If the faulty equipment cannot be diagnosed at all, then the equipment will be discarded and the Engineer will raise a request to the Administrator for a new equipment purchase, the Administrator will forward this request to the Purchase Manager and the Purchase List will be updated.

Then The request of an altogether new equipment will be processed, here we will see in the Availability Manager the availability of that particular equipment in our Stock, If it is available in the Stock then that equipment will be issued by the Administrator to the User who requested for that particular equipment and the database for the Issue Manager will be updated respectively.

If the requested equipment is not available in the Stock, then the Availability Manager will update the purchase list in the Purchase List Manager and then the user will able to see the request status for the equipment.

In the Purchase List Manager, We have Purchase List Updater which will be updated by the Administrator with respect to the requests for new equipment arrives, then the Administrator will specify a set of orders to give to the store/ the dealer and the system will notify the dealer for the set of orders. Then the dealer will give the Quotation

All of the above users will be able to view the request status of their requests.

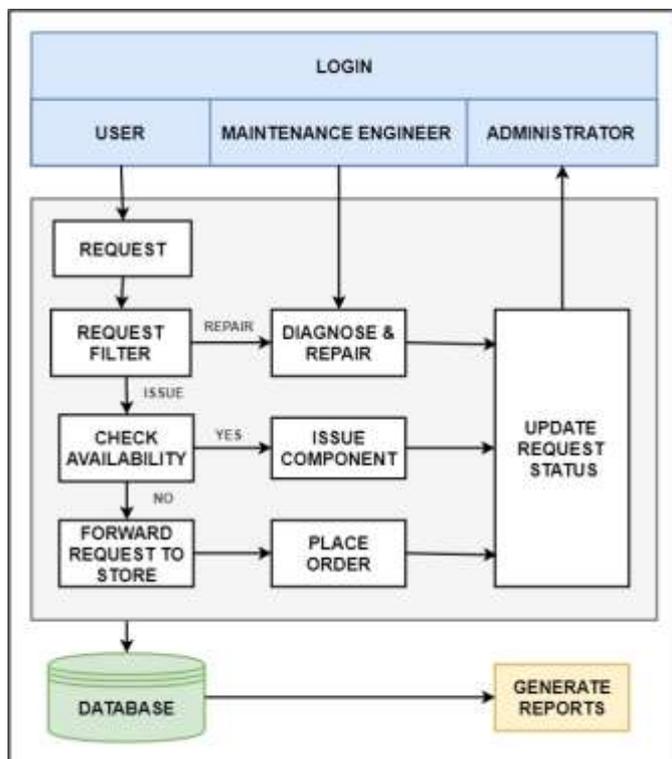


Fig -1: System Architecture.

Chart -1: Name of the chart

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**b) Functioning of the system:**

Initially, The Users of the system will send a request to the Administrator, That request might be a new equipment purchase request or might be a maintenance request.

for the orders to the Administrator and the Administrator will Place the Order from the Order Manager Module.

Once the Orders have been placed successfully by the Administrator, The Order Manager Module will keep tracks of all the orders issued to the dealer. Also The Administrator will be able to know the order status.

### c) Generating Reports:

#### i. Transaction Reports:

In this module, the Administrator will be able to generate the transaction reports for the new purchases made from one particular date to another and also the Administrator will be able to generate the maintenance reports with cost and anything that involves transaction.

#### ii. Purchase Reports:

In this module, The list of all the purchases made will be available to the Administrator from one particular date to another.

#### iii. Issue Reports:

In this module, all the issues made from the Inventory will available for the Administrator.

#### iv. Maintenance Reports:

In this module, All the maintenance job carried out by and updated by an engineer will be available to the Administrator.

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### 3. CONCLUSION

This system aims to ease the manual maintenance of Server Inventory and other tasks such as generating reports on demand, carrying out maintenance job and thus maintaining data for all of these processes, and also to ease the manual job of inventory management by maintaining physical data and also to give transparency, security and integrity to the system

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