**CHAPTER 1**

**INTRODUCTION**

In an organization, there are a large number of users and printers. Keeping track of all the print jobs given by each user and each document printed on every printer in the organization is a cumbrous task and requires human effort. In this project we aim to reduce this task by tracking these print jobs through our software and storing it in a database which can be reviewed by the administrator of the organization on timely basis. This project is based on the users and printers all existing on the same LAN network.

* 1. **PURPOSE**

To keep track of all the print jobs given by the users of an organization to any network printer present in the organization. Each user is assigned a quota of pages that he/she can use to print over a period of time. Once this quota is over, no print jobs are carried out and the user needs to send a request to the administrator for assigning more quota. Also this project sends notifications if the cartridge level of a printer is low and needs replacement or if pages are not available for printing etc.

Advantages of managing the print jobs through software are:

* Controlling usage of printer by the employers
* Keeping track of documents printed
* Make the system more transparent
* Reduce the cost incurred for printing facilities
* Using appropriate printer type based on type of usage
* Reducing the manual work involved in keeping track of the print jobs
* Making the overall printing facilities more efficient

* 1. **DEFINITIONS AND ACRONYMS**

The following definitions and acronyms should be understood and are required for the project. They are :

* Network Printer - A printer connected to a wired or wireless network. It may be Ethernet enabled and be cabled to an Ethernet switch, or it may connect to a Wi-Fi (wireless) network, or both. In our project, we use a wired network printer.
* LAN network - A local area network (LAN) is a [computer network](http://en.wikipedia.org/wiki/Computer_network) that interconnects computers within a limited area such as a home, school, computer laboratory, or office building using network media. In our project, we require a LAN connection in the organization.
* Client – In a network, a desktop computer or workstation that is capable of obtaining information and applications from a server.
* Server - A computer or computer program which manages access to a centralized resource or service in a network. In our project, the administrator is the server.

* 1. **LITERATURE SURVEY**

Considering a large organization, there are large number of computers and printers connected over a LAN network. To manage all the print jobs from all the users is a tiresome job. To avoid this problem, we have created software which keeps track of all the print jobs and store it in a database. The administrator can add/delete any user or printer at anytime and can also change the user or group quota.

* 1. **EXISTING SYSTEM**

There a couple of software’s available in the market today doing similar operation. In these software’s, there is no concept of using the user quota involved. Also due to the high price of these software, they are not so frequently used. The user does not have a personalized user interface to send any request to administrator or check his/her usage.

* 1. **PROPOSED SYSTEM**

Proposed system is planned to have the following features,

* Providing each user with a specified quota so that over usage is avoided
* Client user interface to check quota left and send quota requests to administrator
* Administrator interface to add/delete/modify user or printer information
* Graph displaying the usage of each printer in terms of number of pages printed
* Recording all the print jobs for later view by administrator
* View all information about any user/printer
* Categorization of users and printers into groups (department)

Once the administrator adds users to the database, information such as ip address, system name, MAC address, user name, joining data, group id etc. are stored. Similarly the printer information such as ip address ad cost per page for that printer etc. is stored when a new printer is added. The database size depends on the size of the organization. The database is created in the administrator system. A local database (xml file) is created for quota and storing records.

In our software, we retrieve all the information necessary though the network and the administrator doesn’t have to add each user information manually. The quota left and all the job records are updated from the local database file to the main database in regular intervals. A print job is deleted from the print queue if appropriate amount of quota is not there, then the user needs to request for more quota.

* 1. **STATEMENT OF PROBLEM**

Considering a large organization, we have a number of printers and a number of systems all connected to the same LAN network via LAN cables. Managing these printers manually is a cumbersome job. This project deals with creating software to overcome this problem.

* 1. **SUMMARY**

This chapter describes the aim of this project. It compares the already existing system with the proposed system stating the differences and specifying the advantages of the new proposed system over the existing system. It also discusses the actual problem and the solution to it in brief.